

PHOTOS FROM FACEBOOK.COM/PEOPLE/FRIENDS-OF-ESSEX-ELEMENTARY-SCHOOL

PRELIMINARY DESIGN PROGRAM

ESSEX ELEMENTARY SCHOOL

ESSEX, MASSACHUSETTS

MSBA PROJECT NO. 202306980020

SUBMITTED: JANUARY 14, 2026

JCJARCHITECTURE

January 8, 2026

Veatriki Dagkalakou
MSBA Project Manager
Massachusetts School Building Authority
40 Broad Street, Suite 500
Boston, MA 02109

RE: Essex Elementary School Project
Preliminary Design Program Submission

Dear Veatriki,

Please accept the Module 3 Preliminary Design Program submission for the Manchester Essex Regional School District's Essex Elementary School Project. As the OPM, we have reviewed the package to ensure it meets the requirements established by the MSBA. We look forward to your feedback and to working with you as we move toward the final evaluation of the proposed alternatives in the Preferred Schematic Report.

Sincerely,

Christina Dell Angelo MCPPO
DORE + WHITTIER
doreandwhittier.com
(978) 778-5353

ACKNOWLEDGEMENTS

Thank you to these individuals and organizations for their contributions to this Feasibility Study.

Massachusetts School Building Authority

Veatriki Dagkalakou, Project Manager

Manchester Essex Regional School District - School Building Committee

Pam Beaudoin, Superintendent of Schools/SBC

Michelle Cresta, Director of Finance & Ops/SBC

Kim Provost, Essex Elementary School Principal/SBC

Theresa Whitman, SC/SBC Co-Chair

John Binieris, SC/SBC Co-Chair

Annie Cameron, Essex Select Board/SBC

Tyler Virden, Project Executive/SBC

Gordon Brewster, OPM/SBC

Charlie Hay, Architect/SBC

Henry Oettinger, Manchester ConCom/SBC

Tim McDonald, Architect/SBC

Andy Oldeman, Manchester Finance Committee/SBC

Lisa O'Donnell, Essex Planning Board/SBC Advisor

Ariel Fernando Brain, Architect/SBC

Jen Hocherman, Architect/SBC

Michael Gerhardt, Civil Engineer/SBC

David Pereen, Plumbing/Fire Design/SBC Advisor

Emily Dwyer, Essex ES Teacher Rep

Rachelle Russo, Essex ES Teacher Rep/SBC Advisor

Kim Field, Essex ES Teacher Rep/SBC Advisor

Steve Hunt, Facilities Director/SBC Advisor

3.1 – TABLE OF CONTENTS

3.1.1 INTRODUCTION

- Facility Deficiencies
- MSBA Board Action Letter
- Design Enrollment
- Capital Budget Statement
- Project Directory
- Project Schedule

3.1.2 EDUCATIONAL PROGRAM

3.1.3 INITIAL SPACE SUMMARY

- Initial Space Summary Overview
- Initial Space Summaries – Various Enrolment Options
    - 165 student enrollment, grades K-3 + 30 PreK student enrollment
    - 250 student enrollment, grades K-5 + 30 PreK student enrollment
    - 515 student enrollment, grades K-5 + 60 PreK student enrollment
- Existing Floor Plans
- Variations from MSBA Space Guidelines

3.1.4 EVALUATION OF EXISTING CONDITIONS

- Property Ownership
- Property Development
- Historical Significance
- Building Code
- Accessibility
- Geotechnical Evaluation
- Environmental Site Assessment
- Sustainability
- Existing Documentation
- General Existing Conditions
- Existing Floor Plans
- Evaluations of Existing Conditions
    - Architectural
    - Structural
    - HVAC
    - Electrical
    - Plumbing
    - Fire Protection

- Foodservice
- AV/Theatre
- Site/Civil/Survey
- Landscape Architecture
- Visual Hazardous Building Materials Review
- Phase 1 ESA

3.1.5 SITE DEVELOPMENT REQUIREMENTS

- Overview
- 12 Story Street, Essex, MA (Essex ES)
  - Site Scope
  - Regulatory
  - Utilities
  - Site Analysis
  - Buildable Area
  - Opportunities
  - Limitations
  - Conclusion
- 43 Lincoln Street, Manchester-By-The-Sea, MA (Manchester Memorial ES)
  - Site Scope
  - Regulatory
  - Utilities
  - Site Analysis
  - Buildable Area
  - Opportunities
  - Limitations
  - Conclusion

3.1.6 PRELIMINARY EVALUATION OF ALTERNATIVES

- Introduction
- Code Upgrade Option
  - Option A0.1 – 12 Story Street, Essex, MA, Grades K-3 + PreK
  - Option A0.2 – 12 Story Street, Essex, MA, Grades K-5 + PreK
- Renovation and Addition Options
  - Option A1.1 – 12 Story Street, Essex, MA, Grades K-3 + PreK
  - Option A1.2 – 12 Story Street, Essex, MA, Grades K-5 + PreK
  - Option B1.1 – 43 Lincoln Street, Manchester-by-the-Sea, MA, Grades K-5 + PreK
- New Construction Options
  - Option A2.1 – 12 Story Street, Essex, MA, Grades K-3 + PreK
  - Option A2.2 – 12 Story Street, Essex, MA, Grades K-5 + PreK

3.1.7 LOCAL ACTIONS AND APPROVALS

- Meeting Summary
    - School Building Committee Meetings
    - Community Meetings

3.1.8 APPENDIX

3.1.8.1 Statement of Interest
3.1.8.2 MSBA Board Action Letter – Invitation to Feasibility
3.1.8.3 Design Enrollment Certification Letter
3.1.8.4 Capital Budget Statement
3.1.8.5 Project Directory
3.1.8.6 Project Schedule
3.1.8.7 Educational Visioning Workshop Notes
3.1.8.8 MHC Project Notification Form
3.1.8.9 Property Leases
3.1.8.10 Local Actions and Approvals
3.1.8.11 Comparative Probable Cost Analysis
3.1.8.12 Topographic Plan of Land
3.1.8.13 Traffic Feasibility Study
3.1.8.14 Phase 1 ESA
3.1.8.15 Feasibility Study Agreement

INTRODUCTION

SECTION 3.1.1

3.1.1 – INTRODUCTION

- Facility Deficiencies
- MSBA Board Action Letter
- Design Enrollment
- Capital Budget Statement
- Project Directory
- Project Schedule

3.1.1 – INTRODUCTION

The purpose of the Preliminary Design Program (PDP) is to define the programmatic, functional, spatial, and environmental requirements of the educational facility necessary to meet a District's educational program. The PDP also requires the design team perform a review and investigation to clearly define the existing building deficiencies. During this phase, the design team also reviews the District's educational program to identify the programmatic space needs for the school project. Understanding the space needs, along with the evaluation of existing conditions and consideration of the site development requirements, allows the design team to form a series of alternatives upon which the most educationally appropriate and cost-effective solutions will be considered by the Building Committee and moved forward into the Preferred Schematic Report (PSR) phase for further consideration.

To begin this process, the Manchester Essex Regional School District, MERSD, (District) submitted their Statement of Interest (SOI) for Essex Elementary School on or about April 13, 2023. At their, December 13, 2023, meeting the Board of Directors (Board) of the Massachusetts School Building Authority (MSBA) voted to invite the MERSD into the MSBA's Eligibility Period. On March 4, 2024, the Board of Directors of the Authority voted to invite the District to commence the Eligibility Period thereby, initiating a 270-day period for the District to complete preliminary requirements including, but not limited to, the formation of a School Building Committee and the certification of a design enrollment agreed upon with the MSBA. At their December 13, 2024, meeting, the Board voted to invite the District to partner with the MSBA to conduct a Feasibility Study for Essex Elementary School. The necessity for the project was first identified in the SOI, summarized below, and detailed within in section 3.1.4 – Evaluation of Existing Conditions of this Preliminary Design Program (PDP) report.

These deficiencies have been identified as direct problems that the District seeks to correct in order to provide the best possible educational experience for all their students.

FACILITY DEFICIENCIES

The Essex Elementary School, located at 12 Story Street Essex, Massachusetts, was originally constructed circa 1958. A southern addition consisting of a media center and gymnasium with locker rooms was added in 1975. The total facility as it stands today is approximately 53,036 gross square feet and is located on the site of approximately 9.75 acres. The school is a single-story courtyard building with a half-level change accessible via ramps between the 1958 and 1975 portions of the school. There is a portion of the basement that is occupied for school activities that has level access discharge due to site topography.

Essex Elementary School is the only elementary school in Essex, MA and one of two elementary schools in the Manchester Essex Regional School District. The school's current enrollment is +/-200

students from grades Kindergarten through 5th grade with an average class size of 17 students. During the fall of 2025, representatives from the architect, civil engineer, landscape architect, structural engineer, mechanical engineer, electrical engineer, plumbing engineer, audio/visual, theatre, foodservice, technology, hazardous materials and geoenvironmental consultants toured the site and building to complete a visual assessment of the site, building structure, envelope, and systems; there was no destructive testing conducted as part of this assessment.

The building is mostly a single story rectangular shaped footprint with a central courtyard. The site is mostly flat except for the east side of the building which steps down to reveal an at grade occupied portion of the basement. There is a central main entrance at the northern side of the building facing Story Street, to the east is the main office and admin space and to the west is the cafetorium and kitchen. Corridors on both the east and west side of the building wrap around the courtyard and house the two academic wings of the building. At the southern end of the building the corridors ramp down to the 1975 addition that houses both the media center and gymnasium.

The lower-level houses classrooms that once functioned as the art room but in recent years have been converted to project rooms and OT / PT spaces. There is also storage as well as the building's server room located in the basement. The northeast corner of the basement houses the electrical rooms as well as building maintenance storage. Beyond the electrical rooms is a subbasement that houses the buildings boiler room. There is no accessible access to the boiler room. The rest of the basement is mostly unoccupied space that houses mechanical equipment as well as pipe chase for sanitary and HVAC piping.

Most of the egress doors have stairs or ramps and do not satisfy accessibility. Where exterior ramps are provided, they are mostly wood and are nearing the end of their useful life

While many accommodations were made over the years, many aspects of the existing building are not accessible or code compliant. Toilet rooms have been moderately adapted for accessibility; however, this effort is not comprehensive due to building limitations. Many of the smaller in-room toilets do not meet modern accessibility requirements and do not have the space to accommodate such alterations.

The existing building envelope exhibits signs of distress with cracked masonry and deteriorating soffits and overhangs. The 1958 portion of the building has original windows that are well past their useful life and should be replaced with modern energy-efficient windows systems. Repeated issues with the exterior walls in the 1975 additions, most notable the southern gym wall, have resulted in water infiltration and years of constant repairs to interior paint and other finishes. Multiple past repairs have been unsuccessful in addressing these wall issues.

The existing interior finishes are mostly original. Although the District custodians have maintained the facility well, the finishes show signs of their age and in most locations are at the end of their useful life. Suspected Asbestos Containing Materials and Lead Base Paint have been identified within the building complex. These conditions are documented within this Hazardous Materials Consultant's report. This report is included within the Appendix.

The existing HVAC system has been well maintained over the years, though a majority of the building HVAC indoor air handling unit, terminal equipment and ductwork distribution systems are originally installed equipment that's approaching their life expectancy.

Most of the electrical distribution systems are original to the building and although functioning, have far outlived their intended useful life. Upgrades such as an emergency generator and fire alarm system have been completed and are in fair condition. The power distribution system has had some upgrades, but the majority is original and in poor condition. The interior lighting fixtures have been upgraded since the renovation in 1975 and at present are mostly LED sourced linear utility type strip lighting that are high glare and not ideal for classroom or office installations. All exterior lighting are new LED type fixtures, however products installed vary from door to door and are low quality, high glare fixtures for which the existing wiring was also reused.

The plumbing systems are mostly original to the building and approaching 70 years of use rendering the systems obsolete and beyond their useful life. The building is not protected by a fully automatic sprinkler system. The existing kitchen hood is not equipped with an integral fire suppression system.

Refer to section 3.1.4 – Evaluation of Existing Conditions for a full report on the facility's existing conditions and recommended actions.

MSBA INVITATION TO FEASIBILITY STUDY

The MSBA Board of Directors invited the District to conduct a Feasibility Study on December 13, 2024. A copy of the MSBA Board Action letter is included in Appendix 3.1.8.2 of this report.

DESIGN ENROLLMENT

As a result of a collaborative analysis with the MSBA of enrollment projections and space capacity needs for the proposed project, the Feasibility Study will investigate and evaluate potential alternatives which include a design enrollment of 165 students for Grades K through 3 plus 30 student PreK, a design enrollment of 250 students for Grades K through 5 plus 30 student PreK and a design enrollment of 515 students for Grades K through 5 plus 60 student PreK. A copy of the Design Enrollment Certification letter is included in Appendix 3.1.8.3 of this report.

CAPITAL BUDGET STATEMENT

The Manchester Essex Regional School District Capital Budget Statement is included in Appendix 3.1.8.4 of this report.

The preliminary design program comparative total project cost estimates range from $45 million to $95 million. The Manchester Essex Regional School District has three student enrollment options

being studied on two potential sites. This resulted in a total of 7 potential design options being submitted in the MSBA's preliminary design program. The PDP comparative cost estimates are listed below with additional estimating details provided by PM&C and AM Fogarty included within this PDP submission.

OPTION	SCOPE	CONSTRUCTION COST	TOTAL PROJECT COST
A0.1	CODE UPGRADE / BASE REPAIR	$37m	$45m-50m
A0.2	CODE UPGRADE / BASE REPAIR	$37m	$45m-50m
A1.1	ADD/RENO	$63m	$75m-80m
A1.2	ADD/RENO	$73m	$90m-95m
A2.1	NEW CONSTRUCTION	$68m	$80m-85m
A2.2	NEW CONSTRUCTION	$76m	$90m-95m
B1.1	ADD/RENO	$55m	$70m-80m

The current base reimbursement rate from MSBA for the Essex Elementary School project is 31% (of eligible project costs). Depending on the preferred solution ultimately selected, it is estimated that additional incentive points will be received. The following are the incentive points being considered: High Efficiency Green School Program, Best Practices for Routine and Capital Maintenance, and Renovation/Re-use of Existing Facilities. The full value of any ineligible costs are shared regionally between Manchester-by-the-Sea and Essex using a combined Equalized Valuation (EQV) and population-based assessment methodology established by the Regional Agreement.

Although a budget has not been formally approved, the School Building Committee has reviewed and approved the PDP comparative cost estimates for a total project budget in the range of $45 million to $95 million based on the different student enrollments and design options that meet the educational program. The School Building Committee understands that the values contained within this Preliminary Design Program Submission are subject to adjustment as a preferred option is selected and the design progresses.

TARGET BUDGET

At this time, the target budget is considered as a target range due to the fact that the District has not selected the preferred option or enrollment, refined the gross square footage of the program/design, and finalized the project location or limits of the project on the campus. However, based on the comparable-probable cost analysis, the total project budgets for all options including Code Upgrade/Base Repair, Addition/Renovation and New Construction range are between $45 million to $95 million depending on the final preferred option, total gross square footage of the program, student enrollment, and extents of the site and site improvements. Please note that these values are subject to change as the project moves forward into the Preferred Schematic Report phase. The Comparative Probable Cost Analysis is included in Appendix 3.1.8.11 of this report.

PROJECT DIRECTORY

A project directory with contact information for representatives of all District stakeholders, School Building Committee (SBC), Designer, and OPM is included in Appendix 3.1.8.5 of this report.

PROJECT SCHEDULE

An updated project schedule is included in the Appendix 3.1.8.6 of this report. In summary, the critical milestone dates currently proposed are as follows:

- SBC vote to submit Preliminary Design Program: January 6, 2026
- Project Team submits Preliminary Design Program to the MSBA: January 15, 2026
- SBC vote to submit Preferred Schematic Report (PSR): April 28, 2026
- Project Team submits Preferred Schematic Report to the MSBA: April 29,2026
- MSBA Facilities Assessment Subcommittee Presentation: May 13, 2026, or May 20, 2026
- MSBA Board meeting to authorize Schematic Design: June 24, 2026
- SBC vote to submit to the Schematic Design submittal to the MSBA: August 25, 2026
- Project Team submits the DESE submittal to the MSBA: August 27, 2026
- Project Team submits the Schematic Design submittal to the MSBA: August 27, 2026
- MSBA Board meeting to approve Project Scope and Budget Agreement: October 28, 2026
- Manchester -by-the Sea - Town Meeting October / November 2026
- Essex - Town Meeting October / November 2026
- Projected Town vote for PS&BA and full funding of the project: November / December 2026

EDUCATIONAL PROGRAM

SECTION 3.1.2

Essex Elementary School Educational Program

Manchester Essex Regional School District

Prepared in Support of the
Massachusetts School Building Authority
Feasibility Study

Approved by the MERSD School Committee • December 2, 2025

Table of Contents

Acknowledgements 4
Introduction 6
Grade and School Configuration 7
Class Size Policies 12
School Scheduling and Methodology 14
Teaching Methodology & Structure 17
Curriculum Delivery Methods and Practice 19
Teacher Planning 29
Professional Development 31
Pre-Kindergarten Program (Integrated) 32
Kindergarten Program 34
Lunch Programs 35
Technology Instruction Policies & Program Requirements & Library 36
Visual Arts 39
Performing Arts 40
Physical Education and Wellness 41
Special Education Programs 42
Technology / Vocational Programs 45
Transportation Policies 46
Functional & Spatial Relationships and Key Programmatic Adjacencies 47
Security & Visual Access Requirements 50
Typical Day & Week in the Life of a Student 51
Play, Movement, and Multi-Use Indoor Community Space 53
Extended Day / Community Programs 56
Appendix 59
Appendix A: *Educational Visioning Final Report* 60
Appendix B: *MERSD Regional Agreement* 61
Appendix C: *MERSD Elementary Task Force Recommendations* 62
Appendix D: *Configuration Scenario Operational Impact* 63

Appendix E: *Strategic Plan Overview & District Improvement Plan* 64

Appendix F: *Grade-Level Curriculum Guides* 65

Appendix G: Special Education Program Review 66

Appendix Documents Cited

The following appendices are referenced within the Essex Elementary School Educational Program and provide supporting documentation for the educational vision, programmatic assumptions, policy framework, and operational considerations described herein. Appendices are lettered and ordered to align with their first appearance in the narrative.

Appendix A: ***Educational Visioning Final Report***
Documents the district's educational visioning process and guiding principles informing instructional practice and facility design.

Appendix B: ***MERSD Regional Agreement***
Establishes governance, grade configuration requirements, and statutory obligations of the Manchester Essex Regional School District.

Appendix C: ***MERSD Elementary Task Force Recommendations***
Summarizes prior district analysis and community findings related to elementary configuration and neighborhood school models.

Appendix D: ***Configuration Scenario Operational Impact***
Identifies operational considerations associated with alternative grade-span and site configuration options as part of the MSBA Feasibility Study.

Appendix E: ***Strategic Plan Overview & District Improvement Plan***
Outlines district priorities, core values, and improvement objectives guiding instructional and organizational planning.

Appendix F: ***Grade-Level Curriculum Guides***
Provides grade-level curriculum frameworks supporting the instructional program described in this Educational Program.

Appendix G: ***Special Education Program Review***
Presents findings related to special education service delivery, inclusion practices, and alignment with district support structures.

Acknowledgements

Educational Visioning Team

The District completed one site visit, two large group, and two small group visioning sessions with Consultant Michael Pirollo. The Educational Visioning Team included the following members of the school district, parents, community members, and local board members:

- Pamela Beaudoin, Superintendent
- Gordon Brewster, Essex School Building Committee
- Taylor Clary, Essex Elementary Grade 4 Teacher
- Allison Collins, Director of Student Services
- Michelle Cresta, Director of Operations & Finance
- Christina Dell Angelo, OPM, Dore & Whittier
- Danielle Demetri, Essex Elementary Grade 4 Teacher
- Emily Dwyer, Essex Elementary Grade 1 Teacher
- Jeff Elliott, Architect, JCJ
- Kim Field, Essex Elementary Grade 4 Teacher
- Jake Foster, School Committee / Parent
- Nicole Grasso-Correnti, Essex Elementary School Nurse
- Heather Leonard, Director of Curriculum & Instructional Technology
- Gillian Mackay-Smith, Essex Parent
- Fawn Pelligrino, Project Manager, JCK
- Patty Roundy, Essex Elementary School Paraprofessional
- Rachelle Russo, Essex Elementary Kindergarten Teacher
- Maggie Safrine, Essex Elementary Administrative Assistant

Educational Program Development Team

This Educational Program was developed collaboratively by the following individuals through an iterative process of review, community feedback, and cross-district collaboration to ensure alignment with MERSD's mission, educational vision, and long-term strategic priorities.

Primary Authors

- Pamela Beaudoin, Superintendent of Schools
- Heather Leonard, Director of Curriculum & Instructional Technology
- Allison Collins, Director of Student Services
- Kim Provost, Essex Elementary School Principal
- Michelle Cresta, Director of Finance and Operations

Reviewed By

- Emily Dwyer, Essex Elementary Grade 1 Teacher
- Jake Foster, School Committee/Parent
- Rachelle Russo, Essex Elementary Kindergarten Teacher
- Kim Field, Essex Elementary Grade 4 Teacher
- Michael Pirollo Educational Planner, MLP Integrated Design

Introduction

The educational program at MERSD is guided by a shared philosophy that places students at the center of all decision-making and instructional design. Our approach reflects a deep belief in cultivating curiosity, integrity, and intellectual engagement while nurturing the social-emotional well-being essential to learning. We value inclusivity, collaboration, and equity—ensuring every student is seen, supported, and challenged to reach their fullest potential.

Our classrooms are communities of active learners where authentic experiences connect knowledge, skills, and character. Instruction emphasizes inquiry, creativity, and problem-solving, encouraging students to think critically and act responsibly as empathetic global citizens. Through strong partnerships among educators, families, and the broader community, we strive to create learning environments that honor the uniqueness of each child while preparing them to thrive in a complex and interconnected world.

MERSD proudly works to educate each child from his/her own readiness level in order to facilitate the intellectual, social and emotional growth process. There are many measures of success, and we are committed to helping each individual child achieve his/her potential. In addition to a robust core curriculum that balances high expectations for student achievement with the needs of the whole child, we offer specialty programming and a variety of learning opportunities, such as: elementary world language; Integrated Pre-Kindergarten; specialized learning programs for students with dyslexia, autism spectrum disorders, and developmental delays; STEM coursework in coding, engineering, project based environmental studies, FIRST Robotics, Project Adventure; award winning arts and music programs; and, state champion athletic teams.

In collaboration with Mike Pirollo from My Learning Place Integrated Design, Inc., MERSD engaged in a two-day Educational Visioning workshop. Through this process, teachers, community members, and administrators gathered to learn how the organization of physical space within a school can support our educational goals both now and in the future. Through a series of collaborative exercises, we uncovered common themes that will serve as guiding principles for our design team, JCJ Architecture.

> **Student-Centered & Active Learning:** Spaces that empower students as active learners—engaged in inquiry, creation, problem solving, and authentic experiences.
>
> **Flexible Learning Neighborhoods:** Adaptable, multi-use environments that support varied groupings, collaboration, movement, and differentiated instruction.
>
> **Well-Being & Environmental Connection:** Learning environments that support emotional regulation and belonging while providing purposeful access to outdoor spaces that enrich wellness, play, and environmental learning**.**

Community Hub & Shared Identity: A school that reflects Essex's character and serves as a gathering place for students, families, and the broader community—supporting learning and connection throughout the day.

These design principles support our district's core values and commitment to active, student-centered learning—promoting collaboration and creativity, and empowering students to be the doers and leaders of their own learning. They reflect our goal of creating a learning environment that captures the energy of children, supports multiple modes of engagement, and provides flexible pathways for students and teachers to work together. It is our hope that the design process will yield an educational facility that is timeless in style but flexible and adaptable to the ever-evolving curriculum and instructional program, while continuing to serve as a hub of the community with spaces for small, large, and whole-school gatherings. (*Appendix A: Educational Visioning Final Report*)

Grade and School Configuration

The Manchester Essex Regional School District (MERSD) provides a high-quality public education for students from the towns of Manchester-by-the-Sea and Essex, serving approximately 1,190 students in grades Pre-Kindergarten through Grade 12 during the 2024–2025 school year. The district is organized as a two-town regional system with two elementary schools—Essex Elementary School and Manchester Memorial Elementary School, that feed into a shared Middle and High School campus. This configuration allows MERSD to maintain strong community connections at the elementary level while providing a cohesive, unified educational experience for all students as they progress through the district.
Regional Agreement Requirements for Grade Configuration

The District operates under a Regional Agreement between the towns of Manchester-by-the-Sea and Essex, which establishes several requirements that directly influence grade-level configuration and facility planning. The Agreement mandates that the District shall provide a comprehensive Kindergarten through Grade 12 education program and maintain at least one elementary school facility in each member town. It further guarantees that all pupils in elementary grades—defined as at minimum Kindergarten through Grade 4—must be provided the opportunity to attend school in the town in which they reside. While the Regional School Committee holds authority to designate grade spans beyond this minimum, any change that alters longstanding grade assignments or materially affects the programmatic use of facilities requires formal Committee action and, in many cases, amendment of the Regional Agreement. Amendments require majority approval in both member towns through Town Meeting, ensuring transparency and broad community consent. Collectively, these provisions affirm MERSD's historical neighborhood school model and provide a framework for considering future adjustments based on educational need, enrollment patterns, and facility capacity. (Appendix B: *MERSD Regional Agreement)*

Current Elementary Configuration

Essex Elementary School (EES) serves students from the town of Essex in Grades Kindergarten through Grade 5. During the 2024–2025 school year, EES enrolled approximately 215 students across these grade levels. Students in Essex who require integrated preschool programming are served through districtwide early childhood programs located at Manchester Memorial Elementary School.

The Educational Program described in this document is based on a PreK–5 configuration at Essex Elementary School, which aligns with current grade span organization and instructional practices. Where applicable, the plan identifies considerations that would differ under alternate configuration scenarios.

EES operates under a single-classroom teacher model, in which one teacher provides core instruction across all subjects, supported by a collaborative team of specialists in reading, mathematics, special education, and social-emotional learning. Instructional design is grounded in a student-centered, inclusive approach, ensuring that all children learn in environments that promote academic rigor, creativity, and belonging.

Inclusion is a cornerstone of the MERSD philosophy. Students with disabilities are educated in the least restrictive environment, receiving push-in supports within general education classrooms whenever possible and pull-out instruction when individualized services are required. This model reflects the district's belief in the power of collaborative, flexible teaching structures that enable differentiation and maximize access to the full curriculum for every learner.

Historical Context and Task Force Findings

The district's current planning process builds on extensive prior study and community engagement. In response to the aging condition of both Essex and Memorial Elementary Schools, MERSD conducted a Facilities Needs Assessment (Habeeb & Associates, 2013) and subsequently formed the Elementary Configuration Task Force in Fall 2013. The Task Force—comprised of residents, parents, educators, and town officials—was charged with exploring whether the district should maintain its neighborhood school model or transition to a unified elementary configuration.

The group reviewed architectural analyses, demographic data, operational costs, and stakeholder feedback through surveys, interviews, and community forums across both towns. Three primary options were studied:

- **Option A:** Renovate and/or expand each school while maintaining neighborhood K–5 schools.
- **Option B:** Create an early education center (PreK–2) at one site and a Grades 3–5 school at the other.
- **Option C:** Construct a single, unified elementary school for all district students on a new site.

After months of analysis and outreach, the Task Force concluded that the neighborhood school model best meets the educational and community needs of Manchester and Essex. Key themes emphasized by stakeholders included:

- Neighborhood K–5 schools serve as community anchors, promoting civic engagement and walkability.
- Smaller schools allow for stronger relationships between staff, students, and families, supporting academic and social-emotional growth.
- Families expressed a strong preference for local access to elementary education within their town of residence.
- While operational efficiencies were discussed, research and peer-district comparisons revealed no significant cost savings associated with consolidation.

These findings, presented to the School Committee in 2014, continue to guide district planning for facility improvement and educational continuity. The conclusions of the Elementary Configuration Task Force remain foundational to MERSD's current Feasibility Study, affirming the educational and community value of maintaining two neighborhood-based elementary schools. (*Appendix C: Elementary Task Force Recommendations*)

Configuration Constraints Defined by the Regional Agreement

The Regional Agreement establishes specific requirements that must be upheld in any future facility or grade-span scenario:

- **Local Access to Elementary Education (Minimum K–4)**
  Students in elementary grades—at minimum Grades K–4—must be guaranteed the opportunity to attend school in the town in which they reside.
- **Requirement to Maintain Elementary Schools in Both Towns**
  The District must operate and maintain at least one elementary school facility in each member community.
- **Assignment Flexibility for Specialized Programming**
  Students with special needs may be served outside their home school as required to meet individualized services.
- **Location of Shared Facilities**
  Any schools serving students from both towns must be located within the geographical limits of the District.
- **Amendment Process for Changes to Grade Configuration**
  Material changes require a Regional Agreement amendment, approved by majority vote at Town Meeting in both Manchester and Essex.

These constraints ensure that grade-span planning remains aligned with statutory requirements, governance structures, and community expectations.

Feasibility Study and Configuration Options

As part of the ongoing MSBA Feasibility Study, MERSD is revisiting potential grade-level configurations and site options to ensure that long-term solutions align with both educational goals and fiscal responsibility (*Appendix D: Configuration Scenario Operational Impact*). The current options under consideration build upon the foundation established by the 2013–2014 Task Force:

Feasibility Study Essex Elementary Student Enrollment Configurations to be Studied		
Grades PreK–3 165 Students *Sited in Essex w/ Grades 4 & 5 integrated into Memorial*	Grades PreK–5 250 Students *Sited in Essex*	Grades PreK–5 515 students *Sited at Manchester Memorial with all Essex & Manchester students in one school*
SC Program Vote / Redistricting		SC Program Vote / Redistricting
SC Vote to Amend Regional Agreement		SC Vote to Amend Regional Agreement
Essex & Manchester Town Meeting Vote to Approve Regional Agreement Amendment		Essex & Manchester Town Meeting Vote to Approve Regional Agreement Amendment
Essex & Manchester Town Meeting Full Project Vote & Debt Exclusion Vote		

1. **PreK–3 Configuration (Essex-based)**
    - Approximately 165 students housed in Essex.
    - Grades 4 and 5 transition to Manchester Memorial.
    - Divides Essex elementary students across two sites.
    - Requires School Committee vote, Regional Agreement amendment, and approval in both towns.

Under a PreK–3 configuration, Essex students would transition to Manchester Memorial beginning in Grade 4. To accommodate this shift, Memorial would require four Grade 4 classrooms (currently three) and five Grade 5 classrooms, necessitating the reclamation of three general classrooms presently used by other grade levels, shared instructional spaces, or programs. In this model, the project room may need to be repurposed for world language instruction or special education services. Full implementation would require the utilization of approximately 16–18 general education classrooms at Memorial, reducing scheduling flexibility and limiting the school's ability to absorb future enrollment variability.

Under this scenario, the District would need to split both the ACE and RISE specialized programs between buildings, placing the lower elementary cohorts at Essex and the upper elementary cohorts at Memorial. This division decreases programmatic efficiency, reduces opportunities for staff collaboration, and introduces scheduling and supervision challenges. Co-located staffing, shared therapeutic spaces, and interdisciplinary collaboration are integral to effective delivery of services; splitting programs diminishes these advantages and increases operational complexity.

While core instructional practices would remain consistent, shifting Essex students at Grade 4 introduces additional complexity for school culture, family engagement, and social-emotional development. Memorial's curriculum and community programming are grounded in

partnerships with local agencies and civic organizations, and successful integration would require intentional planning to support belonging and continuity of experience. Typically, peer communities merge in Grade 6 as students transition to middle school. Advancing this convergence to Grade 4 compresses developmental readiness and would necessitate programming to support relationship-building, family onboarding, and shared identity development.

Splitting Essex's elementary cohort across two buildings also introduces operational burdens. Transportation needs increase, daily drop-off and pick-up become more complex for families with multiple children in different grade spans, and scheduling coordination becomes more challenging. While extended-day calendars and specials schedules can be managed equitably, daily logistics represent a meaningful shift in family experience.

2. **PreK–5 Configuration (Essex-based)**
    - Approximately 250 students housed in Essex.
    - Maintains the current neighborhood school model.

This configuration preserves existing instructional structures and maintains neighborhood school identity. Students remain connected to their community for the full elementary span, supporting social-emotional development, family engagement, and continuity of services. Grade-level staffing remains co-located, supporting collaborative planning, interdisciplinary teaming, and effective implementation of specialized programming.

3. **Unified PreK–5 Model (Manchester Memorial Site)**
    - Approximately 515 district elementary students in a single expanded building.
    - Requires multiple Regional Agreement amendments, dual Town Meeting votes, and debt exclusion approval.

Of the alternative proposals, full consolidation at Manchester Memorial aligns most directly with existing program delivery and maintains the current PreK–5 grade structure. This model would provide access to all grade-level teams for collaborative instructional work and support coherence in curriculum implementation. However, associated impacts include increased transportation for Essex families, concentrated traffic on Lincoln Street, and the relocation of tennis courts, which are used regularly for both school and community programming. Neighborhood circulation patterns and site capacity would require further study to ensure safety and accessibility.

Because this option would create a single elementary school serving approximately 515 students, the leadership team would require the addition of an assistant principal to support instructional leadership, staff evaluation, student services coordination, and supervision of daily operations. The scale of the program would also increase the number of classroom teachers and

related service providers at this site, necessitating expanded common planning spaces and collaboration areas.

Should this configuration be pursued, the District would need to develop comprehensive culture-building strategies to support the merger of two school communities. Subsequent District Improvement Plan cycles (particularly 2028–2031) would prioritize belonging, transition support, and community integration. School Improvement Plans would correspondingly emphasize climate, communication, and conditions for learning as students and families adapt to a unified environment. Identifying a leadership team experienced in organizational change will be essential.

A significant design challenge associated with this configuration is the need to maintain the neighborhood or cluster instructional model in a facility originally constructed to serve only one town. Grade-level teams would need to be grouped in multi-classroom "neighborhoods," supported by adjacent small-group rooms, breakout spaces, and shared instructional resources. While this is feasible, it poses complexity within the current footprint. Alternatively, space could be organized into lower-school (PreK–2) and upper-school (3–5) wings if this structure better aligns with an addition or renovation strategy.

District Core Values and Strategic Alignment

All configuration planning aligns with MERSD's core values:

- **Student-Centered Learning** – placing students at the heart of decision making.
- **Student Achievement** – maintaining high expectations and equitable access to rigorous learning.
- **Equity and Inclusion** – fostering belonging and opportunity for all learners.
- **Family and Community Partnerships** – engaging parents and towns as active partners in student success.
- **Responsible Use of Resources** – ensuring fiscal stewardship and long-term sustainability.

These principles ensure that facilities planning reflects both educational priorities and the character of the two-town district. *(Appendix E: Strategic Plan Overview & District Improvement Plan)*

Space Implications: The grade configuration selected will directly shape the design and organization of learning environments at Essex Elementary School. Regardless of the final model, the facility must support flexibility, collaboration, and inclusion across grade levels.

Class Size Policies

The Manchester Essex Regional School District (MERSD) adheres to the philosophy that small class size is essential to supporting student-centered, hands-on, and differentiated instruction. Research and district experience have consistently demonstrated that maintaining small, balanced class sizes enables teachers to build strong relationships with students, tailor instruction to individual learning needs, and promote active engagement in the learning process.

To support this philosophy, the MERSD School Committee has established class size benchmarks that serve as the foundation for scheduling, staffing, and facility planning. These benchmarks ensure equitable access to resources and consistency across grade levels while reflecting the distinct developmental needs of students as they progress from early childhood through the upper elementary years.

MERSD Elementary Class Size Benchmarks

Grade Level	Class Size Benchmark
Kindergarten	17–19
Grade 1	17–19
Grade 2	18–20
Grade 3	18–20
Grade 4	19–22
Grade 5	19–22

These benchmarks are used as the first building block of the scheduling process, guiding annual decisions about staffing, classroom allocation, and cohort organization. MERSD's scheduling and enrollment practices are designed to maintain educational quality and consistency even as small shifts in population occur.

Developmental Design Alignment

The district's class size philosophy directly informs the educational and architectural design of its elementary facilities. Learning environments are organized around three developmental groupings:

- **PreK–K:** Classrooms support exploration, play, and growing independence through flexible open space, zones for small-group activity, and safe, visible connections to outdoor learning areas.
- **Grades 1–3:** Classrooms emphasize active, connected learning environments with flexible groupings that encourage collaboration, literacy development, and foundational academic skills.
- **Grades 4–5:** Spaces are designed to support increased independence, problem-solving, and leadership opportunities through collaborative work zones and cross-grade interaction.

Planning and Flexibility

Essex Elementary School maintains twelve core K–5 academic classrooms within the elementary program, with two sections per grade as a baseline for planning and an occasional need to add a third section due to enrollment bubbles. Grade-level enrollment patterns fluctuate annually due to demographic variation, resulting in cohorts that, at times, may require three sections. These "bubble classes" advance through the grades together, creating potential variability in the number of classrooms needed at each level.

While enrollment can fluctuate from year to year, MERSD's historical patterns demonstrate the importance of maintaining sufficient core classrooms to preserve consistent cohort sizes as students advance through the grades. The design of the new facility must therefore include enough general classrooms to accommodate occasional enrollment bubbles without exceeding local class-size benchmarks or disrupting instructional groupings. Although MSBA space guidelines provide a baseline allowance for classroom count, maintaining one additional core classroom beyond the recommended minimum is necessary to ensure adherence to local class-size expectations, cohort continuity, and equitable access to high-quality instruction.

This additional instructional capacity supports master schedule efficiency, prevents oversized sections in bubble years, and allows specialist and intervention services to be scheduled equitably across grade levels. Moreover, it strengthens the district's ability to implement a Multi-Tiered System of Supports (MTSS) by increasing flexibility for small-group instruction, targeted intervention, and temporary instructional groupings without displacing existing classroom programming.
By aligning the facility design with educational expectations, MERSD will ensure that class-size benchmarks remain attainable and that every student continues to experience a personalized, engaging, and developmentally responsive learning environment throughout their elementary experience.

School Scheduling and Methodology

Essex Elementary School (EES) operates on a five-day schedule designed to provide consistent instructional time, predictable routines, and equitable access to enrichment and student support services. The schedule is structured around clearly defined instructional blocks that preserve uninterrupted time for core academic learning while ensuring students have access to specialists, movement, and social-emotional development opportunities.

Daily and Weekly Structure

The student day runs from 8:25 a.m. to 2:55 p.m. (a total of 6 hours and 30 minutes, or 390 instructional minutes). The schedule ensures balanced time across all subjects while allowing teachers flexibility to adjust pacing and grouping based on student needs.

Each grade level includes six 45-minute specialist blocks per week. Specialist subjects—Wellness/Physical Education, Visual Arts, Music, Library, Technology, and World Language (not currently running)—are strategically placed to support both student enrichment and teacher collaboration. With the planned reintroduction of World Language (projected Fall 2027) the Specialist subject rotation will be reevaluated with the intent of maintaining six blocks per week.

Scheduling Methodology

The EES schedule is built upon core instructional blocks that guarantee sufficient time on learning in literacy, mathematics, science, and history/social studies. These blocks are protected in the master schedule to maintain instructional continuity across the school and alignment across the district. Once instructional blocks are established, specialist periods, lunch, recess, and common planning times are layered in to create a cohesive daily rhythm. This approach allows for sustained, high-quality instruction and predictable transitions for students.

All classrooms in grades PreK–5 are self-contained, giving teachers flexibility to extend or shorten lessons based on formative assessment and student engagement. This design supports MERSD's philosophy of student-centered, differentiated learning, emphasizing responsive teaching and strong relationships.

Student Support

MERSD implements a Multi-Tiered System of Support (MTSS) to ensure that all students receive proactive, evidence-based instruction and intervention. MTSS provides a comprehensive structure that offers a continuum of supports organized into three tiers of increasing intensity:

- Tier 1: High-quality, differentiated core instruction for all students.
- Tier 2: Short-term, targeted support to address academic and social emotional skill gaps within or outside the classroom setting.
- Tier 3: Intensive, frequent, and explicit focused interventions for students in need of more support and instruction.

Interventions are designed to be delivered within or adjacent to the classroom by teachers and interventionists using research-based programs aligned to student data. Continuous progress monitoring informs instructional adjustments and ensures timely, responsive support.

Currently, the physical layout of the existing Essex Elementary School limits the efficiency of this system. Students often travel across the building to access shared intervention rooms or work at tables within active classrooms. These settings can create distractions, reduce instructional time, and isolate intervention from core learning routines.

The new facility will address these limitations by incorporating localized breakout spaces adjacent to classrooms. These areas will:

- Bring supports directly to students, minimizing transition time;
- Normalize small-group instruction and flexible learning for all students, including those receiving MTSS, MLL, and special education services;
- Provide private, well-equipped environments for targeted instruction and assessment; and
- Strengthen collaboration between classroom teachers, specialists, and support staff.

This approach reflects MERSD's commitment to inclusive, equitable, and accessible learning environments that respond to individual student needs.

Illustrative Weekly Time on Learning

Content Area	Approximate Weekly Time Allocation
Social-Emotional Learning & Morning Meeting	5 × 15 min
Literacy (Reading, Writing, Word Study)	K–2: 5 × 90 min + 4 × 25 min 3–5: 5 × 90 min
Mathematics	5 × 75 min
Science / Social Studies	K–2: 5 × 45 min 3–5: 4 × 70 min + 1 × 45 min
Specialists	6 × 45 min
Lunch / Recess	5 × 45 min

Specialist Programming

Students participate weekly in a range of specialist classes that enrich the academic program and foster creativity, movement, and inquiry:

- Wellness / Physical Education (twice weekly)
- Visual Arts
- Music
- World Language (when offered)
- Library
- Technology
- Instrumental Music (individual or small-group pull-outs)

Instructional Coherence and Collaboration

The EES schedule balances student learning needs with teacher collaboration. By aligning specialist blocks across grade levels, teams share common planning periods to analyze data, coordinate MTSS supports, and plan interdisciplinary instruction.
This structure reflects MERSD's strategic priorities of Authentic Learning, Social-Emotional Wellness, and Inclusive Culture, ensuring that daily practice embodies the district's mission of rigorous, responsive, and relationship-based instruction.

Space Implications: The EES scheduling model and instructional philosophy have direct implications for the design of the new facility. The emphasis on protected instructional blocks, flexible grouping, and integrated student supports requires spaces that are adaptable, interconnected, and conducive to both focused and collaborative learning.

Grade-level classroom neighborhoods should be organized to promote seamless transitions between instructional settings. Each cluster of classrooms should include:

- Small breakout rooms for Tier 2 and Tier 3 MTSS interventions, English Learner instruction, and small-group special education support;

- Shared collaboration areas that support flexible grouping, cross-class projects, and team teaching;
- Teacher planning and prep spaces located within the neighborhood to foster collaboration among general educators, specialists, and interventionists;
- Visibility and accessibility that enable supervision, inclusion, and smooth student movement between spaces.

Specialist areas such as Art, Music, Wellness/PE, and Technology should be located to balance student access, acoustic separation, and cross-disciplinary connections. Their adjacency to grade-level neighborhoods will reduce transition time while maintaining dedicated zones for creativity, movement, and exploration.

By incorporating localized intervention spaces and shared instructional zones, the new Essex Elementary design will reduce lost learning time, strengthen inclusion, and create a learning environment that fully embodies MERSD's vision for student-centered, equitable, and future-ready education.

Teaching Methodology & Structure

MERSD blends progressive pedagogy with time-tested practices. Instruction is differentiated based on formative assessment and delivered through whole-group, small-group, and individual learning with "anywhere, anytime" technology access. Multi-Tiered Systems of Support (MTSS) provide timely interventions and extensions across academic and social-emotional domains. Universal Design for Learning (UDL) practices ensure equitable access.

The Manchester Essex Elementary Schools employ a broad range of teaching methodologies that balance progressive practices with proven traditional approaches. Our curriculum and instructional program are designed to support our mission, vision, and core values.

Organization of the School

Essex Elementary School is organized to support student-centered, inclusive, and developmentally responsive learning experiences. The current model is structured around grade-level classroom cohorts, with students grouped by grade and supported by classroom teachers, specialists, and student services staff. As the district plans for the renovation or replacement of the building, the future vision shifts toward multi-grade learning neighborhoods that create more flexible pathways for collaboration, targeted instruction, and peer-to-peer interaction. These neighborhoods are designed to harness the natural energy of young learners and promote student agency by supporting a full range of engagement types—student-to-student, student-to-teacher, and teacher-to-teacher—within a purposefully interconnected environment.

Primary student learning experiences are organized within two instructional wings: a PreK–3 wing supporting early childhood and early elementary development, and a Grades 4–5 wing supporting

upper-elementary readiness for middle school. Each wing is intentionally designed to create space for small-group collaboration, quiet individualized work, and whole-school community experiences, allowing students to experience both intimate learning environments and shared celebrations that build belonging.

Within these wings, learning neighborhoods will serve as shared environments that extend instruction beyond single classrooms. These spaces will include visually connected commons areas, flexible furnishings, and transparent sightlines that allow teachers to supervise while enabling students to engage in hands-on, project-based learning. Neighborhoods support cross-grade partnerships, integrated service delivery, and access to community partners—all of which align with the district's instructional vision and project goal of creating environments where students take active ownership of their learning through meaningful collaboration.

To strengthen access to academic and social-emotional support, the new design integrates small-group rooms and breakout spaces directly adjacent to classrooms. These areas support MTSS intervention, multilingual learner instruction, special education services, quiet testing environments, and teacher-student conferencing. This configuration reduces transition time, increases privacy for assessment, and keeps students meaningfully connected to Tier 1 instruction. It also normalizes flexible movement and access to support, reinforcing instructional equity.

The school is led by a Principal and supported by an Administrative Assistant, School Psychologist, Special Education Team Chair, School Adjustment Counselor, and School Nurse. This interdisciplinary team coordinates academic, behavioral, and mental-health supports and serves as a central resource for students, staff, and families. Locating these roles within a shared office suite in the new facility will enhance communication, privacy, and timely response to student needs.

Staff collaboration is supported through common planning time three times per month, cyclical data meetings, and shared prep periods. These structures enable teams to analyze student learning, align instructional strategies, and adjust supports based on data. Teachers, specialists, and interventionists collaborate to design flexible grouping structures and enrichment cycles that promote personalized learning.

The new Essex Elementary School should be designed to remove structural barriers that currently limit timely access to academic and social-emotional supports. By embedding small-group rooms, sensory spaces, and collaboration zones directly within each learning neighborhood, the building itself becomes an extension of the district's Multi-Tiered System of Support. This approach minimizes transitions, reduces distractions, preserves valuable instructional minutes, and normalizes differentiated learning as part of school culture. Thoughtful spatial organization ensures that every student can access targeted support, enrichment, and opportunities for connection within a coherent, flexible, and inclusive environment—advancing MERSD's commitment to equitable outcomes for all learners.

Curriculum Delivery Methods and Practice

The Essex Elementary School employs a broad- range of teaching methodologies that strive to balance the best of progressive methodology with tried and true approaches. Our curriculum and instructional program are designed to support our District mission, vision and core values. To that end, we provide a rigorous core curriculum that is grounded in a rich program of experiential and exploratory learning experience, designed to utilize an interdisciplinary approach, and to create connections between learning and the real world. It is our intent that through this process we can create deeper more meaningful learning as well as expose students to a broad range of experiences that may help them to identify areas of interest or strength and form the foundations for the development of individual pathways to success.

Administrative & Academic Organization

Overall, MERSD elementary level curriculum and instruction is delivered through heterogeneously grouped inclusive classrooms in which the elementary classroom teacher is responsible for the delivery of all core content instruction. All classroom lessons are differentiated based on formative assessment data and whole group, small group, and individual work is integrated into all lessons with an increasing number of lessons relying on anywhere, anytime access to technology. In addition to general differentiated instruction, students receive a variety of support services that are provided through inclusion and push-in services whenever possible.

Academic Program Description & Space Needs Considerations

The curriculum program titles may change over time, our educational philosophy and methodology will continue to require that future program considerations will also be based on differentiated, hands-on, and experiential learning strategies that require space for movement, demonstration, and small group work. We have provided summaries of each of the core content and program areas, and grade level curriculum guides. (Appendix F: *Grade-Level Curriculum Guides*). Through the Education Visioning process we identified the following principles that guide our practice and align with our District Core Values as well as our District and School Improvement Plans. (*Appendix E)*

English Language Arts / Literacy

The English Language Arts program is grounded in evidence-based instructional practices aligned with the science of reading and the Massachusetts Curriculum Frameworks. Instruction is explicit, systematic, and intentionally sequenced, with rich text experiences that integrate reading, writing, speaking, and listening across multiple genres. Students engage in authentic literacy tasks that develop comprehension, written expression, oral language, and academic vocabulary. Writing is embedded as a daily practice across content areas and revisited through drafting, conferencing, and revision cycles.

Multi-tiered systems of support allow for targeted small-group and one-to-one instruction driven by ongoing data analysis and progress monitoring. The Wonders 2020 program serves as the district's core literacy resource and has been rated "Meets Expectations" by DESE's CURATE and highly by EdReports. In grades K–1, teachers use the multisensory Heggerty curriculum to build foundational phonemic awareness skills, supported by Wonders decodable texts that reinforce early reading behaviors. As students progress, instruction expands to complex texts, writing across genres, and collaborative discourse.

All classrooms promote student choice through diverse classroom libraries stocked with trade books representing a wide range of topics, genres, reading levels, and perspectives. Choice-based reading fosters motivation, independence, and a love of literacy. Speaking and listening are developed through partner work, small-group dialogue, shared reading, presentations, and collaborative discussions.

ELA instruction requires flexible, student-centered learning environments that support multiple instructional modes— whole group lessons, systemic instruction in foundational skills in whole group and small groups, reading and responding to complex text, conferencing, small group targeted skill development, writing instruction, oral language development, and independent literacy work. Classrooms should provide defined areas for classroom libraries, conferencing, and small-group instruction, along with adaptable furniture that can be easily reconfigured for different activities. Transparent sightlines and proximity to adjacent breakout spaces allow for small-group intervention, coaching cycles, and interdisciplinary collaboration. Writable surfaces, access to digital projection, and student devices support drafting, revision, shared publishing, and presentation.

Collectively, these design features create a literacy-rich environment that fosters communication, collaboration, and engagement—key components of MERSD's instructional philosophy—and ensure that every student can access the individualized support necessary to become a confident, capable reader and writer.

Mathematics

Mathematics instruction at Essex Elementary School is grounded in the MA Curriculum Frameworks and promotes hands-on, learning designed to build conceptual understanding and confidence in mathematical thinking. We seek to center student discourse and encourage students to view themselves as problem solvers who value and enjoy mathematics while engaging in the Standards for Mathematical Practice. Teachers employ a variety of manipulatives, visual models, and flexible groupings to support conceptual development through exploration, discourse, and application. Current instructional methodologies include the use of vertical non-permanent work surfaces that allow students to share thinking visibly, take intellectual risks, and learn from peer strategies.

Flexible instructional spaces are essential to support this approach. Classrooms must accommodate whole-group mini-lessons, small-group explorations, partner tasks, and mixed-ability collaborative work. Adequate storage for concrete manipulatives, games, consumable resources, number tools, and formative assessment resources is necessary to ensure materials are accessible and consistently incorporated into daily instruction. Technology integration, including projection tools and digital platforms, supports problem solving, data exploration, and real-world applications.

Design Considerations: To effectively support high-quality mathematics instruction, classroom and neighborhood spaces should include:

- Flexible layouts that enable rapid transitions between whole-class instruction and multiple small-group breakouts.
- Adjacent breakout rooms for targeted intervention, enrichment, assessment, and conferencing aligned with MTSS tiered supports.
- Adequate, organized, and easily accessible for students storage for manipulatives, math tools, and instructional materials.
- Vertical non-permanent work surfaces (e.g., whiteboard walls) to promote mathematical discourse, sense-making, and visibility of student thinking.
- Writable table surfaces and access to digital projection to support modeling and student demonstrations.
- Robust device access and reliable wireless connectivity to support simulations, interactive tasks, and digital fluency and access to adaptive online learning.

Collectively, these design features create an environment that fosters deep conceptual understanding, student agency, and positive math identities—key priorities within MERSD's instructional philosophy.

Science

Science education at Essex Elementary School builds real-world connections by centering learning around phenomena-based instruction, emphasizing hands-on inquiry, experiential learning, and the integration of engineering and environmental literacy. In grades K–2, students engage with the Mystery Science curriculum, which introduces foundational scientific thinking through investigations, observations, and modeling. In grades 3–5, students use the KnowAtom program, which deepens conceptual understanding through inquiry and applies discipline-connected engineering design processes. Across all grades, students design experiments, construct prototypes, test variables, and revise their thinking based on evidence, fostering curiosity, persistence, and creativity.

Instructional approaches require learning environments that support whole-group lessons, collaborative small-group investigations, and long-term project work. Students regularly use scientific tools, manipulatives, large amounts of consumables through inquiry and

experimentation, technology platforms, and engineering materials that must be accessible, storable, and safely managed. Project work is iterative and often spans multiple days or weeks, making secure storage and flexible space essential for preserving student learning over time.

Environmental awareness is a central tenet of MERSD's vertically aligned K–12 environmental literacy strand. At Essex Elementary, gardens, a greenhouse, and outdoor learning areas provide opportunities for interdisciplinary projects. Partnerships with local organizations expand field-based learning and connect students to authentic environmental stewardship. Additional outdoor spaces support both science instruction and social-emotional well-being, offering settings for quiet reflection, observation, and nature-based exploration.

Looking ahead, MERSD plans to deepen its Science, Technology, Engineering, as well as Digital Literacy/Computer Science programming to support enhanced integration across STEM learning at the elementary level. To build on and deepen the work currently taking place, we aim to expand hands-on, interdisciplinary learning opportunities; however, the current physical setup of the building creates barriers to fully implementing these experiences due to limitations in space, storage, safety, and support for longer-term project work. Students will engage in design thinking and interdisciplinary problem solving that draw on science, mathematics, and engineering concepts. As this program grows, facilities will need to support increasing complexity, providing durable work surfaces, tool storage, electrical access, and zones for project iteration.

Design Considerations: STE instruction is primarily delivered within classrooms, as the current project space is inadequate for this purpose, which limits full implementation of our current curriculum. In the future STE lessons will occur in both classroom and dedicated project spaces that should be intentionally designed to support applied hands-on learning. Science and engineering instruction at Essex Elementary requires learning environments that are flexible, durable, and intentionally equipped for hands-on investigation. Classrooms and shared STEM spaces should include:

- Access to sinks, counter space, and water sources to support experimentation, safe cleanup, and material handling.
- Durable, non-slip, easy-to-clean flooring appropriate for spills, tools, and frequent reconfiguration.
- Generous storage, including closed cabinets, open shelving, mobile bins, and secure areas for in-progress lab work.
- Distributed electrical access along perimeter walls and within work zones to support microscopes, robotics systems, sensors, and testing equipment.
- Flexible furniture and large work surfaces that accommodate multi-student collaboration and prototype building.
- Clear sightlines to promote safe supervision and facilitate co-teaching and coaching.
- Space for long-term investigations so materials can remain set up without disrupting other routines.

- Adjacency to outdoor learning areas to support field observations, environmental data collection, and nature-based inquiry.

To accommodate the expansion of elementary Technology & Engineering, a shared project space that can accommodate hands-on project based learning is recommended, featuring:

- Ventilation and safety equipment, including eyewash access and protected storage for tools or low-grade consumables.
- Zones for design, construction, and testing aligned with the Engineering Design Process.
- Appropriate flooring and durable worksurfaces able to withstand adhesives, cutting tools, and moisture.

  Collectively, these design features remove current spatial limitations—such as limited sink access, long travel distances, and insufficient storage—and allow students to engage deeply in authentic STEM experiences. The result is a science and engineering program that fosters investigation, encourages persistence, and prepares students with the habits of mind essential for future learning.

History / Social Studies

The History and Social Sciences program at Essex Elementary School is designed to help students develop as civic-minded, responsible members of society who understand and appreciate both the diversity and commonality of human experience. Instruction is inquiry-based and project-oriented, emphasizing relevance, engagement, and interdisciplinary connections. Students learn to ask compelling questions, analyze primary and secondary sources, construct arguments supported by evidence, and communicate their thinking in a variety of formats.

At the elementary level, MERSD uses DESE-vetted resources to build a coherent, vertically aligned program aligned to the Massachusetts History and Social Science Framework. In Grades K–2, teachers implement the Private i History Detectives curriculum as a foundational resource, which introduces core disciplinary concepts through developmentally appropriate investigations, artifacts analysis, and community-based inquiry. In Grade 5, MERSD has begun implementing Investigating History, a DESE-endorsed program that emphasizes source analysis, civic discussion, and writing from evidence. A phased rollout of this program in Grades 3 and 4 is scheduled for the 2026–2027 school year, ensuring consistent instructional design across the upper-elementary grades.

Across all grade levels, units integrate history, geography, civics, and economics to deepen students' understanding of culture, community, and the ways societies change over time. Students explore the roles of individuals and groups in shaping history, build empathy and perspective-taking, and engage in collaborative projects that connect past and present. Activities may include community interviews, map making, simulations, and service-learning experiences, creating authentic connections to students' lives.

Effective implementation of an inquiry-based, project-oriented model requires:

- Flexible instructional spaces that support whole-class discourse, small-group collaboration, and interdisciplinary project work.
- Writable surfaces, breakout rooms, and access to digital resources to facilitate research, drafting, peer feedback, and revisions.
- Technology integration that supports digital research, primary source analysis, and multimedia presentation tools.

These design features enable teachers to differentiate instruction, promote active learning, and foster the civic discussion, analysis, and collaborative problem solving outlined in the History and Social Science Framework.

By engaging students in meaningful investigations rooted in real-world contexts, Essex Elementary's History and Social Sciences program cultivates curiosity, empathy, and an emerging sense of agency. Students learn how community systems work, why diverse perspectives matter, and how their voices contribute to a stronger, more equitable society—reflecting MERSD's commitment to developing thoughtful, informed, and compassionate citizens.

World Languages

The World Language program at Essex Elementary School will introduce students to world languages, begin to build skills to develop fluency and proficiency, while fostering curiosity about global cultures and communication. Instruction emphasizes listening and speaking in the early grades and gradually builds toward reading and writing proficiency. Lessons integrate songs, stories, games, movement, and role-play to make language learning engaging and developmentally appropriate. Cultural exploration helps students build empathy, perspective-taking, and global awareness—supporting MERSD's mission to develop responsible, connected citizens prepared to thrive in an increasingly interconnected world.

Although elementary World Language instruction is not currently offered due to historic budget constraints, the district is committed to restoring this specialist course at the elementary level as part of the long-term academic program. When implemented, instruction will be delivered by a certified World Language teacher and scheduled as part of the specialist rotation.

Aligned with the Massachusetts Curriculum Framework for World Languages, the elementary program will use a proficiency-based approach that builds student skills across the domains of communication, cultures, connections, comparisons, and communities. Students will develop foundational vocabulary, language structures, and cultural knowledge through authentic listening and speaking tasks, while making meaningful connections to peers, community, and global contexts. Over time, experiences at the elementary level will serve as a bridge to the district's vertically aligned 6–12 World Language pathways.

To support interactive and engaging language learning, instructional spaces should include:

- Flexible furniture arrangements that accommodate movement, pairing, and small-group dialogue.
- Projection and audio systems that allow students to hear authentic models of target-language pronunciation and intonation.
- Breakout areas for partner practice, conferencing, and oral proficiency tasks.
- Access to digital tools for multimedia exploration, cultural immersion, and linguistic comparison.

The design of these spaces should reflect the program's emphasis on active participation, communication, and collaborative learning. By introducing multiple languages and cultural perspectives early in students' educational careers, Essex Elementary builds strong foundations in global citizenship, cultural competency, and lifelong language learning.

Academic Support Programing Spaces

Essex Elementary School's approach to academic support reflects the Manchester Essex Regional School District's commitment to providing equitable access to high-quality learning opportunities for every student. The academic and social-emotional supports offered at EES are delivered through a comprehensive Multi-Tiered System of Support (MTSS) and aligned with the district's core values of student-centered learning, inclusion, and wellness.

EES's support model integrates explicit social-emotional learning (SEL) instruction, targeted academic intervention, and environmental features that promote readiness to learn. These systems work together to ensure that each child's cognitive, emotional, and behavioral needs are met within a supportive and inclusive school community.

Social-Emotional Learning and School Climate: EES emphasizes the importance of developing the whole child—fostering emotional intelligence, empathy, and self-regulation alongside academic achievement. The school incorporates multiple evidence-based frameworks and practices that build emotional awareness and a strong sense of belonging:

- **RULER:** Explicit instruction in recognizing, understanding, labeling, expressing, and regulating emotions.
- **Responsive Classroom:** Daily community-building routines that create safe, joyful, and engaging classrooms.
- **Second Step:** Structured lessons in anti-bullying, emotion management, decision-making, and collaboration.
- **Culturally Responsive Teaching:** Emphasizes academic achievement, cultural competence, and sociopolitical awareness through ongoing professional learning and reflective practice.
- **Individual and Group Counseling Services:** Targeted supports that strengthen coping, communication, and problem-solving skills.

Environmental supports for SEL are woven into the fabric of the school design. Sensory paths, calming nooks, natural light, and outdoor learning extensions will promote emotional regulation and readiness to learn. These physical features will be located within each learning neighborhood and will reinforce instructional practices such as RULER and Responsive Classroom by linking the emotional environment to the physical environment.

Multi-Tiered System of Support (MTSS): MERSD's vision for MTSS is to ensure that all students experience high-quality, inclusive instruction across both academic and social-emotional domains. MTSS provides a proactive and systematic framework that allows educators to identify, monitor, and respond to student needs before they escalate into more significant challenges. The model is organized across three tiers of support:

- **Tier 1:** Core instruction designed to be universally accessible and differentiated to meet diverse learning needs.
- **Tier 2:** Targeted, small-group interventions for students requiring additional reinforcement in specific skill areas.
- **Tier 3:** Intensive, individualized supports tailored to students with significant or persistent learning or behavioral needs.

Implementation depends on collaboration, continuous data collection, and progress monitoring to ensure that interventions are responsive and evidence based. Student progress is reviewed regularly to determine instructional adjustments, resource allocation, and the need for additional support.

Interventions are delivered by classroom teachers, interventionists, and specialists both within and adjacent to the classroom, ensuring that supports remain connected to core instruction. Research-based programs are selected and differentiated based on assessment data and aligned to each tier of support.

Currently, the configuration of the existing Essex Elementary School poses challenges for effective intervention delivery. Students often transition long distances across the building to access shared instructional spaces or receive services at small tables within active classrooms. These conditions can create distractions, limit privacy, and reduce instructional time.

The new school design will address these barriers by incorporating localized breakout spaces within each classroom neighborhood. These spaces will:

- Bring supports directly to students, reducing lost time and improving instructional continuity.
- Normalize flexible, small-group learning for all students, including those receiving MTSS, MLL, or special education services.
- Provide quiet, well-equipped environments for focused intervention, assessment, and conferencing.

- Strengthen collaboration between general education teachers, interventionists, and support staff.

This integrated model reflects MERSD's ongoing commitment to inclusive, data-informed, and student-centered instruction, ensuring that every learner has the opportunity to succeed within their classroom community. By creating space for flexible small-group instruction, student collaboration, and teacher conferencing within each neighborhood, the design strengthens our goal of positioning students as active leaders in their learning, supported by environments that adapt to multiple modes of engagement.

Space Implications for Academic Support

The design of the new facility must reflect MERSD's educational philosophy by incorporating flexible learning environments that support student agency, small-group collaboration, and movement. These goals require spaces that enable multiple types of engagement, including quiet reflection, hands-on exploration, peer collaboration, and teacher-facilitated conferencing. Thoughtful adjacency between classrooms, breakout rooms, and shared learning spaces will allow students to work as leaders within their learning community.

Each grade-level neighborhood should include:

- **Localized breakout spaces** directly adjacent to classrooms for small-group and one-to-one instruction aligned with MTSS.
- **Dedicated calming and sensory zones** to support regulation and readiness for learning.
- **Collaborative work areas** for staff to analyze data, plan interventions, and coordinate services.
- **Visibility and proximity** that promote supervision, inclusion, and minimal disruption during transitions.

As we adjust our intervention and student support services to go to students in their learning spaces, the adults providing support will shift from a classroom to a group office. This will provide our support staff, including Math Specialist, Reading Specialist, Instructional Coaches, MLL teacher, and Title 1 staff, to have a location for planning and peer collaboration in a centralized office location while ensuring student supports are provided at point of learning locations. Shared resource rooms for counseling, speech-language therapy, occupational therapy, and other related services should be centrally located within the instructional core to ensure accessibility and collaboration. Design features such as natural light, acoustic control, and flexible furnishings will enhance the effectiveness of these learning environments.

By embedding support spaces within classroom neighborhoods and aligning the physical environment to instructional practice, the new Essex Elementary School will model MERSD's vision of a responsive, inclusive, and future-ready learning community—one that supports every child's academic growth and emotional well-being.

Student Guidance & Support Services

The Manchester Essex Regional School District is committed to fostering the academic, social, emotional, and physical well-being of all students. Essex Elementary School provides a comprehensive network of guidance and health services that emphasize prevention, early intervention, and responsive care. These supports are integral to the district's whole-child philosophy and are aligned with state and national best practices.

Counseling and Guidance Services

EES provides a range of counseling and adjustment services to promote emotional health, social development, and student success. Counseling programs are designed to build resilience, foster self-awareness, and support students in developing positive relationships and coping strategies. Services include:

- Individual and small-group counseling to address social, emotional, or behavioral needs.
- Screenings, consultation, and crisis intervention in collaboration with teachers and families.
- Classroom-based lessons and community-building activities that reinforce SEL instruction and promote a positive school climate.
- Collaboration with external mental health providers and community agencies to ensure continuity of care when needed.

The school psychologist and school adjustment counselor play key roles in delivering these services. Their work supports both individual student needs and broader school-based initiatives related to mental health, inclusion, and positive behavior support.

To ensure accessibility and confidentiality, counseling and psychology offices should be located within or adjacent to the main office suite, allowing for seamless coordination with the principal, nurse, and administrative staff. Each office should be large enough to accommodate individual meetings or small groups of 6–8 students in a private, welcoming environment conducive to therapeutic work and group discussions.

Health Services

Health Services at Essex Elementary School operate under the comprehensive framework established by the Massachusetts Department of Public Health (DPH) School Health Manual, which provides the roadmap for ensuring compliance with state regulations and promoting student wellness. The goal of the Health Services program is to appraise, protect, and promote student health and to ensure that each child is ready to learn each day.

Core functions include:

- Preventive care through screenings, immunization monitoring, and disease prevention.
- Care coordination with families and community healthcare providers to ensure continuity of services.
- Emergency response and first aid for illness or injury during the school day.

- Health education and counseling to build student understanding of wellness and self-care.
- Support for attendance and engagement, ensuring that students' health needs do not become barriers to learning.

The health suite will provide both semi-private and private areas to address a wide range of daily needs—from first aid to medical assessments and confidential consultations. The design will include:

- A dedicated nurse's office with exam space, cot areas, and secure medication storage.
- Separate areas for rest, isolation (when required), and confidential health assessments.
- Access to handwashing stations, refrigeration, and basic medical equipment for screenings and routine procedures (such as vision and hearing tests).
- Proximity to the main office suite and administration, allowing for efficient communication and student supervision while maintaining privacy.

The health suite will be equipped with modern tools and designed to meet all Massachusetts DPH mandates, ensuring compliance with state guidelines while providing a calm, child-friendly environment that supports student safety and well-being.

Space Implications for Guidance and Health Services

To deliver high-quality guidance and health services, the counseling and health suite should be designed as an integrated component of the main office area, supporting collaboration between student support staff and building administration.

- Counseling and psychology offices should each provide space for individual and small-group work, equipped with soft seating, acoustic privacy, and access to natural light.
- The health suite should include both public-facing and private areas, including waiting space, examination areas, isolation rooms, and secure medical storage.
- Proximity to the main entrance and administrative offices will allow quick access for emergencies while maintaining privacy for students receiving care.

This configuration ensures that guidance and health services are centrally located, accessible, and aligned with the district's vision for a safe, healthy, and supportive learning environment. Together, these spaces will foster physical and emotional well-being and strengthen the school's ability to respond proactively to the diverse needs of its students.

Teacher Planning

Manchester Essex Regional School District (MERSD) recognizes that the quality of instruction is strengthened by providing teachers with dedicated time and collaborative spaces to plan, reflect, and

refine their practice. At Essex Elementary School (EES), teacher collaboration is a cornerstone of the instructional program and a key driver of continuous improvement in student learning.

Collaborative Planning and Professional Practice

EES teachers engage in collaborative planning cycles that bring together classroom teachers, specialists, and interventionists to analyze data, design instruction, and monitor student progress. Grade-level teams meet daily to review formative assessment data, plan differentiated lessons, and coordinate intervention and enrichment activities. These ongoing conversations ensure that instruction remains responsive to the needs of individual learners and aligned to district goals for student achievement and inclusion.

Every teacher has common planning time five days per week, providing the opportunity for regular collaboration within and across grade levels. In addition, extended Wednesdays are built into the district calendar to allow for professional learning, curriculum development, and interdisciplinary collaboration. This structured time supports the district's teacher-centered model of continual improvement—one that values reflection, shared practice, and innovation in teaching and learning.

Through these structures, teachers work in grade-level and cross-disciplinary teams to design flexible grouping models, intervention cycles, and project-based learning experiences. Data analysis is used to inform decisions about instructional pacing, resource allocation, and support services within the Multi-Tiered System of Support (MTSS) framework.

Planning Spaces and Collaboration Environments

To support professional collaboration, the new Essex Elementary School will include adult-friendly common workspaces located within or near grade-level neighborhoods. These spaces will provide comfortable, technology-equipped environments where teachers can plan, meet, and engage in professional dialogue.

Design considerations include:

- Shared work areas for grade-level teams and specialists to collaborate on lesson planning and data review.
- Dedicated spaces for professional development sessions, department meetings, and full staff gatherings.
- Access to technology and instructional materials that support data-driven decision-making and resource sharing.

By embedding collaboration and planning spaces within the instructional core, MERSD will ensure that teachers have immediate access to colleagues, resources, and student data—promoting a culture of professional learning, continuous reflection, and instructional excellence.

Space Implications for Teacher Planning: The design of the new Essex Elementary School must reflect the district's commitment to collaboration, professional learning, and instructional coherence. MERSD is committed to implementing current, research-based instructional practices and supporting the ongoing professional growth of educators. Through the district's embedded coaching model, instructional coaches provide in-the-moment feedback, modeling, guidance, and targeted support to strengthen classroom practice and improve student outcomes. Because this coaching model is integrated into the academic day, teachers require adult-friendly spaces that are intentionally designed to support professional dialogue. These spaces should comfortably accommodate small groups, provide reasonable privacy for observation debriefs and data discussions, allow access to digital resources, and be located in close proximity to classroom neighborhoods to support efficiency and instructional continuity.

These spaces should include:

- Team planning rooms with technology access for data analysis, lesson design, and virtual collaboration.
- Flexible meeting areas that can accommodate both small-group discussions and larger professional learning sessions.
- Storage and resource areas for curriculum materials, student data binders, and shared instructional tools.
- Sound-mitigating finishes and natural light to create comfortable, productive work environments.

In addition to neighborhood-based collaboration zones, a centralized professional workroom or staff commons should be included to support all-staff meetings, professional development, and interdisciplinary work. The inclusion of these adult-centered learning environments ensures that collaboration—an essential component of MERSD's instructional model—is embedded into the daily rhythm of school life.

This design approach underscores the district's belief that supporting teacher collaboration directly enhances student learning outcomes, aligning physical space with MERSD's culture of continual reflection, shared leadership, and professional growth.

Professional Development

Manchester Essex Regional School District is committed to cultivating a culture of continuous improvement through high-quality professional learning. Instructional growth is supported through ongoing coaching cycles, collaborative planning structures, curriculum review processes, and data-informed reflection. Teachers participate in regular collaborative teams that examine formative assessment data, refine instructional strategies, and strengthen alignment across grades.

Extended Wednesdays are built into the district calendar to provide dedicated time for districtwide professional learning, team-based curriculum development, and interdisciplinary collaboration.

Continual curriculum reviews ensure vertical alignment and support ongoing implementation of evidence-based practices and high-quality curriculum. Instructional coaching in literacy, mathematics, and student services provides teachers with embedded opportunities to reflect on classroom practice, analyze student progress, and receive real-time feedback.

Educators transitioning between grade spans or instructional roles receive targeted support, including mentoring, observation cycles, and specialized training aligned to their new assignments. When programmatic changes impact licensure or instructional models, the district offers retraining and certification pathways to ensure staff are fully prepared. Professional development prioritizes inclusive practices, Universal Design for Learning (UDL), social-emotional learning, multilingual learner supports, and culturally and linguistically sustaining practices—all central to MERSD's vision for equitable access.

The new facility will reinforce professional learning by providing flexible collaboration spaces, technology-equipped meeting rooms, and areas for demonstration, reflection, and coaching. By aligning physical design with instructional priorities, Essex Elementary will continue to foster a collegial environment where educators grow together, innovate, and respond to student needs.

Pre-Kindergarten Program (Integrated)

The Manchester-Essex Regional School District (MERSD) currently operates a district-wide integrated preschool program housed at Manchester Memorial Elementary School. As established during the Memorial Building Project, two preschool classrooms were constructed at Memorial, with an additional two classrooms to be included in the future renovation or replacement of Essex Elementary School. This expansion will fulfill the district's long-term goal of providing equitable Pre-K access in both communities, ensuring that all families with three- and four-year-old children have the opportunity to participate in high-quality early learning within their town.

The preschool program serves approximately 30–40 students, including both tuition-paying peers and students with disabilities, fostering an inclusive environment that supports social, emotional, and academic growth for all learners. Enrollment is currently limited by space; however, demographic projections indicate a potential capacity of 45–75 students once the additional classrooms become available. The district has transitioned to a five-day, full-day model for three- and four-year-olds (8:30 AM – 2:55 PM) to better meet family needs and to provide extended opportunities for play-based learning, early literacy, and social development.

The Manchester-Essex Regional School District Preschool is an integrated early-childhood program where children of all abilities learn socially, intellectually, and physically within a developmentally appropriate and nurturing environment. Students with identified special needs receive speech and language, occupational, and physical therapy within the classroom as part of the daily curriculum and through individualized instruction. Students without special needs, known as peer pals, serve as role models while learning at their own pace. This purposeful mix of peers and students with disabilities fosters empathy, social awareness, and a strong sense of self-worth for all children.

Play is an essential focus of the program, as children learn about their world through exploration, discovery, and collaboration. Because the preschool is part of the Manchester-Essex Regional School District, children not only acquire foundational academic and social skills for entering kindergarten but also develop an early sense of belonging and familiarity with the district community.

Pre-K Curriculum and Instructional Model

The MERSD integrated preschool program follows a developmentally appropriate, play-based curriculum aligned with the Massachusetts Guidelines for Preschool Learning Experiences. Instruction is organized around whole-group and center-based learning, with six structured centers that promote early literacy, numeracy, fine- and gross-motor development, and social-emotional growth through purposeful play. Within this environment, children are encouraged to explore, investigate, question, and take appropriate risks in their learning. Teachers provide opportunities for communication, creativity, and problem solving through a balanced schedule of child-initiated and teacher-guided experiences. Speech, language, and motor development are embedded within daily routines, and learning experiences are individualized based on each child's needs and interests.

Classrooms are designed to support this model through purpose-built features such as child-height sinks, accessible bathrooms, and adjacent outdoor play areas that extend learning beyond the classroom walls. The environment includes sound panels and amplification systems to support students with hearing impairments, as well as dedicated storage, cubbies, and flexible furnishings that allow teachers to adapt the space for whole-group, small-group, and independent activities.

The program incorporates applied behavioral analysis (ABA) methodologies to support students with autism and other developmental disabilities, ensuring that all children can access the curriculum in a structured and supportive way. In addition, related services—including speech-language pathology, occupational therapy, and physical therapy—are integrated throughout the school day and delivered through a combination of whole-class, small-group, and individualized sessions.

Peer pals benefit equally from this inclusive model, learning alongside their classmates with special needs. Through shared play, communication, and collaboration, they develop empathy, cooperation, and confidence. The result is a supportive, language-rich environment that nurtures curiosity, independence, and a lifelong love of learning.

Space Considerations: To support the integrated preschool model, the new Essex Elementary School should include two dedicated Pre-K classrooms, each designed for up to 15–18 students. Classrooms should be flexible, welcoming environments that accommodate a range of developmental and instructional needs while ensuring accessibility and compliance with ADA standards.

Each classroom should include:

- Flexible, reconfigurable space to support six small-group learning centers, circle time, and whole-class instruction.

- Child-scaled design features such as low sinks, accessible bathrooms, and cubbies for personal storage.
- Separate areas for meals/snacks, art projects, and play, including a tiled section for messy activities and a carpeted area for circle time and movement.
- A designated quiet zone within one of the learning centers for reading, calming, or independent play.
- Space for individual and small-group therapies, or adjacency to therapy rooms within the same building to minimize transitions.
- An adjacent sensory or de-escalation room to support regulation and individualized needs.
- Ample classroom storage, including shelving and a large closet to minimize visual clutter and maintain organization.
- Sound-mitigating finishes, carpeting, and amplification systems to accommodate students with hearing impairments.
- Accessibility features, including wheelchair access and ramps, to ensure barrier-free movement throughout the preschool and school building.
- Direct access to a secure, developmentally appropriate outdoor learning and play space with shade, varied surfaces, and handicapped-accessible equipment designed for physical, sensory, and social development.

The addition of an after-school daycare program is under consideration and should be factored into the design for future flexibility of use.

Together, the preschool classrooms in Manchester and Essex will form a unified, inclusive early learning system that nurtures the district's youngest learners and ensures equitable access for families across both communities.

Kindergarten Program

The Essex Elementary School Kindergarten program is a full-day, non-tuition program that provides a developmentally appropriate bridge between early childhood education and the formal academic experience of the primary grades. The program emphasizes cooperative learning, exploration, and play as integral components of early academic and social development. Instruction is designed to nurture curiosity, creativity, and foundational skills in literacy, numeracy, and social-emotional learning while fostering independence and confidence in young learners.

Classrooms are designed to support a variety of instructional approaches, including whole-group lessons, small-group collaboration, and individual exploration. Each space must provide ample room for movement and flexible grouping, allowing students to engage in hands-on, inquiry-based learning throughout the day. To accommodate the wide range of activities characteristic of early learning, significant built-in storage is essential for organizing instructional materials, manipulatives, and creative play resources.

In keeping with best practices for early childhood education, each Kindergarten classroom should include a child-sized restroom and an area for creative free play, along with distinct spaces for large- and small-group instruction. Classrooms should also include a gathering area for shared instruction, such as a carpeted circle space or small amphitheater-style tier, that allows students to come together for stories, discussions, and group learning experiences. Multiple breakout areas are also necessary to support differentiated instruction, literacy stations, and small-group work.
The design of Kindergarten learning spaces should reflect the program's emphasis on active engagement and community, providing a safe, welcoming, and flexible environment that supports collaboration, creativity, and the developmental needs of young learners.

Lunch Programs

Essex Elementary School provides both breakfast and lunch service aligned with district wellness policies and designed to support student health, nutrition, and readiness to learn. Breakfast is offered each morning to ensure students begin the school day nourished and prepared to engage academically, supporting focus, stamina, and emotional regulation. Lunch is paired with integrated recess blocks—typically totaling 45 minutes per day—which promote movement, peer interaction, problem-solving, and social-emotional skill development. Multiple recess opportunities throughout the day reinforce students' ability to return to learning calm, focused, and ready to participate.

Food services at Essex Elementary are delivered through a contracted, on-site cooking model that complies with all state and federal nutritional guidelines. The district's long-term goal is to increase the amount of scratch cooking and incorporate more fresh, whole foods; however, the current age and condition of the kitchen infrastructure limits the type and variety of meal options available to students and staff, constraining menu flexibility and restricting the ability to expand healthy, freshly prepared offerings.

A renovated or newly constructed facility would provide a modern kitchen and streamlined serving area capable of supporting expanded breakfast service, increased scratch cooking, improved cold and dry storage, and more efficient traffic flow through the serving line. Updated infrastructure should include adequate electrical capacity, food-preparation workstations, durable stainless-steel surfaces, commercial dishwashing equipment, and clearly defined circulation patterns that support reliable, efficient service. Adjacency to composting, recycling, and waste-management areas will support environmental sustainability goals.

In addition to serving students, the cafeteria and kitchen function as valued community assets. Local organizations use the space for community breakfasts, civic programming, and intergenerational events. The kitchen must therefore be accessible, secure, and equipped to facilitate weekend and evening community use while maintaining appropriate separation from academic areas. Because the school also serves as a potential emergency sheltering location, the kitchen should be designed to support extended

meal service, power resiliency, and safe food handling during emergency operations, with sufficient generator-backed electrical capacity and walk-in refrigeration space.

The cafeteria should be designed for efficient meal service and student flow, with seating and acoustics that create a positive dining experience. Adjacency to outdoor spaces can support smooth transitions between eating and recess, while flexible design will allow the space to function as a hub for community gatherings.

Sensory-Considerate Dining Environment

To support the diverse sensory needs of all students, a sensory-considerate dining option should be included within the cafeteria design. This space, contained within a portion of the allowable MSBA dining guidelines, will provide a quieter, lower-stimulation environment for students who may experience sensory overload in a traditional cafeteria setting.

The sensory-considerate dining area will:

- Feature muted lighting, reduced noise levels, and calming color palettes to create a soothing atmosphere.
- Incorporate sound-dampening materials and spatial separation from high-traffic areas to minimize auditory distractions.
- Provide flexible seating arrangements, allowing students to eat in small groups or independently based on their comfort and regulation needs.
- Align with the school's commitment to inclusive design and social-emotional learning, ensuring that every child has equitable access to a positive and comfortable mealtime experience.

This space is not a separate program, but rather an extension of the school's universal design for learning and whole-child wellness philosophy. By proactively addressing sensory needs, the school can foster belonging, independence, and improved readiness for learning throughout the school day.
Together, these improvements will strengthen nutrition access, promote social connection, support community resilience, and advance MERSD's commitment to caring for the whole child.

Technology Instruction Policies & Program Requirements & Library

Technology instruction at Essex Elementary School is grounded in the belief that digital literacy, information fluency, and responsible technology use are essential competencies for all students. Digital tools and computer science concepts are intentionally integrated into library/media programming and core academic content, allowing students to apply technology skills in authentic, interdisciplinary contexts. Instruction emphasizes research and inquiry, ethical use of information, data privacy, media evaluation, and digital citizenship, preparing students to navigate increasingly complex digital environments.

Classrooms are equipped with interactive display boards, audio amplification systems, document cameras, and 1:1 student devices, enabling teachers to differentiate instruction, provide real-time feedback, and extend learning beyond the physical classroom. Students engage with age-appropriate applications that foster creativity, collaboration, and problem solving while developing proficiency in navigating digital resources and communicating effectively online. Multi-tiered supports and assistive technologies further promote equitable access to curriculum and align with inclusive instructional practices.

The goal of the Technology program is to develop critical thinkers, responsible digital citizens, effective problem solvers, and creative collaborators who can adapt to evolving tools and platforms. Students learn to evaluate information sources, create digital products, engage in collaborative digital environments, and practice safe, ethical online behavior. Instruction builds foundational computer science skills through introductory coding, engineering design, robotics, and iterative problem solving, supporting early exposure to computational thinking and design principles.

Because technology is integrated across the instructional day, the building must provide strong wireless connectivity, electrical capacity for device charging, and the bandwidth necessary to support hundreds of devices simultaneously. Charging stations, access to outlets, and reliable network infrastructure must be distributed throughout classroom neighborhoods and shared learning areas to ensure uninterrupted access to digital tools.

Learning Commons

Currently we have separate Library and Technology specials that frequently work together on interdisciplinary projects. As part of our District and School improvement efforts, we will be reimagining our specialist programming with the goal of increasing integration through a unified model—an approach that will bring both programs together in a shared, flexible space. The curriculum will blend traditional library experiences—such as literature appreciation, research instruction, and access to print media—with opportunities for design thinking, computational thinking, and collaborative project work. Lessons encourage students to apply transferable skills to real-world challenges and reinforce the district's instructional focus on inquiry, creativity, and collaboration. A current key limitation to this vision is the lack of a dedicated common area that can support joint instruction and project work.

Looking ahead, the Learning Commons will function as the academic and social hub of the school—a flexible, interdisciplinary space that combines library services, digital media resources, engineering and maker tools, and collaborative project zones to support research, creativity, inquiry, and hands-on learning. Intentional adjacency to visual arts classrooms and project spaces will support natural crossover between technology, engineering, design, and the creative process. These connections reinforce MERSD's commitment to learning that is active, iterative, and expressive, preparing students to design, build, test, and reflect through multiple modalities.

The Learning Commons and adjacencies will include flexible zones for:

- whole-group instruction,
- small-group collaboration,
- independent exploration,
- digital fabrication and prototyping,
- robotics and coding,
- multimedia production,
- project-based learning,
- visual arts studio space
- and exhibition of student work.

Durable work surfaces, embedded storage, and open shelving will support materials management and long-term project builds. Access to digital fabrication tools as well as engineering materials and art-making resources will allow students to move fluidly between design, construction, and reflection.

Furnishings and Presentation Features

To support diverse instructional and student-driven learning experiences, the Learning Commons will incorporate:

- moveable tables on casters,
- soft seating and modular furniture,
- quiet reading nooks,
- portable whiteboard partitions and writable surfaces,
- digital display boards for showcasing student work,
- and a small-scale amphitheater or stepped seating area for presentations, performances, and read-alouds.

These features will allow teachers and students to rapidly reconfigure the space for collaborative projects, independent reading, small-group instruction, and interdisciplinary work. Quiet reading areas will remain accessible throughout the day for unscheduled visits and independent inquiry.

Visibility, Supervision, and Infrastructure

Glass walls, open sightlines, and transparency between adjoining spaces will support visual supervision and communicate that making, tinkering, coding, reading, and creating are core elements of school culture. Seamless technology infrastructure—including robust wireless networks, ceiling-mounted access points, ample outlets, and collaborative displays—will ensure reliable access to digital resources throughout the school.

By integrating literacy, engineering, technology, and the visual within a central, flexible hub, the Learning Commons will create a vibrant, future-ready learning environment that reflects MERSD's vision for interdisciplinary, student-centered education and lifelong curiosity. The flexibility of these zones supports student-to-student and student-to-teacher collaboration, creates opportunities for exhibitions and

community gatherings, and extends learning beyond the school day—all key goals of the district's vision for this facility.

Learning Commons Staffing and Scheduling

The Learning Commons at Essex Elementary School will be staffed by certified Library Media Specialist, Digital Literacy Computer Science Specialist, and Visual Arts Specialist. Instruction will be delivered through a hybrid scheduling model that balances fixed lessons with flexible access for independent research, small-group inquiry, and interdisciplinary project work. Students may visit the Learning Commons individually, with peers, or as part of scheduled classroom integration.

The Learning Commons will maintain consistent hours during the school day and may be available beyond school hours to support extracurricular enrichment, family engagement events, and community programming. A flexible booking system will allow teachers to reserve instructional zones, project areas, and maker resources. This balanced model ensures that the Learning Commons serves simultaneously as an instructional classroom, collaborative learning space, and independent reading hub.

Visual Arts

The visual arts program nurtures creativity, imagination, and self-expression through exploration of a wide range of media including paint, clay, ceramics, ink, recycled materials, and emerging digital tools. Guided by state standards, the curriculum is vertically coherent and intentionally structured to develop student competency in Creating, Presenting, Responding, and Connecting—the four artistic domains defined by the Massachusetts Arts Frameworks. Students study influential artists, artistic movements, and contemporary makers, connecting visual art to social context, cultural perspectives, and other areas of the curriculum. Critique routines and reflection practices emphasize process, growth, and creative problem-solving, helping students see themselves as confident creators.

Instruction in the visual arts is highly hands-on and exploratory, requiring spaces designed to safely support diverse media and techniques. Art studios should include:

- Durable, easy-to-clean work surfaces suitable for wet and dry media
- Multiple large, multi-height sinks for washing brushes, palettes, and tools
- Adequate storage for supplies, student portfolios, and works-in-progress
- Ventilation and a dedicated kiln room for ceramics coursework
- Flexible layout to support whole-group demonstration, small-group creation, and independent studio work

Technology integration enhances instruction through access to instructional videos, projection and camera-fed demonstrations, digital design software, and documentation of student process. Proximity to the innovation/learning commons hub will support STEAM integration and interdisciplinary projects.

Visibility into art spaces—through interior windows or display glazing—showcases active making and reinforces MERSD's commitment to vibrant, visible learning. Ample display areas throughout corridors

and shared spaces celebrate artistic achievement and provide authentic audiences for student work, contributing to a positive school climate and sense of belonging.

Collectively, these programmatic and spatial elements allow the visual arts to flourish as a core contributor to creativity, critical thinking, and whole-child development within the Essex Elementary experience.

Performing Arts

Music and performing arts are integral to the Essex Elementary experience, fostering creativity, confidence, collaboration, and community connection. Students participate in general music classes weekly, where instruction emphasizes active engagement—singing, listening, improvising, moving, playing instruments, and responding to music. Through these experiences, students develop foundational skills in creating, performing, responding, and connecting, consistent with the Massachusetts Arts Curriculum Frameworks.

In addition to general music, students may pursue instrumental lessons through a pull-out instruction model and can participate in before- or after-school ensembles—including band, chorus, and musical theatre opportunities. These programs nurture self-expression, discipline, and teamwork while building cultural appreciation and artistic literacy. A highlight of the performing arts experience is the annual cross-district Fifth Grade play, which brings together music, drama, staging, and public performance, serving as a capstone celebration of students' growth.

Instruction is grounded in principles of multiple intelligences, recognizing that music supports learning across cognitive, social, emotional, and motor domains. Performing arts experiences strengthen confidence, public speaking, and the ability to collaborate—skills that extend well beyond the stage.

To support high-quality music and performing arts instruction, the school requires:

- A dedicated general music classroom with flexible seating, movable furniture to allow for dance space, appropriate acoustic treatment, and storage for instruments and instructional materials.
- A large performance and rehearsal space suitable for chorus, ensemble work, and dramatic presentations, equipped with adjustable lighting and sound amplification.
- A small lesson or practice room for instrumental pull-outs, individual coaching, and sectional rehearsals.
- Music and performance spaces located near each other to support smooth transition between practice and performance locations.
- Sound isolation to minimize disruption to adjacent academic areas.
- Digital technology for recording, playback, and multimedia integration.

Display and exhibition areas throughout the building will allow students to share their artistic accomplishments with authentic audiences, reinforcing pride and community engagement. Collectively, these programmatic and spatial features ensure that music and performing arts remain central components of a whole-child approach—developing students who are tuneful, artful, expressive, and confident contributors to their school and community.

Physical Education and Wellness

Physical education at Essex Elementary is delivered within a comprehensive wellness model that integrates physical activity, foundational health concepts, and social-emotional skill development to address the needs of the whole child. Students participate in wellness classes twice weekly, with the curriculum emphasizing lifelong healthy habits, fitness, nutrition, motor development, and self-care. Instruction targets refinement of fundamental movement patterns, coordination, and personal fitness through small-sided games, dance and rhythm, gymnastics, and individual skill progressions. These experiences promote teamwork, sportsmanship, and self-regulation, reinforcing learning that occurs in the classroom.

Beginning in the 2025–26 school year, the district will undergo a comprehensive curriculum review to align its health and physical education programming with the Massachusetts Comprehensive Health and Physical Education Frameworks. This work will strengthen vertical alignment, update instructional practices, and support a continuum of developmentally appropriate health and wellness instruction across PreK–12.

A signature component of the District's wellness model is Project Adventure, a K-12 experiential learning strand that builds cooperation, trust, communication, conflict resolution, leadership, goal setting, and creative problem-solving. These activities promote resilience and support students' social-emotional learning competencies. To fully implement this curriculum, the school requires space for low, medium, and high challenge elements, both indoors and outdoors, along with appropriate safety zones, storage, and structurally supported anchor points.

To meet program needs, the gymnasium should include:

- Adequate ceiling height for climbing elements and rope activities
- A divider (sound-attenuating) wall to create two simultaneous teaching stations
- Padded perimeter walls and resilient athletic flooring to support safe movement
- Storage for a wide array of athletic and expeditionary equipment
- An adjacent PE office for supervision, planning, and student support

A regulation-sized basketball court is recommended to support district athletic programming, youth recreation leagues, and community events. This will allow Essex Elementary to continue serving as a practice and competition site for junior varsity, recreation league, and middle school basketball while strengthening community use and reducing scheduling pressure across the district.

Outdoor learning spaces should include:

- Fields for athletic skills practice, PE classes and small games
- A turf surface to extend playability during inclement weather
- Low/medium/high challenge elements for Project Adventure
- Safe circulation pathways for running and movement-based activities

Together, these features ensure that the physical education and wellness program supports the physical, emotional, and social development of all students, fosters healthy lifestyle habits, and aligns with district priorities around whole-child learning, teamwork, and resilience.

Special Education Programs

The special education program at Essex Elementary School serves students with a wide range of learning needs, the majority of whom qualify as moderate special needs students and access a combination of inclusion and pull-out services. The moderate special needs program provides both classroom-based supports and separate instruction delivered individually or in small groups of up to eight students for reading, written language, and mathematics. Currently, moderate special education teachers and the speech-language pathologist share a classroom divided into instructional zones, with one small room available for quieter, separate instruction.

As of FY2025, the moderate needs team consists of three special education teachers, one full-time, and one part-time teaching assistant. To effectively meet student needs, separate instructional spaces are required for teachers to deliver targeted instruction in quiet, acoustically controlled environments. At least two of these spaces should accommodate up to eight students, a teacher workstation, and technology access, while two additional rooms should support small groups of up to four students. All spaces should be located in close proximity to grade-level classroom neighborhoods to support inclusion and efficient transitions.

Because special education enrollment fluctuates with student need and demographic shifts, flexible instructional spaces are required to ensure continuity of programming even as cohorts expand or contract across developmental stages. Locating service delivery spaces adjacent to general education classrooms reduces travel time, protects instructional continuity, and supports discreet movement for students receiving higher-tier interventions.

MERSD is deeply committed to ensuring that every student has access to an inclusive, high-quality education within the least restrictive environment. Essex Elementary School offers a continuum of services that combine in-class supports, targeted interventions, and specialized separate programming designed to meet a range of academic, social, emotional, behavioral, and communication needs. Each program provides individualized instruction while fostering integration within the general education setting, consistent with the district’s values of inclusion, collaboration, and equity.

Maintaining robust, high-quality in-district programming is central to both student outcomes and long-term fiscal responsibility. By providing specialized services within the district, MERSD reduces reliance on out-of-district placements and minimizes the need for specialized transportation, one of the most unpredictable and costly components of special education finance. Beyond operational efficiency, locating specialized programming in-district strengthens students' relationships with peers, fosters continuity of school culture, and supports meaningful inclusion in extracurricular and community-based learning. These benefits reinforce the district's commitment to serving students in the least restrictive environment while ensuring equitable access to comprehensive supports close to home. *(Appendix G: Special Education Program Review.)*

Academic and Communication Enhancement (ACE)

The Academic and Communication Enhancement (ACE) program serves students in grades K–5 with complex language-based learning disabilities who require a structured, language-rich environment and intensive instructional support. The program is designed to be organized into two cohorts—lower elementary and upper elementary—each serving six to eight students with two teachers. Instruction combines small-group and one-to-one tutorials emphasizing reading, writing, mathematics, oral communication, and language comprehension. Lessons follow a sequential, multisensory structure and incorporate assistive technologies to promote independent access to grade-level content.

This interdisciplinary staffing model requires proximity to shared therapy spaces to support collaboration among special educators, speech-language pathologists, reading specialists, and occupational therapists. Co-location enhances supervision, fosters consistent communication supports, and increases the efficiency of scheduling related services.

Space Considerations: ACE requires one dedicated classroom for each cohort with adaptable layouts for small-group instruction and conferencing. Each classroom should include writable surfaces, acoustic control to support focused language instruction, and an adjacent breakout or therapy room for speech-language and reading interventions. Ample storage for instructional materials, manipulatives, and assistive technology is required. Locating ACE in proximity to the RISE cohort supports collaboration among specialized staff and facilitates shared use of sensory and therapy resources.

Reaching Independence in Supported Environments (RISE)

The RISE program serves students in grades K–5 with developmental disabilities or genetic disorders who require highly individualized academic, behavioral, and communication support. The program is designed to be organized into two cohorts—lower elementary and upper elementary—each serving six to eight students with two teachers. Instruction is delivered through small-group and one-to-one tutorials, emphasizing functional academics, communication, life skills, and social-emotional development. Students receive consistent support across the school day, including transitions, lunch, and recess, to reinforce skill generalization.

The program is staffed by an interdisciplinary team that includes a certified special education teacher/board-certified behavior analyst, registered behavior technicians, an occupational therapist, a

speech-language pathologist, and a physical therapist. Students participate in social skills groups, daily living instruction, and specialized case management, and receive ongoing collaboration between home and school.

Increasing numbers of students with autism and complex learning profiles—especially at the preschool and primary levels—highlight the continued necessity of specialized instructional environments and intentionally designed sensory-supportive spaces as students progress through the continuum of services.

Specialized Program Components include:

- Self-contained and inclusion opportunities aligned to the Massachusetts Curriculum Frameworks
- Applied Behavior Analysis (ABA) principles embedded across instructional domains
- Specialized reading and math methodologies (Reading Mastery, Reading Milestones, Visualizing and Verbalizing, Number Worlds, Do the Math)
- Social Thinking and Circles curricula to promote social understanding
- Assistive technology that supports communication and independence
- Consistent data-driven decision-making and progress monitoring

Space Considerations: RISE requires two dedicated classrooms—one for each cohort—with defined areas for academic instruction, sensory regulation, and life-skills practice. Each classroom should include:

- An adjacent breakout or therapy room
- Adaptive restroom facilities
- Low-stimulus lighting and acoustic control
- A kitchenette or food-prep area for daily living skills

Direct access to outdoor learning areas and safe circulation paths supports experiential learning and safe movement during sensory breaks. Co-location with ACE will enable shared therapy resources, coordinated staffing, and efficient scheduling.

Accessibility and Specialized Supports

Essex Elementary has historically served students with hearing impairments and other physical challenges. The new facility must continue to incorporate:

- Sound-field amplification systems in instructional spaces
- Sound-attenuating panels in targeted rooms
- Assistive listening devices
- T-coil or compatible hearing loop systems (where applicable)
- All instructional and public spaces must be fully accessible, with:
- Barrier-free circulation
- Elevator/lift systems
- Accessible restrooms
- Adaptive playground equipment

The current building's split levels and stair configurations create mobility barriers. A renovated or rebuilt Essex Elementary must eliminate these limitations and embody universal design principles, ensuring that every student can participate fully in all aspects of school life.

Design Priorities Across Programs
To ensure successful delivery of specialized instruction, the new facility should include:

- Small-group rooms adjacent to classroom neighborhoods
- Sensory and calming spaces accessible without long transitions
- Therapy rooms for OT, PT, and speech-language services
- Secure storage for adaptive and communication devices
- Quiet testing environments for standardized assessments
- Flexible circulation patterns that support discreet movement

As part of the Essex Elementary building project, specialized programming—including Preschool, ACE, and RISE—will be intentionally located at Essex to align program cohorts, strengthen interdisciplinary staffing, and minimize unnecessary transitions between buildings as students progress through the continuum of services.

These investments reflect MERSD's commitment to inclusive practice, equity of access, and the delivery of high-quality specialized instruction within the least restrictive environment.

Technology / Vocational Programs

Aligned with Technology Instruction Policies & Program Requirements)

Technology instruction at Essex Elementary builds upon the district's broader Technology Instruction Policies and Program Requirements by ensuring that digital tools, resources, and learning experiences are embedded throughout the instructional day. The program is intentionally designed to provide both dedicated instruction, where foundational digital skills, coding concepts, and responsible online behavior are explicitly taught, and integrated instruction, where students apply these skills within core subjects such as literacy, mathematics, science, and social studies. This balanced approach ensures that students receive focused skill development while also experiencing authentic, real-world application across the curriculum.

Students engage in dedicated Digital Literacy and Computer Science (DLCS) instruction as well as integrated technology use within core curriculum areas. The program is designed to build strong foundations in digital literacy, research, critical thinking, and problem solving, ensuring that students develop the skills needed to navigate an increasingly complex digital landscape. Students have hands-on opportunities with a variety of technology tools and platforms, including introductory coding, robotics, multimedia creation, and collaborative virtual environments. This integrated approach emphasizes creativity, communication, teamwork, and responsible engagement as digital citizens.

A dedicated technology instructional space within the Learning Commons will support both quiet, independent exploration and active, project-based collaboration. will support both quiet, independent exploration and active, project-based collaboration. This environment will allow students to engage deeply in computational thinking, engineering concepts, and design practices, while also providing opportunities for small-group instruction, guided inquiry, and iterative prototyping. Instruction includes explicit guidance in safe and ethical online behavior, helping students understand appropriate communication, information evaluation, data privacy, and cyber-safety expectations.

Technology access within classrooms includes interactive display boards, audio amplification systems, and sufficient space and electrical capacity for 1:1 device charging carts. Flexible access to shared devices allows students to create, research, communicate, and problem solve as part of everyday learning. As technologies continue to evolve, the school's infrastructure must support adaptable use of new tools, platforms, and applications.

To sustain continuous, high-quality access, the building must be equipped with a robust network infrastructure and building-wide wireless coverage capable of supporting hundreds of devices simultaneously. Reliable bandwidth, device management systems, and network security will be essential to ensure seamless instructional use and equitable access. Together, these elements create a technology-rich learning environment that empowers students to explore new ideas, innovate collaboratively, and develop the digital literacy and problem-solving skills necessary for future academic and workplace success.

Transportation Policies

Transportation to Essex Elementary School will include a combination of bus, car, bicycle, and walking routes, reflecting the diverse needs of students and families within the district. Arrival and dismissal procedures will be designed to ensure safe, efficient, and predictable traffic flow. Designated bus loops will allow for streamlined boarding and unloading, while clearly marked carline procedures will reduce congestion and maintain separation between vehicle traffic and pedestrian pathways. Safe and accessible walking and biking routes will be integrated into the site plan, encouraging healthy habits and supporting students who live within proximity to the school.
Adequate parent pick-up and drop-off areas will be located near the gymnasium and cafeteria wing to minimize congestion in academic corridors and maximize student safety. Outdoor circulation areas will be designed to provide clear sightlines, age-appropriate supervision, and minimal conflict between cars, buses, and pedestrian traffic. Bicycle racks, crosswalks, and appropriate signage will help promote safe active transportation options.

In addition, the site should include a dedicated Pre-K drop-off zone that minimizes exposure to high-volume traffic areas and allows families to escort students directly to the early childhood entrance. This area will provide short-term parking for strollers and car seats, allow space for adult-to-adult handoff,

and ensure that early learners are not navigating busy corridors or long exterior walks during peak arrival times.

This dedicated circulation pattern aligns with early childhood best practice, which emphasizes predictable, developmentally appropriate transitions, minimized exposure to high-volume traffic areas, and opportunities for direct adult-to-adult handoff. By reducing travel distance and complexity at arrival and dismissal, the design supports young learners' regulation, safety, and readiness to engage in instruction as soon as they enter the building. The separation of Pre-K circulation from older student traffic also decreases sensory overwhelm and supports individualized pacing for students who may require additional time or assistance during transitions.

The transportation plan emphasizes accessibility and equity by ensuring that all students—regardless of mobility needs or geographic location—have consistent, reliable, and safe transportation to and from school. Walkways, curb cuts, and boarding zones will be designed to meet ADA requirements, and transportation services will be coordinated to support students with specialized needs.
Together, these strategies create a school site that is safe, efficient, welcoming, and responsive to the full range of transportation needs within the Essex Elementary community.

Functional & Spatial Relationships and Key Programmatic Adjacencies

The design of the new Essex Elementary School will embody MERSD's commitment to student-centered, inclusive, and collaborative learning. Functional and spatial relationships will be organized to support the district's instructional philosophy—fostering flexibility, connection, and equitable access to high-quality learning environments for all students.

The building will be structured around grade-level classroom neighborhoods, each designed to promote a sense of belonging while encouraging movement, collaboration, and cross-grade interaction. Adjacencies between core classrooms, small-group rooms, and shared learning spaces will strengthen instructional alignment, collaboration, and community cohesion across grade levels.

Classroom Neighborhoods and Small-Group Learning

Each neighborhood will include a cluster of classrooms with direct access to small-group rooms and shared collaboration spaces, supporting inclusive instruction, the district's Multi-Tiered System of Support (MTSS), and flexible grouping structures. These localized breakout areas will allow for differentiated learning and strengthen opportunities for students to lead, collaborate, and engage in hands-on work with increasing independence. By providing multiple pathways for interaction—student-to-student, student-to-teacher, and teacher-to-teacher—the design reinforces our commitment to dynamic, active learning environments.

Early Learning Adjacencies

The Pre-Kindergarten and Kindergarten classrooms will anchor the lower-elementary neighborhood, featuring direct outdoor access, age-appropriate restrooms, flexible play areas, and sensory spaces that foster exploration and independence. These classrooms will include child-height fixtures, built-in storage, and adjacent therapy or small-group rooms to support integrated services for students with special needs. Early learning spaces will set the tone for the school's design—nurturing curiosity, creativity, and belonging.

Specialist and Experiential Learning Spaces

Specialist classrooms will provide environments purpose-built for creativity, experimentation, and interdisciplinary learning:

- Science spaces will include sinks, counter space, waterproof/non-slip flooring, and multiple outlets, designed to support inquiry, safe circulation, and technology integration.
- Visual Arts rooms will feature a kiln room with proper ventilation, multi-height sinks, drying racks, and storage cabinets, with ample natural and adjustable lighting for studio work and student exhibitions.
- Music instruction will occur in a large movement-oriented classroom with risers, instrument storage, a small lesson room, and acoustic treatments to ensure sound quality and reduce noise transfer. The music area will be located near the stage or multipurpose gathering space to support performance-based learning.

The Library/Media Center will serve as a literacy and innovation hub, connecting students to both print and digital resources. Centrally located for easy access, it will include flexible furniture, research zones, and media-creation technology. The library will also serve as a collaboration space for interdisciplinary projects and whole-school programming, aligning with MERSD's emphasis on inquiry, communication, and technology integration.

Physical Education, Wellness, and Community Gathering Spaces

The Gymnasium and Wellness Suite will include a regulation gym floor with padded walls, seating for wellness instruction, Project Adventure installations, and accessible storage. An adjacent office for physical education staff will provide proximity for supervision and instructional planning. The gym will support both daily instruction and community use, reflecting MERSD's belief that schools serve as centers of community engagement.

A flexible cafetorium or multipurpose space will serve as the heart of school gatherings, accommodating assemblies, performances, and family events while maintaining appropriate separation from instructional areas for security and acoustics. This space supports the district's goal of providing a shared, large-scale school community environment where students and families can gather in small, large, or whole-school groupings, reinforcing the school's role as a hub of community connection.

All shared spaces will be designed with universal design principles, ensuring accessibility for individuals with mobility, sensory, and physical challenges. The building's design will reflect MERSD's core value of inclusion—ensuring every student and community member can engage fully in the life of the school.

Teacher Collaboration and Professional Spaces

As outlined in the Teacher Planning section, collaboration is central to MERSD's instructional model. To support this, each classroom neighborhood will include teacher collaboration rooms and professional work areas that are easily accessible from instructional spaces. These areas will provide technology access for data analysis and lesson design, flexible seating for team meetings, and storage for shared instructional resources.

A centralized professional workroom or staff commons will support all-staff collaboration, professional development, and interdisciplinary planning. These adult-centered environments will be designed for comfort, productivity, and reflection, emphasizing that supporting educator collaboration enhances student learning and aligns with MERSD's culture of continuous improvement.

Functional Organization Summary

The organization of Essex Elementary School reflects the district's guiding priorities:

- **Student-Centered Design:** Learning neighborhoods that foster inclusion, flexibility, and belonging.
- **Collaborative Culture:** Adjacencies that promote teamwork, co-teaching, and shared resource use.
- **Community Connection:** Central gathering and performance spaces that unite students, families, and the broader community.
- **Future Readiness:** Specialized, technology-rich environments that support interdisciplinary, hands-on learning.
- **Universal Access:** Spaces designed for safety, comfort, and full participation by all members of the school community.

Together, these functional and spatial relationships create a cohesive, flexible, and connected learning environment that harnesses the energy of children, fosters student leadership, extends learning beyond the traditional school day, and supports the school's role as a vibrant hub for the community.

Supervision and Shared Space Utilization

Shared breakout rooms, collaboration zones, and project spaces will be scheduled through a digital reservation system to ensure equitable access across grade levels. Interior glazing and transparent sightlines allow staff to supervise students working independently or in small groups without leaving core instructional areas. Learning neighborhoods are intentionally compact, minimizing travel and promoting safety. This design normalizes flexible grouping and student agency while preserving continuous instructional oversight.

Security & Visual Access Requirements

Student safety is a top priority for the Manchester-Essex Regional School District, and the design of the new Essex Elementary School will reflect contemporary best practices in school safety, supervision, and emergency response. The district maintains a comprehensive emergency operations framework that is reviewed annually in collaboration with local law enforcement, fire officials, town emergency management personnel, and district leadership. Annual audits and developmentally appropriate drills ensure that protocols remain current and aligned to state requirements. The district's Medical Emergency Response Plan (MERV) was most recently submitted to the Massachusetts Department of Elementary and Secondary Education in September 2025 and will continue to be updated annually.

During the school day, the building will maintain a single, controlled point of entry, improving upon the current model through the addition of a secure, double-door vestibule. Visitors will be required to verify identity and purpose through a staffed reception desk and electronic access-control system before gaining entry to instructional areas. Credentialing, screening, and check-in procedures will reinforce a layered approach to access control while maintaining a welcoming environment for families and community members.

The building will include zoned access, allowing Essex Elementary to safely support community use during evenings and weekends. Access will be granted only to designated program areas—such as the gymnasium, cafeteria/kitchen, multipurpose/performance spaces, select restrooms, and the Learning Commons—while academic wings remain locked and isolated through controlled door hardware. Adjoining access-control points will allow school leadership to initiate partial or full lock-out configurations based on operational needs.

A comprehensive digital surveillance system will monitor critical public areas, entrances, major circulation corridors, parking lots, playgrounds, pedestrian walkways, and perimeter access points. Camera feeds will be accessible to school leadership and district safety teams and, when appropriate, interoperable with local law enforcement during emergency events. Exterior perimeter access roads will enable emergency vehicles to reach multiple sides of the building, improving response times for medical, fire, or security incidents. To support emergency response, the facility will include Knox Boxes (secure key storage systems) for Essex police and fire personnel, ensuring rapid access during urgent situations. Clear signage and multiple egress points will assist responders and enhance evacuation safety.

Classroom neighborhoods will be designed with clear sightlines to reduce isolated or concealed areas. Lockable classroom doors with age-appropriate hardware and remote lockdown capability will support swift protective action if needed. Emergency notification technology, two-way communication systems, and integrated access control will align with district safety protocols.

Site circulation will reinforce safe movement patterns by locating parking, bus loops, and parent pick-up/drop-off areas near the main entry, allowing staff to maintain continuous visual oversight during arrival and dismissal. Clearly delineated pedestrian pathways and accessible routes will support walkers, bicyclists, students with mobility needs, and families using strollers or adaptive devices.

These architectural and operational strategies will create a welcoming, developmentally appropriate environment that balances physical safety with the district's commitment to positive school culture, student belonging, and community partnership. The school will remain both secure and accessible—supporting learning, family engagement, and civic activity—while embedding multiple layers of safety that protect students, staff, and community members every day.

Typical Day & Week in the Life of a Student

A typical day at Essex Elementary School reflects the district's commitment to student-centered, developmentally responsive learning that nurtures the academic, social, and emotional growth of every child. The day begins at 8:25 a.m. with Morning Meeting, a daily community-building routine that strengthens relationships, sets a positive tone for learning, and reinforces social-emotional skills aligned with MERSD's Vision of the Graduate.

Following Morning Meeting, students engage in a Literacy Block that blends whole-group instruction, small-group, small group conferencing and systemic instruction in foundational skills, reading, and writing and opportunities for independent practice. Instruction emphasizes authentic reading, writing, and speaking experiences that develop critical thinking and communication skills.

After a brief movement and snack break, students transition to Mathematics, where lessons build conceptual understanding through hands-on exploration, inquiry, and problem-solving. Students work collaboratively and independently using manipulatives, visual models, and technology to strengthen reasoning and perseverance.

Midday includes lunch and recess, essential times for play, social connection, and physical well-being. In the afternoon, students participate in Science or History/Social Science experiences that promote curiosity and exploration through project-based investigations and inquiry learning. These lessons connect to real-world phenomena and help students understand their roles as informed, engaged citizens.

Sample Student Schedule

Time	Activity
8:25 AM	Arrival & Morning Meeting (community-building, SEL focus)
8:45 AM	Literacy Block (whole group mini-lesson; small-group guided reading/writing; independent practice)
10:15 AM	Movement/Snack
10:30 AM	Math (concept lesson; manipulatives; small-group practice/centers)

11:45 AM	Lunch & Recess
12:30 PM	Science or History/Social Sciences (hands-on investigations or inquiry projects)
1:15 PM	Specialist (e.g., PE, Art, Music, Library/Research, Technology)
2:00 PM	SEL/Closing Circle; Intervention/Enrichment as scheduled
2:55 PM	Dismissal

Each day also includes a specialist class—such as Art, Music, Physical Education, Library/Research, or Technology/Engineering—that supports creative expression, movement, and interdisciplinary learning. These experiences expand student engagement and reinforce the district's belief in educating the whole child through multiple pathways of learning and success.

The day concludes with a Closing Circle, during which students reflect on their learning, celebrate accomplishments, and set goals for the next day. Teachers also provide targeted intervention and enrichment as part of MERSD's Multi-Tiered System of Supports (MTSS) framework, ensuring that every learner is appropriately challenged and supported. Dismissal at 2:45 p.m. concludes a day intentionally designed to balance rigor, engagement, and belonging.

Week in the Life of a Student

Across the week, the Essex Elementary schedule provides a balanced, integrated learning experience aligned with MERSD's strategic priorities: Authentic Learning for Every Student, Social-Emotional Learning, and Inclusive Culture. Instructional time is intentionally distributed among literacy, mathematics, science, history/social science, and SEL, ensuring coherence across disciplines. Students participate in six 45-minute specialist blocks each week, providing consistent opportunities to explore the arts, movement, research, and technology. Within this structure, intervention and enrichment blocks are embedded to provide targeted Tier 2 and Tier 3 supports based on progress-monitoring data and student need.

This approach reflects MERSD's commitment to differentiation, collaboration, and continuous growth, ensuring that every student engages in meaningful, connected learning experiences that promote curiosity, confidence, and compassion. The weekly rhythm fosters both academic achievement and a strong sense of community, embodying the district's mission to empower students as capable, creative, and caring learners prepared to thrive in an ever-changing world

Week In the Life Overview

Activity	Locations	Benefit
ELA (Literacy)	Classroom; Breakout rooms; Learning commons	Reading/writing foundations; differentiation
Mathematics	Classroom; Small-group rooms; Project labs	Fluency, modeling, problem-solving
Science	Project areas; Maker spaces; Outdoor zones	Inquiry, engineering, authentic investigation
Social Studies	Classroom; Collaboration zones; Presentation areas	Civic learning, culture, and research skills

PE (2x)	Gym; Fields; Movement zones	Fitness, coordination, readiness for learning
Visual Arts	Art studio; Project zones; Display corridors	Creative expression, reflection, belonging
Music	Music room; Practice room; Performance space	Rhythm, ensemble, confidence
Library	Learning commons; Breakout rooms	Digital citizenship, inquiry, reading
Technology	Maker spaces; Robotics rooms	Computational thinking, prototyping
Outdoor Learning	Outdoor classroom; Gardens; Trails	Environmental literacy, sensory regulation
Intervention (MTSS)	Small-group rooms; Support spaces	Targeted instruction and enrichment
SEL & Community	Classroom meeting areas; Commons	Belonging, empathy, conflict resolution

Space Implications

The daily and weekly rhythm of instruction at Essex Elementary underscores the need for flexible, adaptive spaces that support a full range of learning experiences—from active collaboration to quiet reflection. Classrooms should accommodate whole-group instruction, small-group collaboration, and individualized learning, with movable furniture and integrated technology to enable seamless transitions throughout the day.

The schedule's emphasis on project-based and inquiry learning in literacy, mathematics, science, and history/social science highlights the need for breakout areas, distributed book nooks, and shared project spaces within grade-level neighborhoods. These areas will allow students to engage in investigations, hands-on projects, and interdisciplinary collaboration beyond the classroom setting.

Frequent integration of social-emotional learning and movement calls for access to outdoor learning areas, calming spaces, and flexible furniture configurations that can shift between active engagement and restorative practices. Specialist spaces—such as art, music, physical education, library and technology—should be centrally located and easily accessible from classroom neighborhoods to support the flow of the daily schedule and interdisciplinary learning.

Finally, spaces designed for intervention and enrichment must be embedded within or adjacent to classroom neighborhoods, providing visibility, accessibility, and proximity for small-group instruction and individualized support. These design features will ensure that the Essex Elementary School facility fully supports the district's vision of authentic, inclusive, and student-centered learning for every child.

Play, Movement, and Multi-Use Indoor Community Space

MERSD is committed to play as part of a comprehensive educational program. Multiple daily recess opportunities provide practice in communication, negotiation, cooperation, sharing, problem solving, and self-regulation, reinforcing classroom learning and supporting overall well-being (per AAP guidance). Play supports creativity, peer connection, physical development, and the acquisition of critical social-emotional skills.

Recess promotes social and emotional learning and development for children by offering them a time to engage in peer interactions in which they practice and role play essential social skills. This type of activity, under adult supervision, extends teaching in the classroom to augment the school's social climate. Through play at recess, children learn valuable communication skills, including negotiation, cooperation, sharing, and problem solving as well as coping skills, such as perseverance and self-control. These skills become fundamental, lifelong personal tools. Recess offers a child a necessary, socially structured means for managing stress. By adapting and adjusting to the complex school environment, children augment and extend their cognitive development in the classroom.
(American Academy of Pediatrics)

At Essex Elementary, students enjoy multiple recess periods that promote social interaction, creativity, and physical activity. The school currently provides age-appropriate playgrounds, a grass playing field, and a large blacktop area that can be cleared for winter recess, ensuring consistent outdoor play opportunities throughout the year. However, coastal climate conditions, seasonal precipitation, cold extremes, and saturated fields limit outdoor access during significant portions of the school year.

Future design considerations include differentiated play structures for younger and older students, accessible play that is ADA compliant and allows all peers to participate in play together, a plowed and accessible area for winter months, and a covered outdoor space for use during inclement weather. The outdoor play space should support skill development and application across gross motor, fine motor, creativity, collaborative teamwork, and exploration/curiosity, while fostering a connection to sense of place. In addition, a flexible indoor movement room is necessary to maintain equitable access to recess and active play when outdoor conditions are unsafe or unavailable.

Play and movement are essential components of healthy child development and are deeply embedded within the instructional and social-emotional framework of Essex Elementary School. Research and experience both reinforce that students learn best when they have frequent opportunities to move, collaborate, regulate, and explore through active, developmentally responsive engagement. At the elementary level, play supports executive functioning, builds problem-solving skills, strengthens peer relationships, and provides critical outlets for sensory regulation.

In order to maintain consistent access to movement, particularly during indoor recess periods, the school must be supported by spaces designed to host safe and structured play during times when outdoor environments are unavailable. The primary gymnasium is regularly scheduled for instructional delivery of the physical education curriculum and wellness programming, leaving limited availability for concurrent indoor recess blocks, student movement breaks, and grade-level common activities. Without an additional dedicated space, these needs place competing demands on the master schedule, risking reduced access to mandated instructional minutes and increased dysregulation in common areas.

For students receiving specialized services, access to indoor movement spaces is not a convenience — it is a therapeutic requirement. Occupational therapy, physical therapy, adaptive movement, gross-motor

development, and sensory regulation activities are integral to many students' Individualized Education Programs (IEPs). These services benefit from access to equipment that must be safely stored and deployed in environments that allow climbing, stretching, balance, full-body movement, and fine-motor practice. The primary gym is often acoustically and socially overstimulating for these students and is rarely available during high-volume instructional blocks. A smaller multi-use movement room provides a quieter, developmentally appropriate space that can support individualized instruction, reduce stigma, and meet the requirements of 603 CMR 28.03 regarding appropriate instructional environments aligned to the least restrictive setting.

Beyond recess and therapeutic programming, flexible interior space plays an important role in supporting the school's whole-child approach. Grade-level community meetings, author visits, robotics demonstrations, STEAM showcases, family engagement nights, student leadership assemblies, and project-based learning exhibitions require space that is sized appropriately for small- and medium-group gatherings. The primary gym, while suitable for large events, is often too large, too loud, or acoustically reflective for younger learners, students who experience sensory sensitivities, or programs that rely on spoken word and presentation. A smaller multi-use space offers improved acoustics, moderated lighting, and a more age-appropriate scale.

As a community hub, Essex Elementary also extends learning beyond the traditional school day. Before- and after-school programming, enrichment activities, youth recreation, town partnership initiatives, and intergenerational programs benefit from access to a community-facing space that can be separated from academic neighborhoods while maintaining safe, secure entry. During evenings and weekends, the flexible multi-use room provides the community with an adaptable venue that supports recreation, meeting space, and connection without compromising the security of the instructional core. This zoning strategy aligns with MSBA guidance that supports separation of community access from instructional spaces for safety and operational efficiency.

The design response to these needs is a smaller, flexible indoor gym/large-group movement room located adjacent to specialist neighborhoods and accessible to occupational and physical therapy staff. The room should include acoustically absorbent surfaces, durable and impact-resistant flooring, storage for therapeutic and gross-motor equipment, and sufficient ceiling height to support climbing structures, movement circuits, and fitness activities. By distributing access to movement opportunities across the day, this space also reduces behavioral challenges, increases readiness to learn, and supports transition routines that lower sensory load.

Without this secondary movement space, Essex Elementary would face frequent scheduling conflicts; limited access to recess during inclement weather; reduced availability of therapeutic environments; and fewer meaningful opportunities for grade-level collaboration, community partnerships, and student showcases. These constraints would disproportionately affect students with disabilities, younger learners, and those who rely on movement to self-regulate. Including a smaller indoor multi-use gym

ensures that the school's learning environment remains developmentally attuned, instructionally flexible, operationally efficient, and community responsive.

Extended Day / Community Programs

Essex Elementary School plays a central role in the civic life of the community, extending well beyond the regular school day. The district operates a before-school program called the Breakfast Club, providing safe, reliable care and supervision that supports smooth morning transitions for families. After-school programming is offered through a combination of district-run enrichment activities, school-based student clubs, and on-site YMCA childcare services. Together, these offerings promote social development, creativity, physical activity, and academic support in a structured, nurturing environment.

Looking ahead, a new or renovated facility should anticipate the potential future development of an Essex Parks & Recreation program that could function as a partner to Essex Elementary, similar to the existing relationship between Memorial School and Manchester Parks & Recreation. The Memorial School building project intentionally included dedicated space for after-school and summer programming; planning for analogous capacity in Essex would ensure equitable access to recreational enrichment across both towns.

During non-school hours, key areas of the building — including the gymnasium, cafeteria, library, and outdoor fields— are regularly used for athletics, community recreation, cultural events, concerts, intergenerational programming, and civic gatherings. Essex Elementary also serves as the venue for annual and fall Town Meetings and hosts community breakfasts and other municipal events. This extended use reinforces MERSD's belief that schools are vital public resources and centers for lifelong learning.

The gymnasium is heavily utilized by local youth sports programs and is currently the home site for junior varsity, recreation league, and middle school basketball. To continue supporting these programs safely and effectively, the new or renovated facility should include a regulation-size court with appropriate clearances, resilient athletic flooring, adequate spectator space, accessible restrooms, and storage for athletic equipment. These features will allow for league play, practices, and weekend community athletics while reducing scheduling pressure across district facilities.

To balance community access with student safety, the design of the new or renovated building will ensure that community-use spaces are located near a secure, controlled entry and can be fully sectioned off from academic wings during after-hours use. Access controls, visibility features, and strategic circulation patterns will allow evening and weekend programming without opening classroom neighborhoods or student support spaces.

The school's enrichment program extends student learning through authentic, hands-on experiences that build curiosity and interdisciplinary connections. In partnership with the Essex PTO and the

Spaulding Education Fund, students engage in visiting-artist workshops, STEM demonstrations, author talks, music residencies, and experiential programming. These activities occur at both grade-level and whole-school scales, typically hosted in flexible gathering areas sized for large groups.

To support these functions, the new or renovated facility should include a multi-use performance and assembly space equipped with audiovisual technology, stage lighting, acoustic treatments, and secure storage. Such a venue will accommodate assemblies, celebrations of learning, enrichment events, and community programming while enabling smooth transitions between instructional and extracurricular experiences.

The Manchester Essex Regional School District's Middle High School athletics program currently faces significant limitations due to the absence of a local track facility. As a result, despite having enough student participation to merit its own independent track and field team, the District must participate as part of the Gloucester High School track program in order to access a regulation track for practices and competitions. This cooperative arrangement creates transportation challenges, reduces program autonomy, and limits the District's ability to provide consistent, developmentally appropriate training schedules for student-athletes.

Developing a combined turf field and perimeter walking/running track at the new or renovated Essex Elementary School would directly address these needs while expanding athletic access across grade levels. The facility would also serve as a dedicated training venue for the Middle High School cross country team, providing a reliable surface for interval work, pacing practice, and conditioning. Currently, cross country training relies on a mix of sidewalks, roadways, and open spaces—settings that can present safety and supervision challenges. A purpose-built running loop would significantly enhance safety, consistency, and coaching effectiveness.

Across the district, athletic field capacity is limited and highly scheduled, resulting in teams practicing late into the evening—sometimes until 9:00 PM. These late schedules are not optimal for student health, sleep, academic readiness, or social-emotional wellbeing. Additional rectangular field space would relieve scheduling pressure, increase access, and allow for safer, more developmentally appropriate practice times.

Approximately 70% of Manchester Essex Middle High School students participate in athletics, underscoring the importance of facilities that promote engagement, teamwork, wellness, and belonging. Currently, all interscholastic competitions—except baseball—take place in Manchester. Establishing a competition-capable venue in Essex would increase geographic equity and better integrate Essex students into the district's after-school athletic life.

In addition to school athletics, a turf field and track would support youth sports, recreation leagues, and community programming. A perimeter track would provide safe, accessible activity space for older adults, families, and residents—supporting intergenerational fitness and reinforcing the school's role as a

community hub. Synthetic turf provides reliable playability during inclement weather, reducing cancellations and minimizing field closures due to overuse. Paired with a regulation track, the facility would increase capacity for practice and competition, reduce reliance on off-site partners, and enable year-round conditioning.

A combined turf field and track at Essex Elementary would:

- Enable Manchester Essex to operate an independent track and field program
- Provide a dedicated training facility for cross country
- Reduce reliance on cooperative agreements and transportation
- Improve scheduling equity across teams, seasons, and age groups
- Reduce late practice times, supporting student health and academic readiness
- Expand youth sports and community recreation opportunities within Essex
- Strengthen Essex's connection to district athletics
- Provide an accessible walking track for older adults and families
- Enhance community resilience, serving as a potential emergency support asset

Strategically located, well-lit, and adjacent to parking, this facility would expand regional athletic capacity while exposing Essex Elementary students to healthy role models and active lifestyles each day. This investment aligns with MERSD's commitment to the whole child, promoting physical wellness, social connection, equitable access, and authentic community engagement.

Appendix

Appendix A: *Educational Visioning Final Report*









ESSEX ELEMENTARY SCHOOL

Educational Visioning Report

November 2025

Manchester Essex Regional School District

MLP INTEGRATED DESIGN

TABLE OF CONTENTS

Executive Summary
- Overview ..... Page 2
- Guiding Educational Principles ..... Page 2
- Developmental Considerations & Impacts ..... Page 2
- Access, Engagement, & Belonging ..... Page 3
- Teaching, Learning, and the Vision of the Future School ..... Page 3
- Design & Physical Space Implications ..... Page 3
- Community Vision ..... Page 3

Launch & Priority Mapping
- Part 1 – Educational, Architectural, and Community Priorities ..... Page 4

Visioning 1
- Part 1 – Understanding the Learner ..... Page 9
- Part 2 – Grade Configuration Considerations ..... Page 13
- Part 3 – Spaces That Support Students ..... Page 17

Visioning 2
- Part 1 – Learning That Sticks ..... Page 26
- Part 2 – Strategic Plan in Action ..... Page 27
- Part 3 – Learning Environments in Action ..... Page 29
- Part 4 – Strategic Plan in Action (Revisited) ..... Page 48
- Part 5 – Closing Reflection ..... Page 50

Sign-In Sheets ..... Page 51

EXECUTIVE SUMMARY

In the fall of 2025, members of the Manchester Essex Regional School District participated in a series of Educational Visioning sessions facilitated by Educational Planner Mike Pirollo and Educational Consultant Paul White from MLP Integrated Design, Inc., in collaboration with JCJ Architecture. Each session was part of a collaborative process designed to inform the Essex Elementary School Feasibility Study and pre-design process. Through interactive workshops and reflective discussions, participants engaged in a step-by-step process aimed at capturing high-level thinking around the following:

- Educational, Architectural, and Community Priorities
- Developmental Needs of PreK–5 Learners
- Vision of Teaching and Learning, Including Practices, Strategies, and Structures
- Vision of Learning Environments that Best Support Student Growth

Through this process, participants shared rich insights about what students need to thrive, how teaching and learning can best support their development, and how the school's physical environment can be designed to align with these goals. The following summary captures the key outcomes and themes that emerged, reflecting the community's aspirations for an educational experience that is responsive, inclusive, and future-focused.

Guiding Educational Principles

The guiding principles emerging from this visioning process emphasize:

1. Students as the Doers and Leaders of Their Own Learning
2. A Learning Environment that Captures and Supports the Energy of Children
3. Flexibility in Space and Practice to Support Collaboration and Engagement
4. A School that Serves as the Hub of the Essex Community
5. Seamless Connections Between Indoor and Outdoor Learning
6. Spaces that Promote Comfort, Belonging, and Accessibility for All Learners

Developmental Considerations & Impacts

Participants reflected deeply on the developmental characteristics of PreK–5 learners, emphasizing the need for environments that balance structure and independence, movement and focus, and social connection and quiet reflection.

They identified major shifts across the early childhood and elementary years, calling for varied and flexible spaces that respond to differences in readiness, regulation, and learning style. PreK and early elementary learners benefit from warm, nurturing environments scaled to their size and independence, while upper elementary students thrive when given opportunities for leadership, autonomy, and peer collaboration.

Movement, sensory regulation, and access to nature were identified as essential to supporting cognitive growth and emotional wellbeing. Participants emphasized that space should not limit engagement—

outdoor classrooms, small breakout areas, and calming zones are as critical to learning as traditional classrooms.

Access, Engagement, and Belonging

Stakeholders envisioned Essex Elementary as a community-centered school where learning extends beyond the classroom walls and across the full day. The facility should support before- and after-school enrichment, family and community gatherings, and integrated partnerships with local organizations such as the library, senior center, and Parks & Recreation. Participants underscored the importance of connection and continuity, valuing relationships that grow across years and across grade levels. Cross-age collaboration, buddy systems, and leadership roles for older students were seen as ways to foster belonging and a shared sense of community.

Teaching, Learning, and the Vision of the Future School

Across all sessions, participants described learning that "sticks" as hands-on, active, joyful, and relevant, learning that connects to real-world experiences and allows students to take ownership. Educators emphasized practices that promote curiosity, critical thinking, and creativity through collaboration, inquiry, and problem solving. The school should enable flexible teaching models, including team-based instruction, project-based learning, and small-group intervention, supported by adaptable spaces and shared professional areas for teacher collaboration. A future Essex Elementary School should celebrate curiosity and encourage risk-taking within a safe, supportive, and inclusive environment.

Design & Physical Space Implications

Participants envisioned a building that reflects Essex's character and values—inviting, connected to nature, and sized for community. Key design implications include:

- Flexible learning neighborhoods that support varied groupings, collaboration, and movement
- Transparency and visibility to promote safety, connection, and shared learning
- Calming and sensory-friendly spaces integrated throughout the school for all learners
- Strong indoor-outdoor connections, with direct access to outdoor learning and play
- Community-scaled gathering spaces for small group, large group, and whole-school events
- Environments that foster comfort, pride, and ownership for students, staff, and families

Community Vision

Ultimately, the community envisions Essex Elementary School as a joyful, flexible, and future-ready learning environment, one that celebrates the unique energy of children, strengthens community identity, and honors the developmental journey of every learner.

The future Essex Elementary will be a hub for learning and connection, designed to nurture curiosity, confidence, and belonging. It will reflect a shared belief that students learn best when they are engaged, supported, and inspired by an environment that grows with them, academically, socially, and emotionally.

Launch & Priority Mapping Overview

On September 16, 2025, members of Manchester Essex Regional School District attended a meeting with Educational Planner Mike Pirollo from MLP Integrated Design, Inc., along with JCJ Architecture. This meeting was part of the visioning effort for the Essex Elementary School building project. The goal of the meeting was to identify educational, architectural, and community goals and priorities.

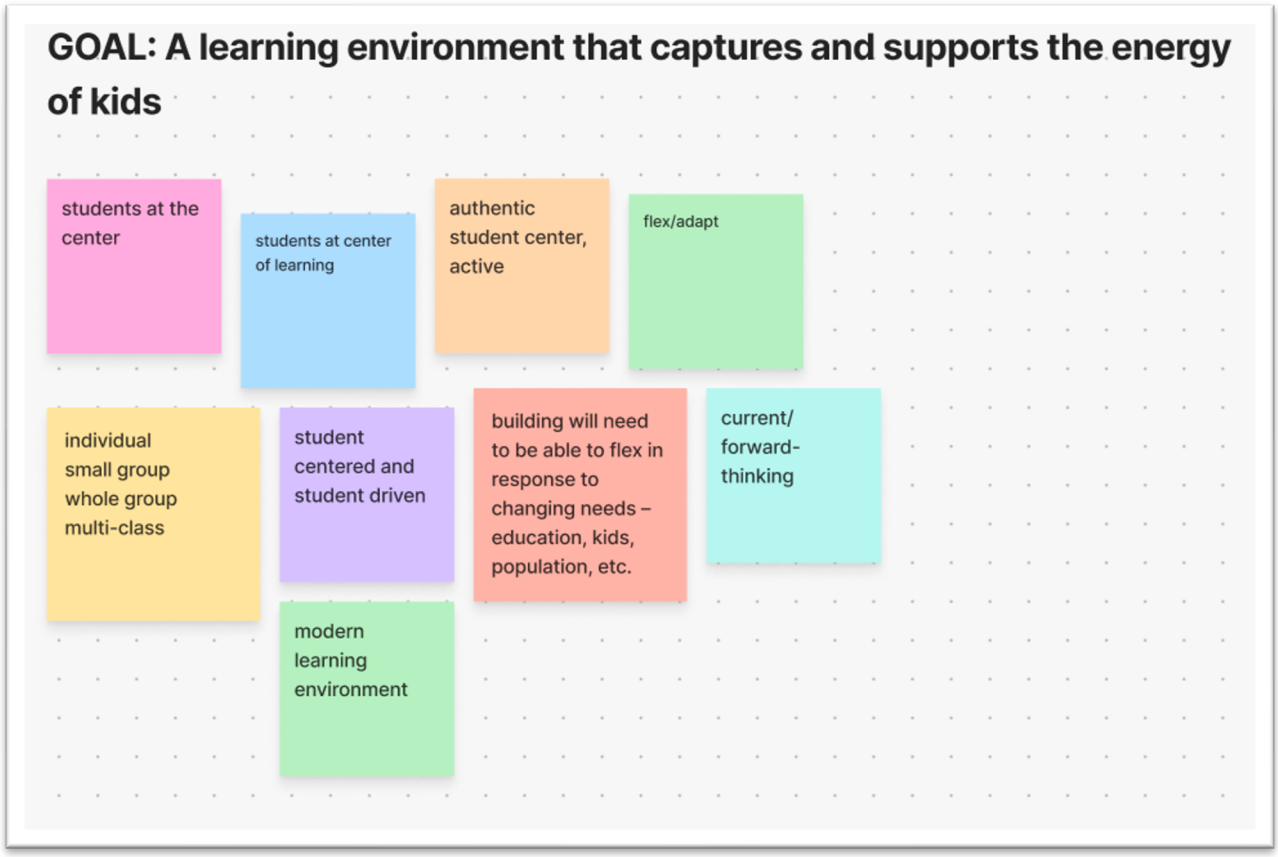
Part 1 - Educational, Architectural, and Community Priorities

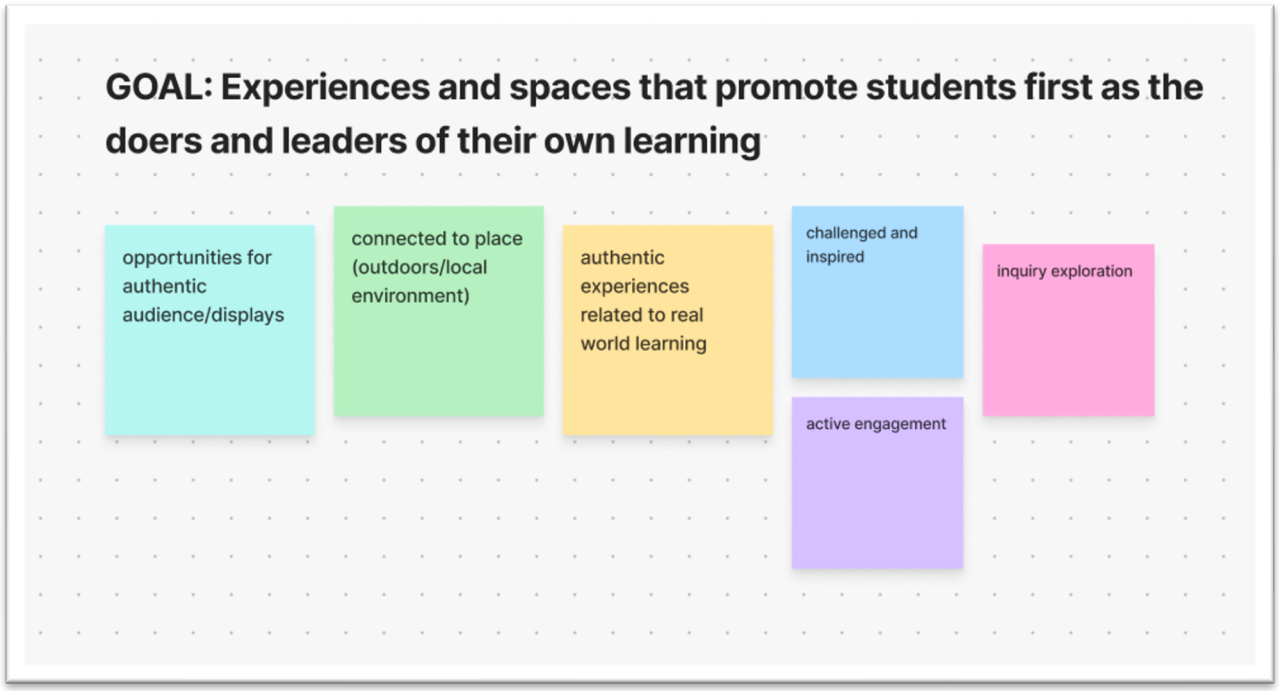
In Part 1, participants were asked to identify educational, architectural, and community priorities on individual sticky notes. After sharing their individual responses, participants grouped and categorized like-ideas to identify overarching project goals and considerations as documented below:

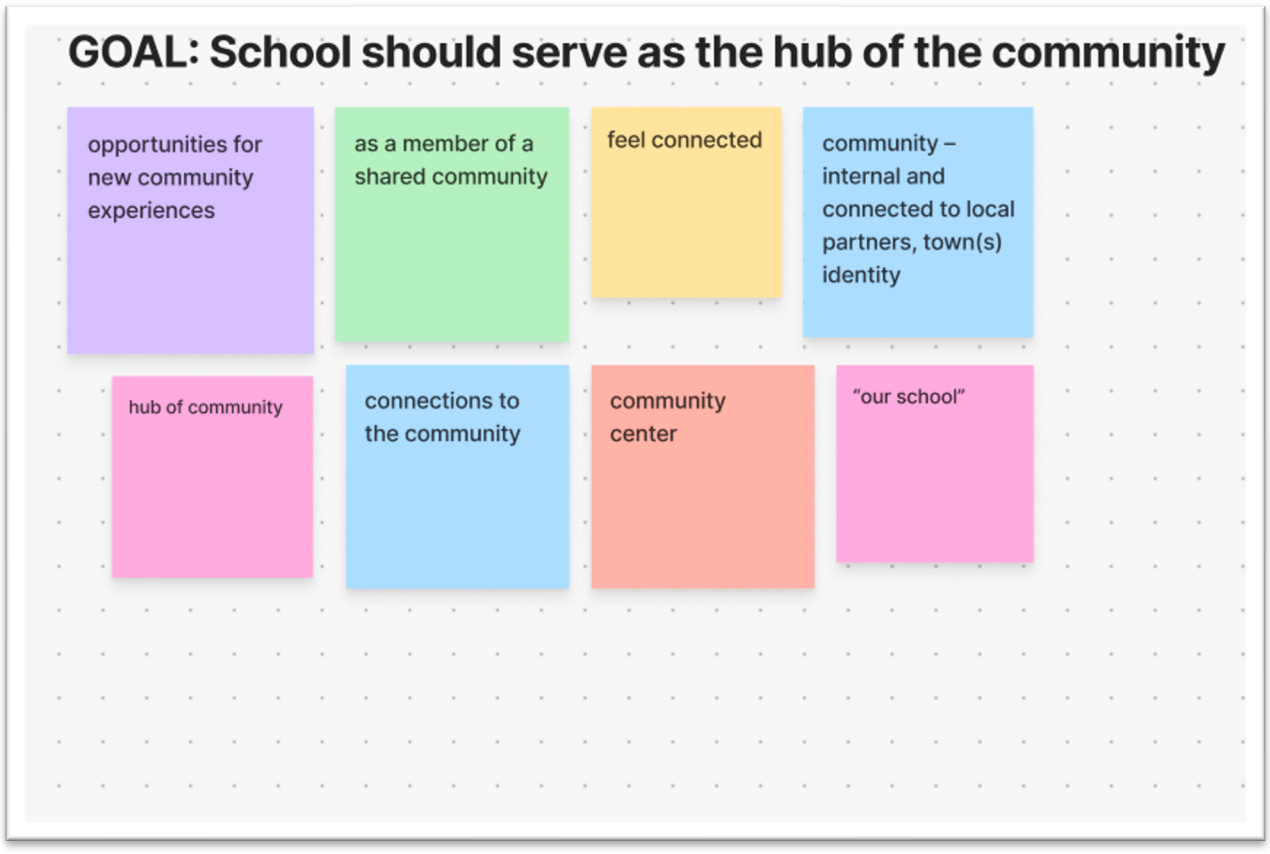
PROJECT GOALS:

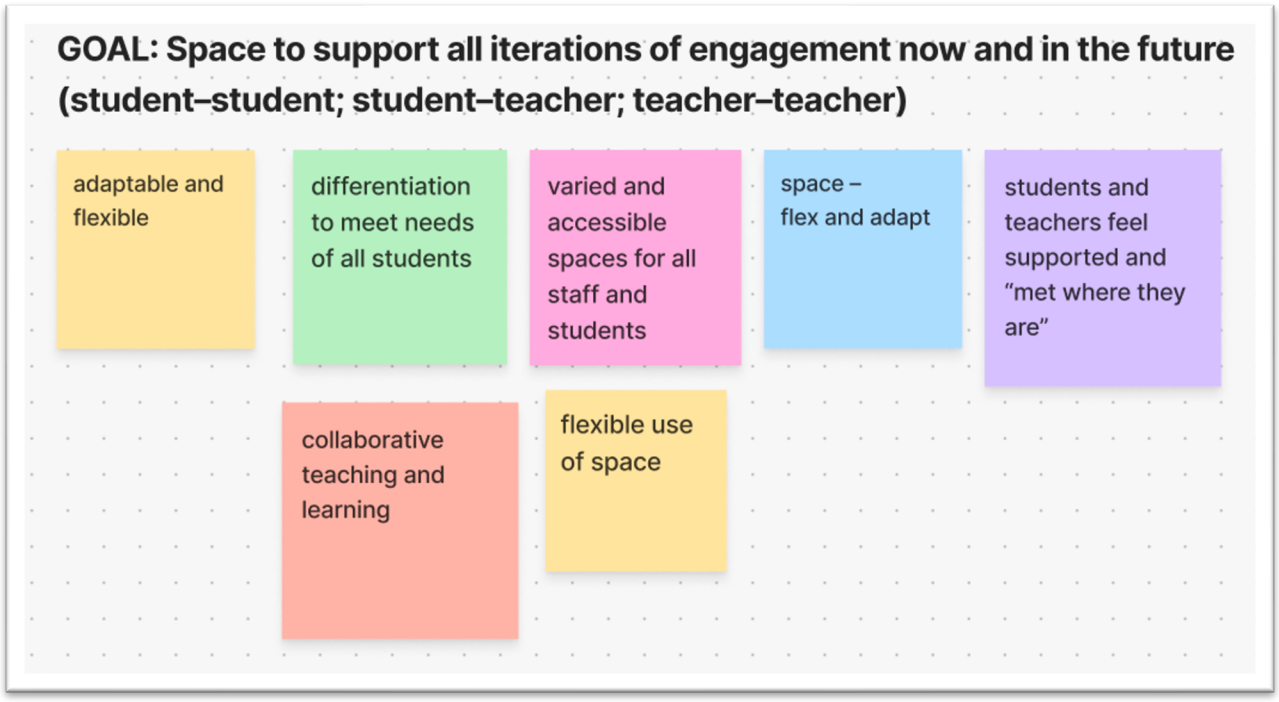
- Experiences and spaces that promote students first as the doers and leaders of their own learning
- A learning environment that captures and supports the energy of kids
- Space to support all iterations of engagement now and in the future (student–student; student–teacher; teacher–teacher)
- School should serve as the hub of the community
- Facility should support extensions of learning, including before and after school opportunities
- A shared large-scale school community for parents and students to experience small group, large group, and whole school gathering

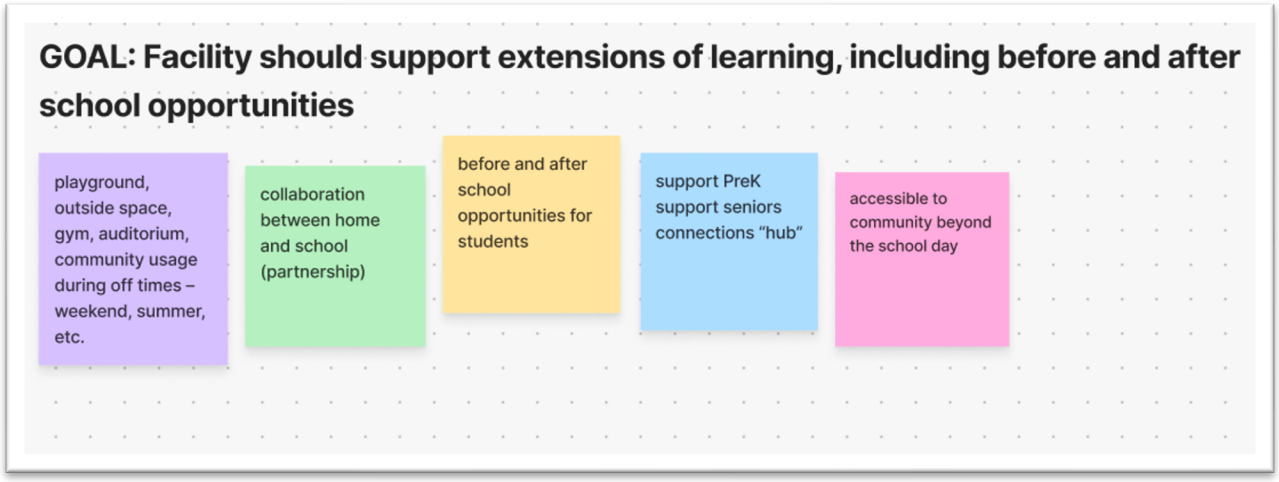
Individual responses that fall under each of these overarching project goals are documented in the pages that follow.

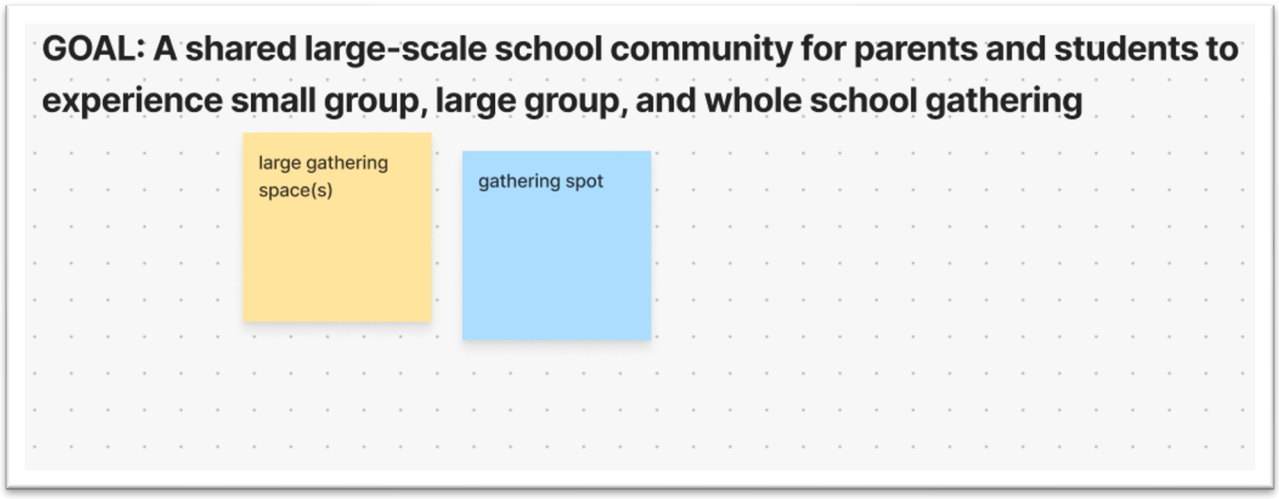

GOAL: A learning environment that captures and supports the energy of kids
students at the center
students at center of learning
authentic student center, active
flex/adapt
individual small group whole group multi-class
student centered and student driven
building will need to be able to flex in response to changing needs – education, kids, population, etc.
current/ forward-thinking
modern learning environment


GOAL: Experiences and spaces that promote students first as the doers and leaders of their own learning
opportunities for authentic audience/displays
connected to place (outdoors/local environment)
authentic experiences related to real world learning
challenged and inspired
inquiry exploration
active engagement


GOAL: School should serve as the hub of the community
opportunities for new community experiences
as a member of a shared community
feel connected
community – internal and connected to local partners, town(s) identity
hub of community
connections to the community
community center
"our school"


GOAL: Space to support all iterations of engagement now and in the future (student–student; student–teacher; teacher–teacher)
adaptable and flexible
differentiation to meet needs of all students
varied and accessible spaces for all staff and students
space – flex and adapt
students and teachers feel supported and "met where they are"
collaborative teaching and learning
flexible use of space


GOAL: Facility should support extensions of learning, including before and after school opportunities
playground, outside space, gym, auditorium, community usage during off times – weekend, summer, etc.
collaboration between home and school (partnership)
before and after school opportunities for students
support PreK support seniors connections "hub"
accessible to community beyond the school day


GOAL: A shared large-scale school community for parents and students to experience small group, large group, and whole school gathering
large gathering space(s)
gathering spot

Visioning 1 Overview

On September 22, 2025, members of Manchester Essex Regional School District attended a meeting with Educational Planner Mike Pirollo and Educational Consultant Paul White from MLP Integrated Design, Inc., along with JCJ Architecture. This meeting was part of the visioning effort for the Essex Elementary School Building Project. The session focused on understanding the developmental needs of PreK–5 learners and beginning to envision the spaces, structures, and experiences that will best support students in a future Essex Elementary School.

The meeting centered around the following goals:

- Understanding the developmental needs of PreK–5 learners
- Exploring grade configuration options and their implications
- Envisioning spaces that best support students' growth and learning

Part 1 – Understanding the Learner

In Part 1, participants explored the developmental characteristics of PreK–5 students. Through cross-grade discussions, they identified key academic, social-emotional, and physical milestones and considered how these shifts shape effective teaching, organization, and learning space design.

The responses from the whole-group wrap-up and learner profile charts are documented below.

- Integrating more movement into daily learning
- Major differences among Pre-K-5 so space and experience should be different
- Integration of SEL throughout day; being able to respond in real time – continuum of available space
- Need for flexibility in practice, space, and group size
- Variety of active and interactive learning
- Outside academic and movement spaces to support more choice
- Access to flexible spaces or outdoor space can't be cumbersome
- Need a feeling of warmth and comfort
- Developmentally appropriate scaled furniture and features – support independence
- Bring the outside in
- Use of glass and transparency for supervision and learning
- Showing students what is theirs to access

SOCIAL and EMOTIONAL

What are the most significant changes they experience?

GRADES PreK-K

Separation from family/ caregiver

making friends

following rules/expectations

managing emotions

problem solving

GRADES 1-3

testing authority/ limits

Changing structure of friendships

academic anxiety

adult guidance/support managing emotions + problem solving

GRADES 4-5

Competitive but cooperative

dating/relationships

hormonal - quick changing emotions

Integration of SEL across the entire School day!

Multi-tiered system of support for SEL

What supports, structures, and experiences can help them navigate this transition successfully?

warm, welcoming fun environment

learning through play - singing
dancing
hands-on experiences

Opportunities for different types of groupings
- large group
- small group
- partners
- individual

PHYSICAL

What are the most significant changes they experience?

- needs movement opportunities
- short amt. sitting
- reduce fine-motor

- Copying from board is hard
- move from lots of movement to more compact
- body control
- play hard/work hard
- low stamina
- short movement breaks

- Copying from board gets easier
- big muscles/larger motor movement developing quickly
- better with tools
- snacks and rest periods
- pushing physical limits
- roughhousing



What supports, structures, and experiences can help them navigate this transition successfully?

- breaks in learning
- variety of types of learning experiences (tactile, auditory etc)
- hands-on experiences - authentic learning
- various ways to present information
- variety of scale of activities
- mutiple seating options/spaces
- different types of play spaces for variety of ages and physical skills.

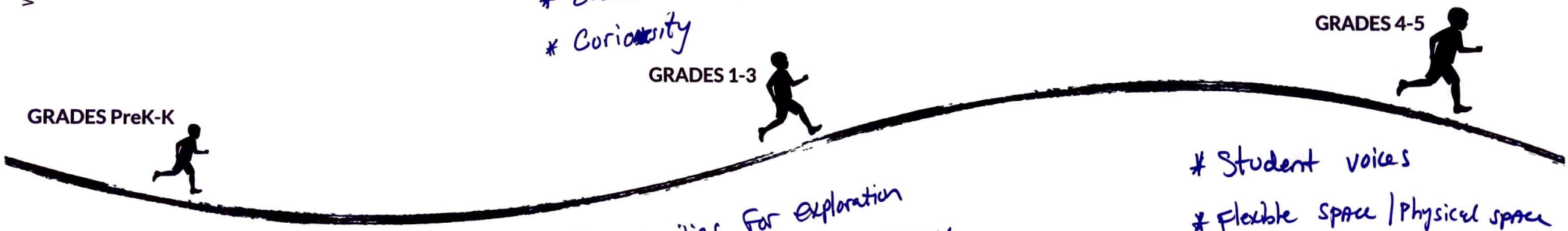
ACADEMIC

What are the most significant changes they experience?

* Play Based
* Gross Motor play

* Structed hands on learning
* tools -vs- toys
* Coriosity

* AWARness - bigger picture worry
* Structur supports learning



What supports, structures, and experiences can help them navigate this transition successfully?

* Variety of options/ Intentional space

Outdoor learning space →

* Opportunities for exploration
* Balance between Lg + Small spaces

* Student voices
* Flexible space / Physical space
* Varied learning spaces

Part 2 – Grade Configuration Considerations

In Part 2, MLP presented several possible grade configuration models for the project. Participants rotated through stations to examine each option, considering its developmental alignment, benefits, and challenges. A gallery walk and group discussion followed, identifying key themes, priorities, and tradeoffs.

The collective feedback from these discussions is summarized below, with items in blue indicating ideas that resonated across groups.

Enrollment Scenario 1: *Town of Essex – K-3 + Pre-K (Essex 4th and 5th at MM) – 165 students*

Developmental Fit: *How well does this grade configuration support the developmental needs of students (social, emotional, academic, and physical?*

- Focus on early childhood' developmentally appropriateness
- One subset of students having an additional transition – not developmentally supported

Advantages: *What are the potential benefits or strengths of this configuration for students, educators, and the school community?*

- Smaller population
- Start education in neighborhood school
- Teaming and collaboration for Grades 4 & 5 teachers
- Access to programming for 4th / 5th – fields, Parks & Rec
- More opportunity to break student dynamics

Challenges: *What potential difficulties, concerns, or drawbacks might arise with this configuration?*

- Transition of 4th / 5th into existing culture / cohort at MMES
- Essex students have additional transition
- Teacher rapport building with Grade 4
- Parent buy-in
- Smaller population
- Too many young – missing older voices
- Many 4th / 5th together – increase in conflicts
- Families of elementary students spilt across sites
- Parent / family culture – having to join MMES PTO, etc.
- Essex as "outsiders" emphasized
- Teacher culture for those that have to move
- Will require focused efforts on culture
- Higher teacher cost (impact) for Special Education – specialized program

Enrollment Scenario 2: *Town of Essex – K-5 + Pre-K (current configuration) – 250 students*

Developmental Fit: *How well does this grade configuration support the developmental needs of students (social, emotional, academic, and physical?*

- Builds community and sense of place
- Small size
- Community keeps staff & families
- Keeps kids and relationships for 6 years (+ 2 Pre-K) – supports SEL
- Cross-grade opportunities

Advantages: *What are the potential benefits or strengths of this configuration for students, educators, and the school community?*

- Older students can support younger students
- Maintains regional agreement for district
- Families / comfort / familiar for local access
- Local community partners: library, shipbuilding, senior center
- Family engagement
- Community hub
- History (traditions)
- Pre-K-5 in 1 location
- Preference of community for neighborhood school
- Maintaining EES staff community / family

Challenges: *What potential difficulties, concerns, or drawbacks might arise with this configuration?*

- "Bubble" classes
- Outdoor structures for wide range Pre-K-5 and space
- Distance from other district schools
- District Sped programs – staff sharing
- Specialists (shared) drive schedule

Enrollment Scenario 3: *District-Wide – K-5 + Pre-K (expansion at Manchester Memorial) – 515 students*

Developmental Fit: *How well does this grade configuration support the developmental needs of students (social, emotional, academic, and physical?*

- Social connections with expanded geographic area
- Maintains same school for 6 years – supports SEL
- Size impacts (?) on all ages

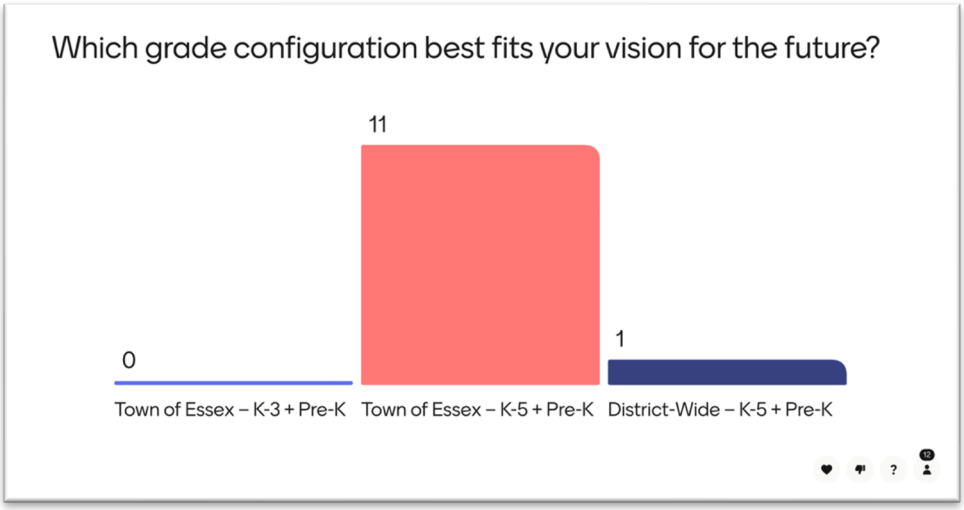
Advantages: *What are the potential benefits or strengths of this configuration for students, educators, and the school community?*

- Economy of scale
- Peer collaboration (staff and students)
- Equity – everyone has the same stuff and experience
- Students already familiar with each other before MS transition
- Single connected campus – upper and lower school
- Minimizes transitions
- No school change needed for specialized Sped
- MERSD culture-building for all

Challenges: *What potential difficulties, concerns, or drawbacks might arise with this configuration?*

- Lots of students currently ride their bike. They don't like the bus.
- Melding cultures / philosophies
- Parent buy-in
- No neighborhood school
- Another Memorial renovation
- Impact on Essex real estate market
- Impact on commute for some staff; traffic
- Community impact of site redesign
- Commuting distance for Essex residents
- Potential staff reduction
- Limited flexibility for growth options

Finally, participants used Mentimeter to indicate their preferred configuration and discussed the results (shown below). The conversation emphasized the importance of alignment between grade configuration, developmental needs, and the district's goals for student success, belonging, and community.



Part 3 – Spaces That Support Students

In Part 3, participants examined how school spaces can best support students' academic, social, and emotional growth. Using precedent images and small-group discussion, participants explored how the environment can address key developmental needs, including movement and sensory regulation, social connection, self-regulation, and a sense of belonging.

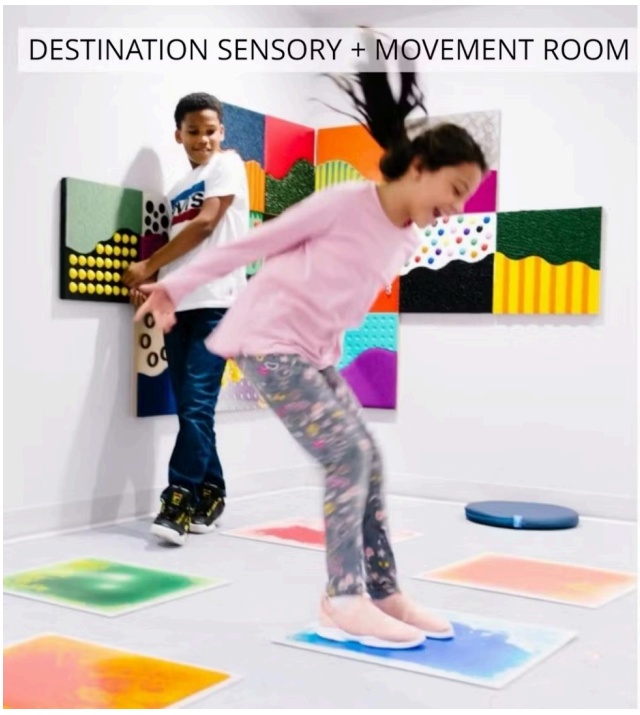
Participants reacted to each photo with a heart if they felt like spaces supported development and their future vision, a question mark if spaces somewhat fit their future vision, or a thumbs down if spaces didn't fit their future vision. Then, the session concluded with groups brainstorming types of spaces that could meet these needs in a future Essex Elementary School. Their ideas and the precedent images with reactions are documented in the following pages.

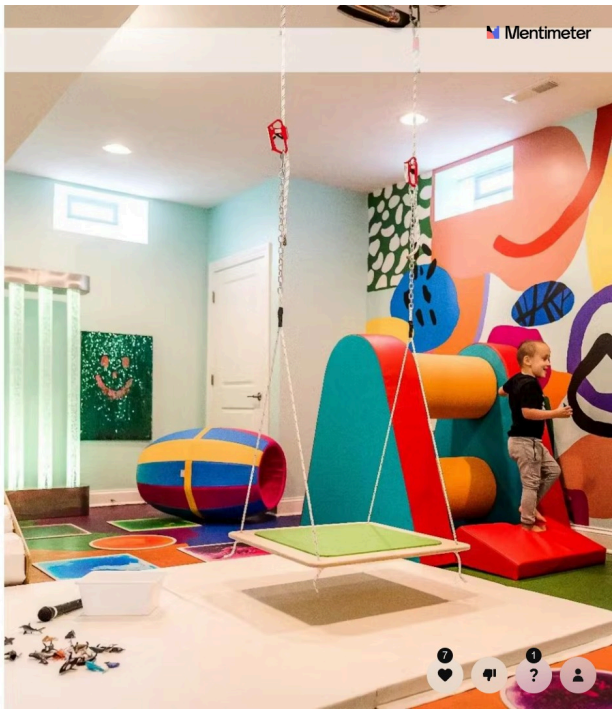
- Spaces that are quiet and calming
- Calming space in & out
- Calming spaces in classes as important as calming spaces elsewhere
- Visibility to outdoors – connection to outside / nature
- More age inclusive outdoor space
- Indoor & outdoor motor opportunities that meets developmental ranges
- Bring the outside in (not sand!)
- Celebration of students / connection to community & Essex culture
- Collaboration spaces support learning (used with intention and purpose)
- Sensory space – specific room
- Destination for movement / sensory experiences
- Sensory movement options / spaces, especially for older students
- Sensory path
- Alternative dining – varied table sizes
- Quiet dining space / varied options
- Porch
- Neighborhood spaces
- Break out neighborhood outside classrooms for partnering classes on science, projects
- Sliding doors between classes with middle shared space
- Small group / intervention spaces near classrooms
- Visibility into shared spaces
- Avoid places where students can hide and not be visible
- Stage / café / gym configuration with non-traditional café seating options
- Make use of "passage" space for SEL
- Lots of light and glass

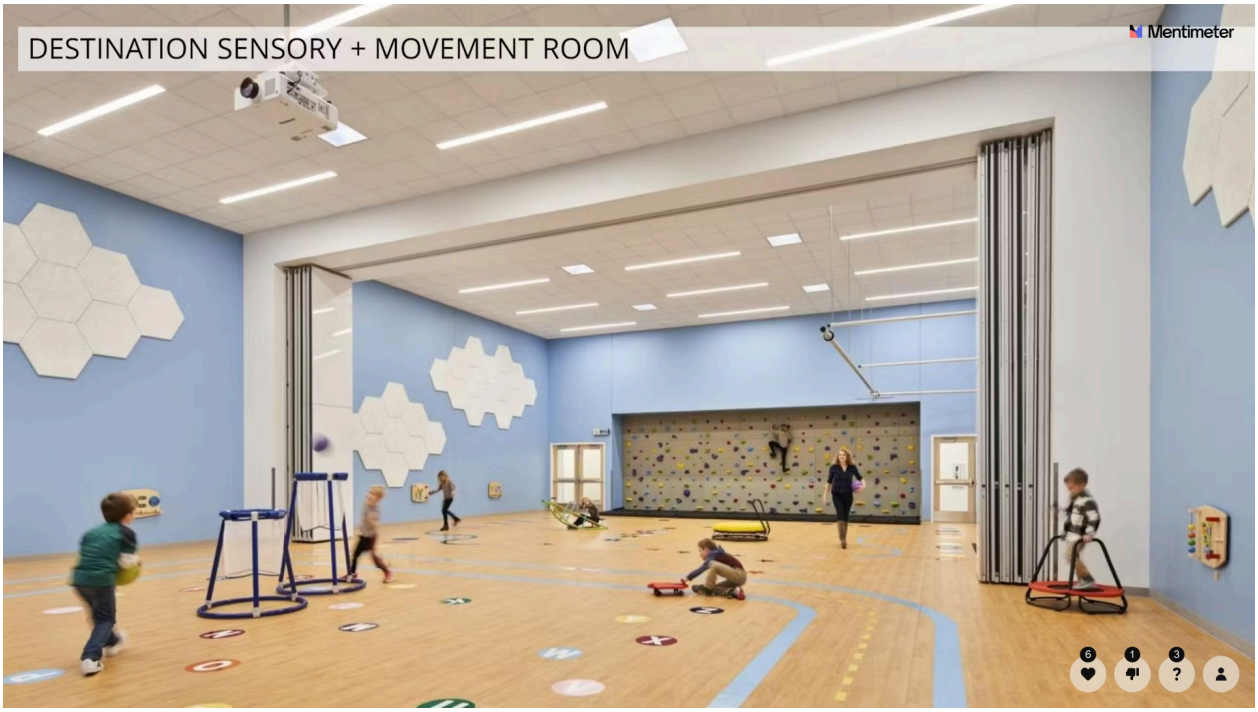
Mentimeter

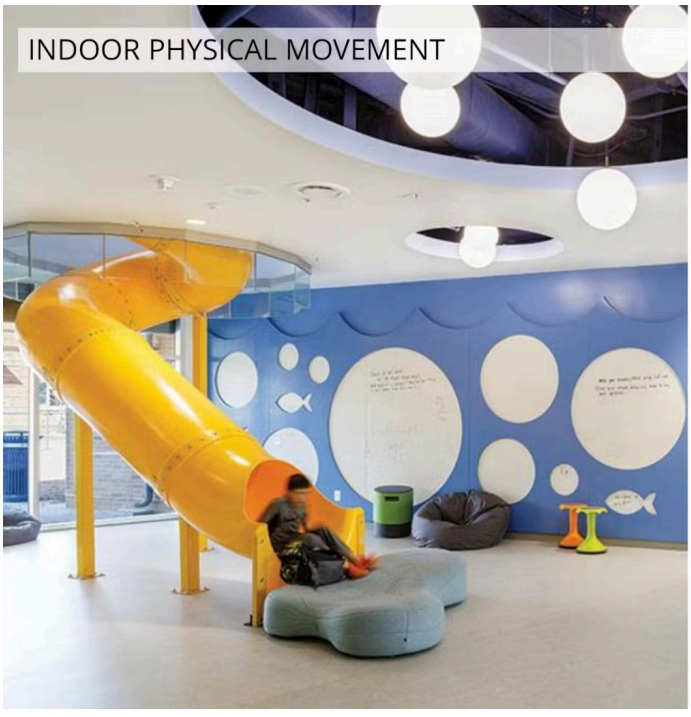
SPACES THAT SUPPORT STUDENTS

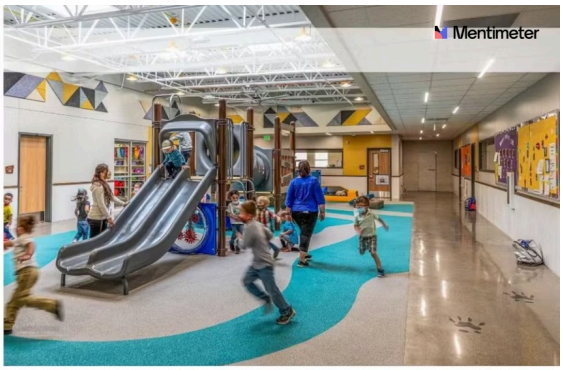
MOVEMENT + SENSORY NEEDS

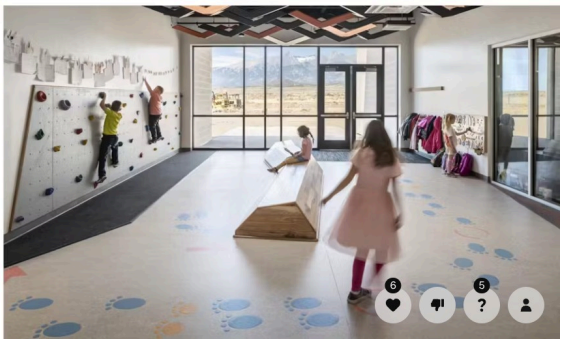





DESTINATION SENSORY + MOVEMENT ROOM
Mentimeter
6
1
3


INDOOR PHYSICAL MOVEMENT


Mentimeter


6
5


OUTDOOR PHYSICAL MOVEMENT
Mentimeter
11


SHARED COMMON SENSORY EXPERIENCES
Mentimeter
6
5


SHARED COMMON SENSORY EXPERIENCES


Mentimeter
3
5
3


OUTDOOR SENSORY EXPERIENCES


Mentimeter


3
7

Mentimeter

SPACES THAT SUPPORT STUDENTS

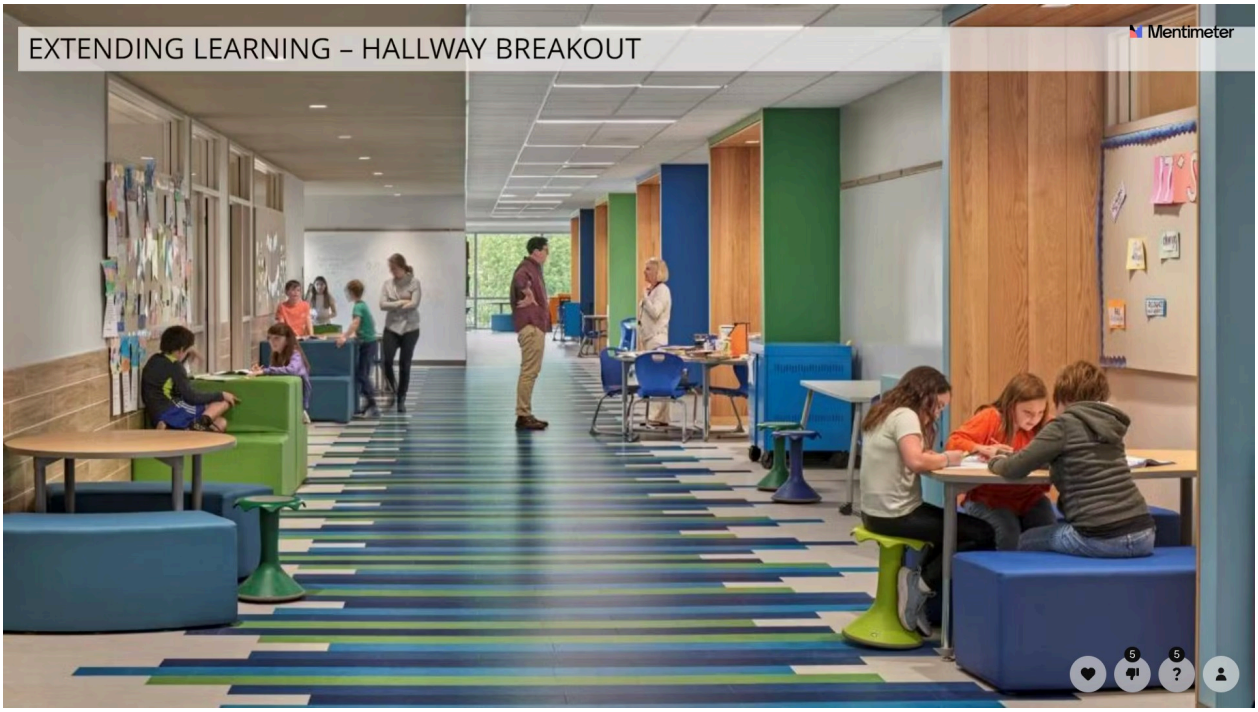
SOCIAL SKILLS + PEER INTERACTION

Mentimeter

EXTENDING LEARNING – PORCH BREAKOUT

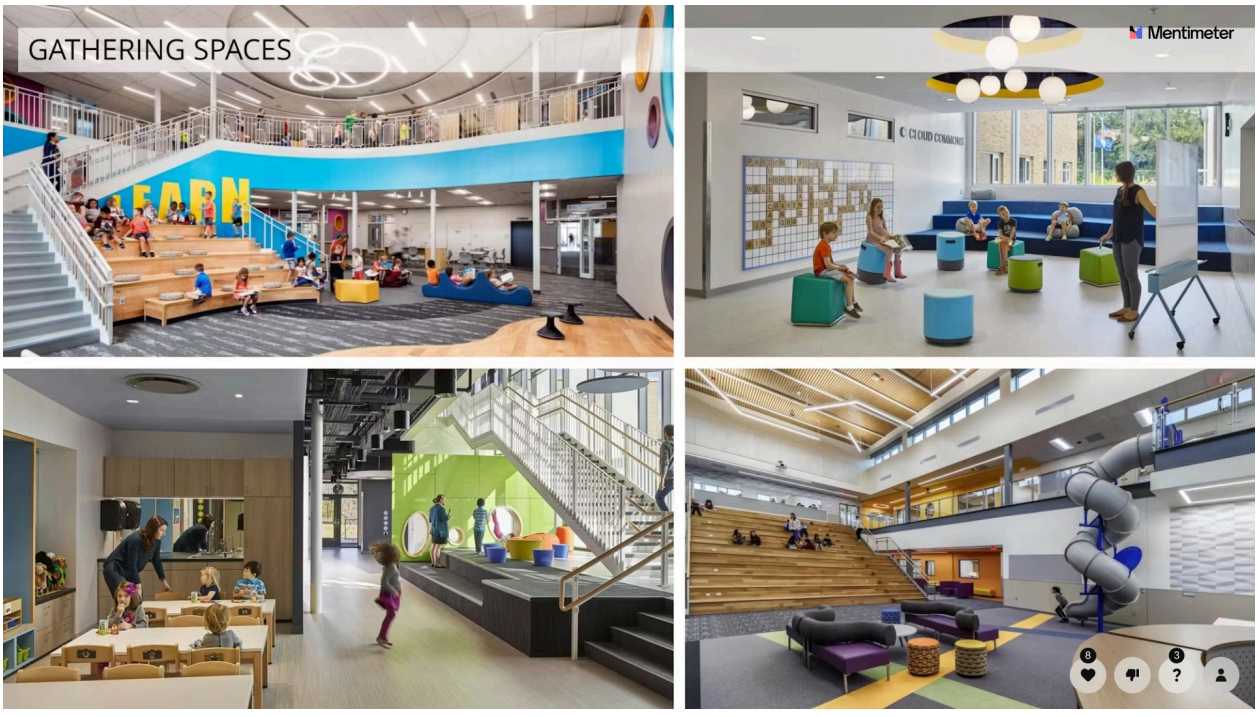





EXTENDING LEARNING – HALLWAY BREAKOUT
Mentimeter
5
5


EXTENDING LEARNING – NEIGHBORHOOD COMMONS
Mentimeter
8
3


EXTENDING LEARNING – NEIGHBORHOOD COMMONS
Mentimeter


GATHERING SPACES
Mentimeter

Mentimeter

SPACES THAT SUPPORT STUDENTS

SELF REGULATION
+ EMOTIONAL GROWTH





Visioning 2 Overview

On October 22, 2025, members of Manchester Essex Regional School District attended the second visioning session for the Essex Elementary School Building Project, facilitated by Educational Planner Mike Pirollo and Educational Consultant Paul White from MLP Integrated Design, Inc., with JCJ Architecture. This session focused on connecting teaching, learning, and student experiences with the design of learning spaces.

The meeting centered around the following goals:

- Reflect on current instructional practice using the district's Strategic Plan
- Explore how space types and design features can support desired learning experiences

Part 1 – Learning That Sticks

In Part 1, participants began by reflecting on moments when learning truly "stuck" for themselves or their students. They identified key descriptors that make learning meaningful and shared them on a "*What We Value in Learning*" wall. This created a shared understanding of what effective, engaging learning looks like.

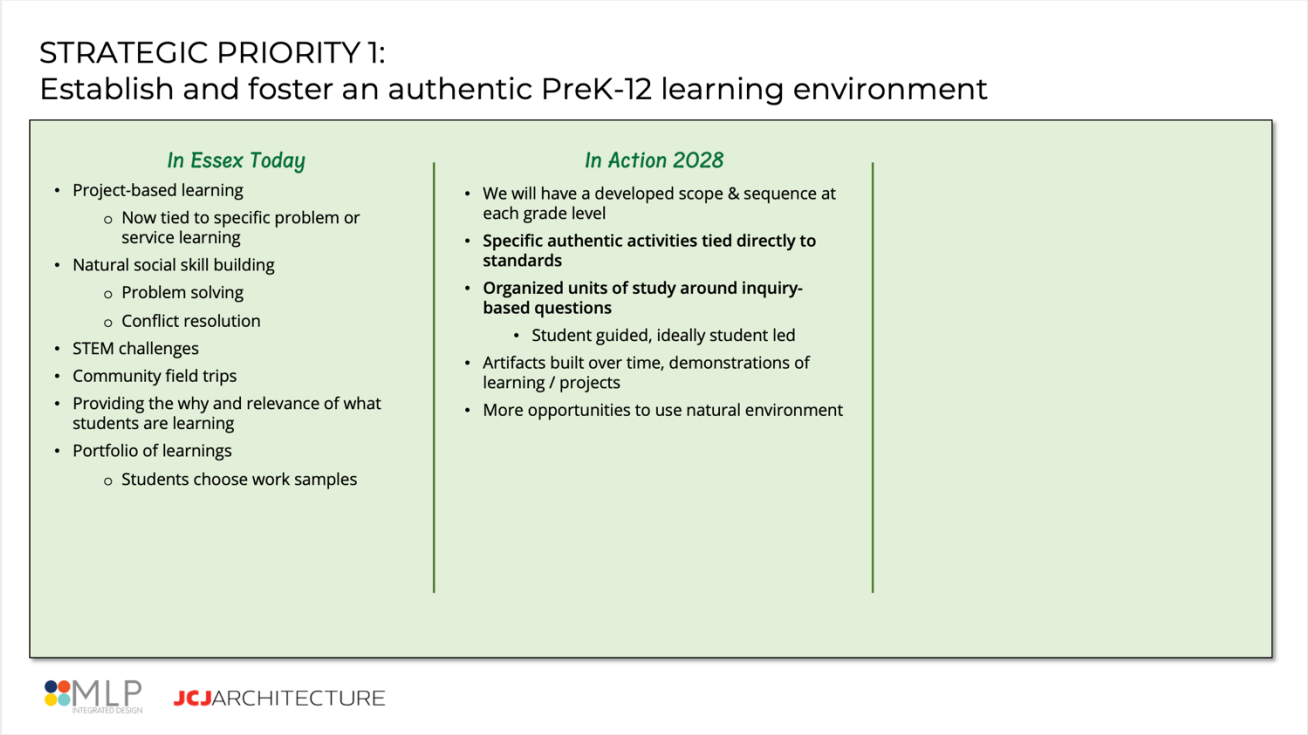
The responses from the *What We Value in Learning* chart is documented below. Please note, numbers in parenthesis signify the number of times a similar idea was made.

- Hands-on activities (4)
- Students helping each other (3)
- Whole class discussion and sharing ideas (2)
- Relationship building (2)
- Motivation / engagement (2)
- Connections to other learning or experiences (2)
- Fun (2)
- Cooperative learning (2)
- Creative
- Team building activities
- Whiteboard work
- Comparing strategies
- Was connected to current, real-world events
- Used knowledge and experiences many years later
- Kids struggled; it was hard but rewarding
- Show learning in different ways
- Choice
- Students taking ownership of their learning (the transfer and expansion)
- Outside in nature
- Active
- Relevant – solving a real problem
- Low-stakes, no pressure
- Data collection and visualization
- Whole-class participation
- Quick, easy
- Inviting space
- Natural light
- Appropriate seating

Part 2 – Strategic Plan in Action

In Part 2, participants worked in small groups to connect the district's Strategic Plan to classroom experiences. Each group documented how a priority is currently realized and how it might look in the final year of the District Improvement Plan, identifying gaps between current practice and desired outcomes.

The responses from the Strategic Plan priority charts are documented below.



STRATEGIC PRIORITY 2:
Integrate social-emotional learning into all aspects of the school day

In Essex Today

- Greet by name at door
- **Morning meetings / school meeting**
- RULER tools:
  - Chart how we want to feel
  - Mood meter
- **Calming spaces in class / school**
- Access to school adjustment counselor
- Multi-year personal relationships, personal connection
- Integrate students' interests in learning
- **Responsive Classroom routines**
- Birthday shout-outs
- After-school clubs – connecting after school with different adults
- Consistent expectations of routines, behavior (model & practice, role-playing)
- Logical consequences
- Student Leadership Council

In Action 2028

- **Consistent vertical scope of skills / practices**
- **Integrating purposeful movement / activators**
- **Integrate SEL assessments and intervention into MTSS model**
- **SEL component on report card**
- Integrate SEL in all academics / specials
- Small group space (close to classroom – visible to have private conversations)
- Peer leaders for conflict resolution
- Accessible spaces to meet SEL needs
- Large group spaces for collaboration

MLP INTEGRATED DESIGN JCJARCHITECTURE

STRATEGIC PRIORITY 3:
Celebrate and nurture an inclusive and diverse school culture through UDL

In Essex Today

- **Differentiation**:
  - Small group
  - Manipulatives
  - Type / amount for showing learning
  - MTSS (support for students in inclusive setting)
  - Title 1
  - Flexible seating
- Choice
  - Groupings
  - Order of completion
  - How to show work
  - Choice in assignment

In Action 2028

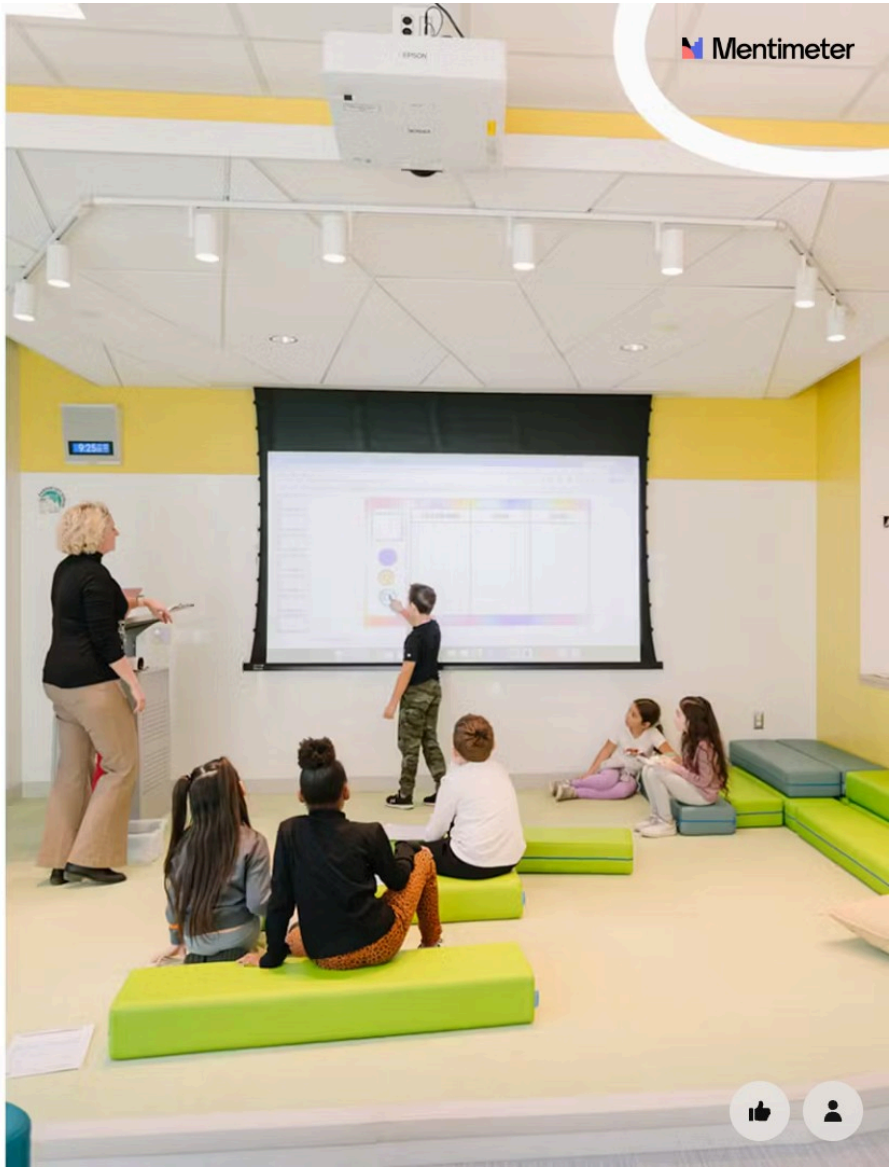
- Know the routines and expectations:
  - Group work
  - Partner work
  - Materials
- Small group spaces next to classrooms for support:
  - Minimize travel times
- Playground closer to lunch room = more time to play
- Flexible use of spaces
- Variety of spaces to meet students' needs (i.e. sensory)
- Programs / classes in the building with diverse learners:
  - SWING / RISE, PreK
  - World language classes
- Children are not stressed / anxious, better self-regulation

MLP INTEGRATED DESIGN JCJARCHITECTURE

Part 3 – Learning Environments in Action

In Part 3, participants explored how different types of spaces can support learning, collaboration, core curriculum, and student wellness. They reflected on which environments resonated most, what experiences they would enable for students, and which spaces felt essential for the future school. There responses to specific prompts are documented in the pages that follow.

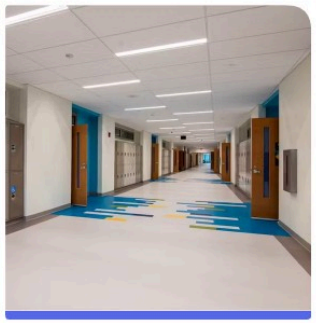
BUILDING ORGANIZATION



Mentimeter

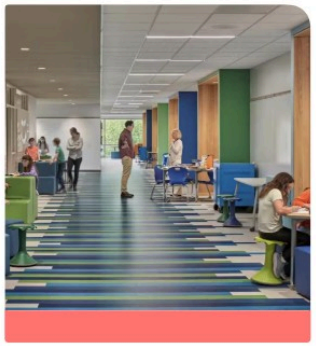
Which level of building organization feels right for MERSD students?

0



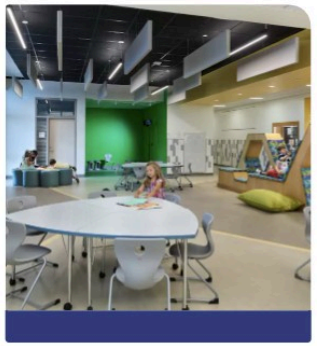
Traditional Corridor, No Breakout

1



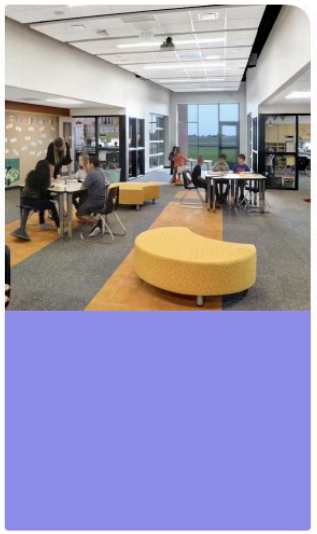
Small Corridor Breakout

1



Grouped Classrooms; Destination Breakout

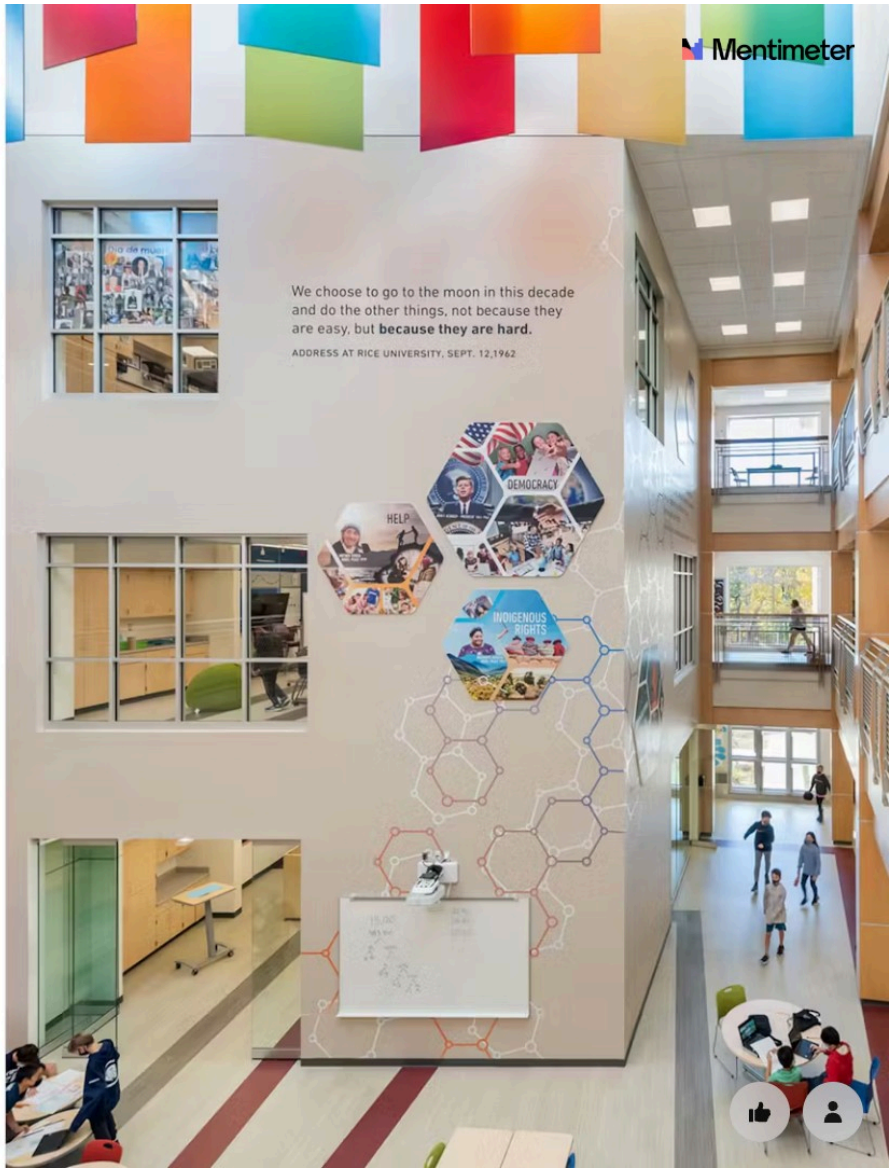
9



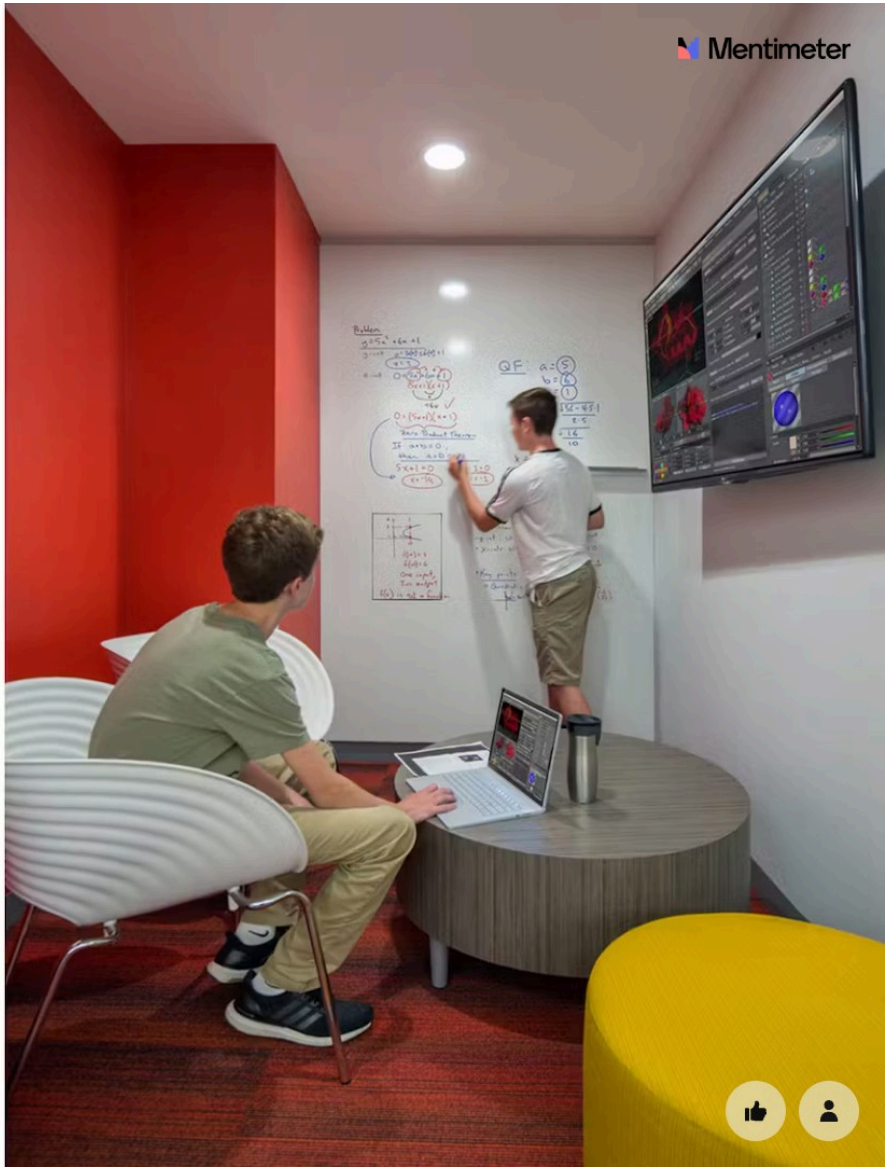
Small Learning Communities

11

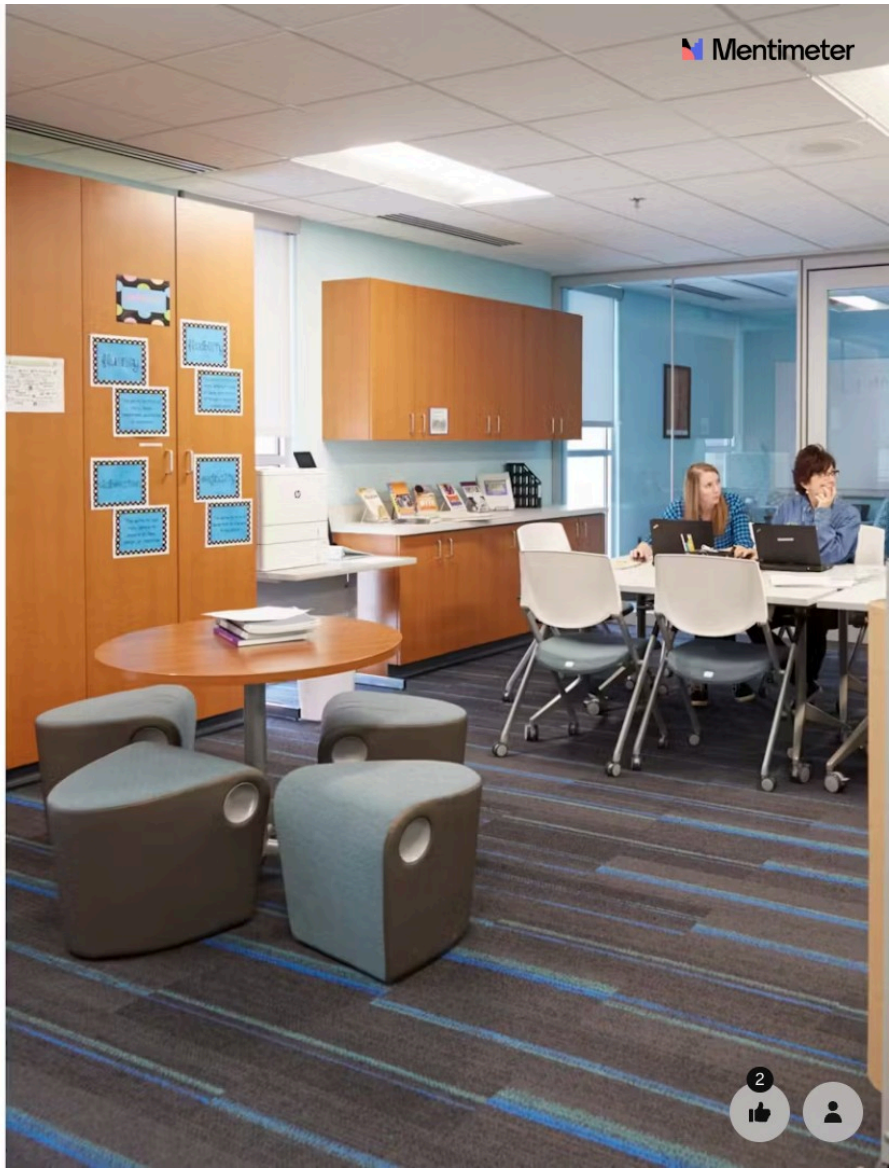
COLLABORATION + INTERACTION



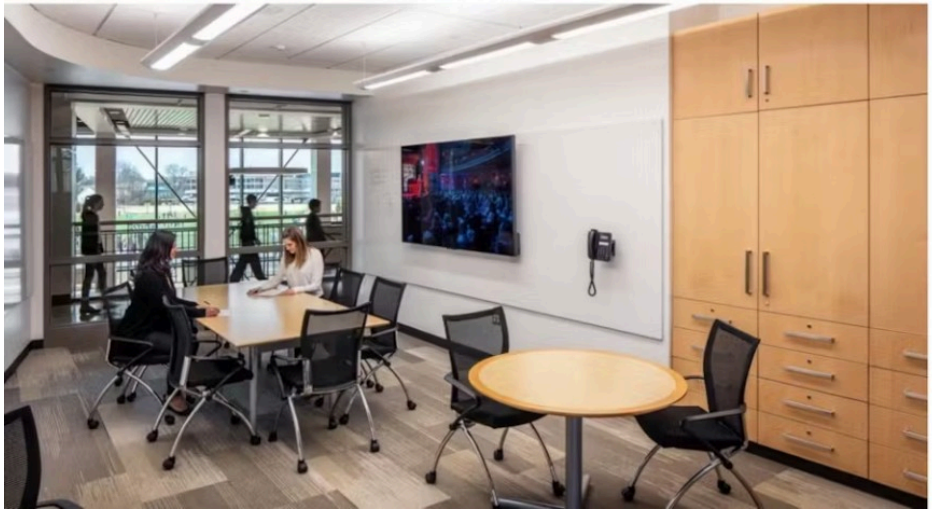
SMALL GROUP COLLABORATION

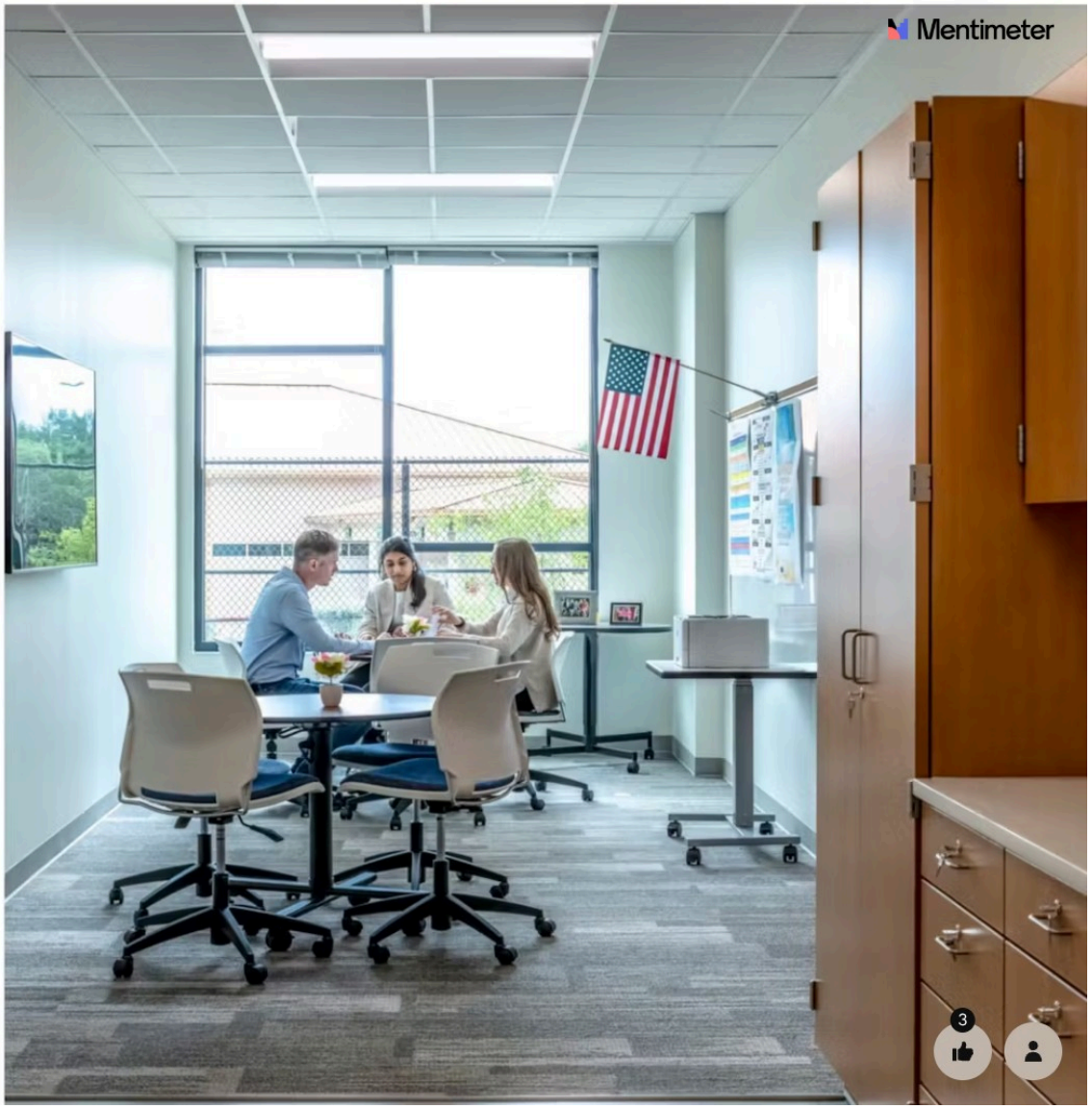


TEACHER COLLABORATION








Mentimeter
3



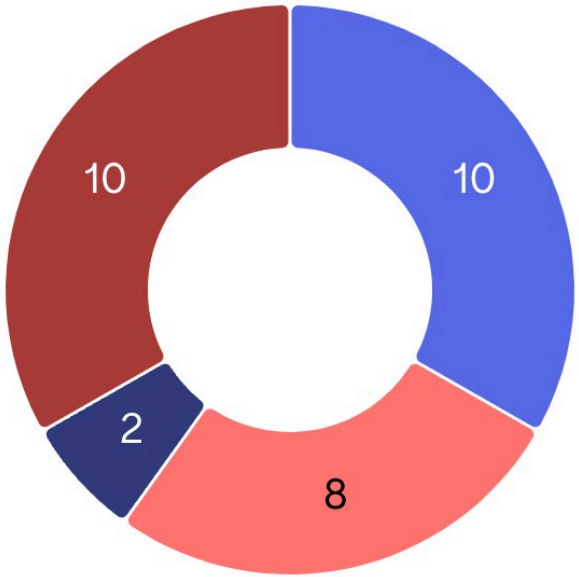
Picture a typical day for students in the new building.

What kinds of learning experiences should be easy and natural in classrooms and breakout spaces?

How should space support movement, hands-on exploration, and small-group learning to reach every child?

Mentimeter

What should collaboration space make *most possible* every day? Pick 3.



10	Active, hands-on exploration and movement
8	Small-group and individualized instruction
2	Collaboration among teachers and support staff
0	Calm, organized routines that help students focus
10	Flexibility to shift between group, partner, and independent learning

10

Mentimeter

Is there anything else collaboration spaces should make possible that isn't listed above?

Flexibility for learners physically. Opportunities for grades to collaborate together. Separate spaces for large projects

Larger class STEM activities or morning meetings

Performance and presentation

Shared space for cross grade collaboration such as k buddies Space for science labs with sinks

Co teaching with other classes.

Learning that can happen over time (like it doesn't have to be cleaned up each day because there's no space) Co-teaching Cross-class or cross-grade collaboration with students

Ability to shift based on changes in education/best practices.

Space for groups to gather for extracurricular activities

8

CONNECTIONS TO CORE LEARNING





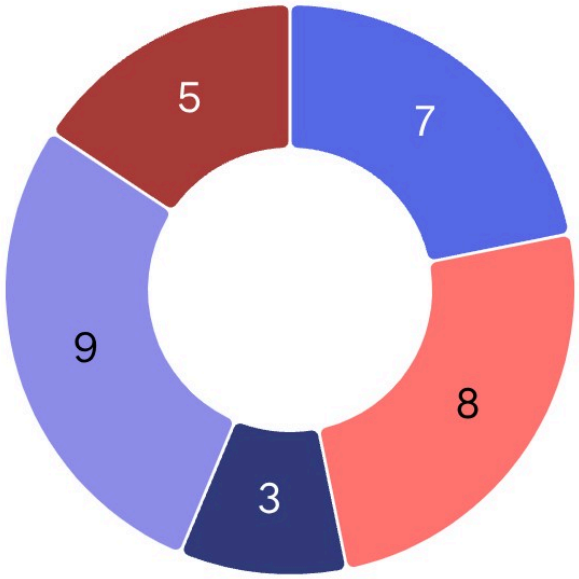
How should creation spaces connect to classroom learning?

When students move into these areas, what experiences do you hope they'll have (i.e. discovery, problem-solving?

How can design make it easy for teachers and specialists to work together so these experiences feel integrated?

Mentimeter

What's most important about how creation and exploration spaces connect to classroom learning? Pick 3.



7	They should be connected and visible to classrooms so learning flows easily between them.
8	They should be shared and flexible, used by different grades or programs for hands-on, creative work.
3	They should be collaborative, allowing teachers and specialists to co-teach or plan together.
9	They should be integrated and student-centered, supporting curiosity, making, and problem-solving.
5	They should also serve as community assets and not spatially connected to academics.

11

EDUCATIONAL WELLNESS & BELONGING



INDOOR – OUTDOOR CONNECTION





Think about an ideal day from morning arrival to lunch to the end of the day.

How can these spaces help students manage energy, focus, and emotions throughout the day?

Mentimeter

What kinds of spaces or design features can help students find calm, make choices, and belong?

Play spaces, distributed nooks and books, outdoor connections/access

Ruckus room

Flex for indoor to outdoor spaces

Lunch seating options are important. Quiet spaces carpeted with nooks, window seats.

Developmentally appropriate spaces for students, spaces that reflect different student interests (academic, sports, arts),

Age-appropriate play spaces; opportunities for outdoor learning activities. Indoor recess space.

Lunch with large, small, indoor and outdoor spaces

Indoor recess space upper grades recess space Lower grades recess space Flexible lunch spaces

9

Mentimeter

What kinds of spaces or design features can help students find calm, make choices, and belong?

A balance of calming spaces and active spaces is important. A cafeteria with different seating options so that all students can feel like they fill a table.

Indoor spaces for indoor recess

Varied/quiet space and seating for lunch Varied outdoor playground experiences Space for indoor recess activities

9

Part 4 – Strategic Plan in Action (Revisited)

In Part 4, groups revisited the strategic priority charts to link learning environments to priorities, considering how spaces would look, feel, and sound in supporting desired student outcomes.

The responses from the Strategic Plan priority charts are documented below.

STRATEGIC PRIORITY 1:
Establish and foster an authentic PreK-12 learning environment

In Essex Today	*In Action 2028*	*How Spaces Support*

• Project-based learning
  ○ Now tied to specific problem or service learning
• Natural social skill building
  ○ Problem solving
  ○ Conflict resolution
• STEM challenges
• Community field trips
• Providing the why and relevance of what students are learning
• Portfolio of learnings
  ○ Students choose work samples
	• We will have a developed scope & sequence at each grade level
	• **Specific authentic activities tied directly to standards**
	• **Organized units of study around inquiry-based questions**
	  • Student guided, ideally student led
	• Artifacts built over time, demonstrations of learning / projects
	• More opportunities to use natural environment
		• **Break out spaces support collaboration**
		• **Having a shared space allows for flexibility and choice (student & teacher)**
		• Flexible seating learning environment
		• Includes sinks at proper height
		• Space to set up projects / experiments and keep them up for a few days
		• Connection to outdoor spaces for learning
		• Display space for student work

MLP INTEGRATED DESIGN JCJARCHITECTURE

STRATEGIC PRIORITY 2:
Integrate social-emotional learning into all aspects of the school day

In Essex Today

- Greet by name at door
- **Morning meetings / school meeting**
- RULER tools:
  - Chart how we want to feel
  - Mood meter
- **Calming spaces in class / school**
- Access to school adjustment counselor
- Multi-year personal relationships, personal connection
- Integrate students' interests in learning
- **Responsive Classroom routines**
- Birthday shout-outs
- After-school clubs – connecting after school with different adults
- Consistent expectations of routines, behavior (model & practice, role-playing)
- Logical consequences
- Student Leadership Council

In Action 2028

- **Consistent vertical scope of skills / practices**
- **Integrating purposeful movement / activators**
- **Integrate SEL assessments and intervention into MTSS model**
- **SEL component on report card**
- Integrate SEL in all academics / specials
- Small group space (close to classroom – visible to have private conversations)
- Peer leaders for conflict resolution
- Accessible spaces to meet SEL needs
- Large group spaces for collaboration

How Spaces Support

- Calming / self-regulation sensory spaces
- Outdoor connections
- **Options for students to choose based on interest**
- **Café with tables of different sizes, booths**
- Collaboration:
  - Classroom – classroom
  - Students – students
  - Teachers
- **Large spaces to fit whole school plus families / community**

MLP INTEGRATED DESIGN JCJARCHITECTURE

STRATEGIC PRIORITY 3:
Celebrate and nurture an inclusive and diverse school culture through UDL

In Essex Today

- **Differentiation**:
  - Small group
  - Manipulatives
  - Type / amount for showing learning
  - MTSS (support for students in inclusive setting)
  - Title 1
  - Flexible seating
- Choice
  - Groupings
  - Order of completion
  - How to show work
  - Choice in assignment

In Action 2028

- Know the routines and expectations:
  - Group work
  - Partner work
  - Materials
- Small group spaces next to classrooms for support:
  - Minimize travel times
- Playground closer to lunch room = more time to play
- Flexible use of spaces
- Variety of spaces to meet students' needs (i.e. sensory)
- Programs / classes in the building with diverse learners:
  - SWING / RISE, PreK
  - World language classes
- Children are not stressed / anxious, better self-regulation

How Spaces Support

- Break out spaces
- Porch
- **Different lunch room options, table sizes**
- Upper grade play space
- Lower grade play space
- Space for all movement
- Student / cultural representation (town artifacts)
- Flexible size options for furniture

MLP INTEGRATED DESIGN JCJARCHITECTURE

Part 5 – Closing Reflection

The session concluded with a reflection prompt asking participants: *"After everything we explored* during these past two sessions*, what's still sitting on your mind — a thought, question, or hope you're leaving with?"*

The thoughts and lingering questions from participants are documented below.

- Not all classrooms need to have the same things
- Bathrooms – kids and adults
- Handwashing stations in the cafeteria

Sign In Sheets

Launch and Priority Mapping – 09.16.25

Kimberly Provost	Principal	provostk@mersd.org
Christina Dell Angelo	OPM Project Director	cdellangelo@doreandwhittier.com
Jacob Greco	Dore and Whittier APM	jgreco@doreandwhittier.com
Pam Beaudoin	Superintendent	beaudoinp@mersd.org
Heather Leonard	Director of Curriculum	leonardh@mersd.org
John Albright	OPM Dore+Whittier	jalbright@doreandwhittier.com
James LaPosta	JCJ Architect	jlaposta@jcj.com
Mike Pirollo	Educational Planner	mike@mlpid.com

Visioning 1 Session – 09.22.25

Emily Dwyer	Grade 1 teacher	dwyere@mersd.org
Gillian Mackay-Smith	Parent	gmackaysmith@gmail.com
Danielle Denetri	Grade 5 Teacher	demetrid@mersd.org
Kim Field	Grade 4 Teacher	fieldk@mersd.org
Taylor Clary	Grade 4 Teacher	claryt@mersd.org
Kimberly Provost	Principal	provostk@mersd.org
Maggie Safrine	EES Administrative Assistant	safrinem@mersd.org
Rachelle Russo	Kindergarten Teacher	russor@mersd.org
Patty Roundy	Kindergarten TA	roundyp@mersd.org
Jake Foster	School Committee	jfoster@mersd.org
Jeff Elliott	JCJ Architecture	jelliott@JCJ.com
Heather Leonard	Director of Curriculum	leonardh@mersd.org
Pam Beaudoin	Superintendent	beaudoinp@mersd.org
James LaPosta	JCJ Architect	jlaposta@jcj.com
Mike Pirollo	Educational Planner	mike@mlpid.com
Paul White	Educational Consultant	paul@mlpid.com

Visioning 2 Session – 10.22.25

Emily Dwyer	Grade 1 teacher	dwyere@mersd.org
Danielle Denetri	Grade 5 Teacher	demetrid@mersd.org
Kim Field	Grade 4 Teacher	fieldk@mersd.org
Taylor Clary	Grade 4 Teacher	claryt@mersd.org
Kimberly Provost	Principal	provostk@mersd.org
Maggie Safrine	EES Administrative Assistant	safrinem@mersd.org
Rachelle Russo	Kindergarten Teacher	russor@mersd.org
Patty Roundy	Kindergarten TA	roundyp@mersd.org
Jake Foster	School Committee	jfoster@mersd.org
Jeff Elliott	JCJ Architecture	jelliott@JCJ.com
Heather Leonard	Director of Curriculum	leonardh@mersd.org
Nicole Grasso-Correnti	Nurse	grasso-correnti@mersd.org
Pam Beaudoin	Superintendent	beaudoinp@mersd.org
James LaPosta	JCJ Architect	jlaposta@jcj.com
John Albright	OPM Dore+Whittier	jalbright@doreandwhittier.com
Mike Pirollo	Educational Planner	mike@mlpid.com
Paul White	Educational Consultant	paul@mlpid.com

Program Workshop 1 Session – 09.29.25

Heather Leonard	Director of Curriculum	leonardh@mersd.org
Kimberly Provost	Principal	provostk@mersd.org
Pam Beaudoin	Superintendent	beaudoinp@mersd.org
Jeff Elliott	JCJ Architect	jelliott@jcj.com
Mike Pirollo	Educational Planner	mike@mlpid.com

Program Workshop 2 Session – 10.08.25

Heather Leonard	Director of Curriculum	leonardh@mersd.org
Kimberly Provost	Principal	provostk@mersd.org
Pam Beaudoin	Superintendent	beaudoinp@mersd.org
James LaPosta	JCJ Architect	jlaposta@jcj.com
Jeff Elliott	JCJ Architect	jelliott@jcj.com
Mike Pirollo	Educational Planner	mike@mlpid.com

Appendix B: *MERSD Regional Agreement*

Amended effective October 14, 2003 and May 10, 2007

AGREEMENT BETWEEN THE TOWNS OF ESSEX AND MANCHESTER-BY-THE-SEA, MASSACHUSETTS WITH RESPECT TO THE FORMATION OF A REGIONAL SCHOOL DISTRICT RESTATING THE PROVISIONS OF SAID AGREEMENT, AS AMENDED

This Agreement is entered into pursuant to Chapter 71 of the General Laws of the Commonwealth of Massachusetts, as amended, between the towns of Essex and Manchester-by-the-Sea ("MANCHESTER"), hereinafter sometimes referred to as member towns. In consideration of the mutual promises herein contained, it is hereby agreed as follows:

SECTION 1. THE REGIONAL SCHOOL COMMITTEE

(a) Composition

The powers and duties of the Regional School District shall be vested in and exercised by a Regional School Committee, hereinafter called the "Committee", which shall consist of seven (7) members, four (4) of whom shall be residents of Manchester and three (3) of whom shall be residents of Essex. All members shall serve until their respective successors are elected and qualified.

(b) Interim Committee

All members of the present Essex School Committee and the Manchester School Committee, acting jointly, shall serve as an Interim Committee until the next annual town elections held in the year following the year in which this Agreement is accepted by the member towns.

(c) Election of Members

Members of the Committee shall be elected by the voters of the member towns at each member town's annual town election.

At the next succeeding annual town elections of the member towns to be held in the year following the year in which this Agreement is accepted by the member towns, there shall be

elected seven (7) members of the Committee, four (4) of whom shall be residents of and elected by Manchester and three (3) of whom shall be residents of and elected by Essex, as follows:

(1) One (1) member who is a resident of and elected by Manchester and one member who is a resident of and elected by Essex, for a term of one (1) year;

(2) One (1) member who is a resident of and elected by Manchester and one member who is a resident of and elected by Essex, for a term of two (2) years;

(3) Two (2) residents who are residents of and elected by Manchester and one member who is a resident of and elected by Essex, for a term of three (3) years.

A candidate for membership on the Committee shall file nomination papers for the particular Committee position with the term such candidate is seeking as set forth in subparagraphs (i), (ii) or (iii) set forth above with the Town Clerk of the member town in which such candidate resides within the time allowed by the General Laws relating to filing nomination papers for town elections. Following the expiration of the original terms set forth in subparagraphs (i), (ii) and (iii) above, all members will be elected for a term of three (3) years at all succeeding elections.

Any registered voter of any member town may be a candidate and the method of his or her nomination shall be the same as if he or she were a candidate for elected town office in the member town in which he or she is a registered voter.

Promptly after their election, members of the Committee shall be sworn to the faithful discharge of their duties by the Town Clerk of the town in which they reside and a record of such oath shall be made and kept by the Town Clerk and a copy thereof delivered to the Secretary of the Committee.

Notwithstanding any other provision of this Agreement to the contrary, on February first immediately following the official publication of the most recently conducted state or federal census, the Committee shall determine, on the basis of such census figures, the total population of each member town and the total population of the District. (For the purposes of this provision, "official publication" means publication by the Secretary of the Commonwealth in the case of the state census and transmittal to Congress by the President in the case of the federal census.) Membership on the Committee shall be adjusted at that time, as hereinafter provided, so that the

town having the larger population as indicated in the official publication will have four (4) members on the Committee.

If a member town is entitled to an additional member of the Committee, as hereinabove provided, such additional member from such town shall be elected to the Committee at the annual town election next following the February first on which the determination of population must be made. If the population of a member town shall at any time cause its membership on the Committee to be reduced by one (1) member, such town shall at its next annual town election elect one less than the number of members of the Committee from that town whose terms expire.

The term of office of members of the Committee shall commence on the day following their election.

If there is a failure to nominate or a failure to elect a candidate, then the Board of Selectmen of the member town in which such failure to nominate or elect occurs shall appoint a member as though there were a vacancy under the provisions of subsection 1(e) of this Agreement.

(d) Organization

At the first regular meeting of the Committee following the acceptance of this Agreement by the member towns, and, thereafter at the first regular meeting of the Committee following the latter of the annual town elections of the member towns in each year, the Committee shall organize and choose by ballot a chairperson and vice-chairperson from its own membership. At the same meeting or at any other meeting, the Committee shall appoint a treasurer and a secretary who may be the same person but who need not be members of the Committee.

(e) Vacancies

If a vacancy occurs on the Committee, such vacancy shall be filled by a roll call vote of the Board of Selectmen and the remaining members of the Committee of the member town in which the member vacating office resided at the time of his or her election. The person so appointed shall be a resident of the town from which the vacancy occurred, and shall serve until the next town annual election, at which election a successor shall be elected to serve the balance of the unexpired term, if any.

(f) Quorum

A majority of the Committee shall constitute a quorum, at least one (1) of whom shall represent each member town.

(g) Powers and Duties

The Committee shall have all of the powers and duties conferred and imposed upon regional school district committees by law and by this Agreement and any amendment or additions thereto or as may be conferred and imposed upon it by any applicable general or special law.

SECTION 2. TYPE OF REGIONAL SCHOOL DISTRICT

The Regional School District shall include all grades, kindergarten through twelve (12). The Committee may establish and maintain vocational educational courses, acting as trustees therefore, in accordance with the provisions of Chapter 74 of the General Laws and any amendments or additions thereto.

SECTION 3. LOCATION AND LEASING OF SCHOOL FACILITIES

(a) Location

Any facility constructed to accommodate pupils in one or more grades from both member towns shall be located within the geographical limits of the District. The District shall at all times maintain at least one (1) elementary school facility in each member town. For purposes of this Agreement, an "elementary school facility" shall mean a facility used for elementary school grades as set forth in Section 13 below.

(b) Leasing

The Town of Essex is hereby authorized to lease to the Regional School District all the premises and buildings presently known as the

Essex Elementary and Middle School.

The Town of Manchester is hereby authorized to lease to the Regional School District all the premises and buildings presently known as the

Manchester Memorial School

Manchester Junior Senior High School

Each of the leases authorized above shall be for a term of twenty (20) years and the term shall commence on the date when the Committee assumes jurisdiction of the pupils in the grades served by said schools. Each of the leases shall contain a provision for the extension of the term thereof for a renewal term not in excess of twenty (20) years, renewable at any time during the term, at the option of the Committee. Each such lease shall automatically terminate, and the use of the building so leased shall revert back to the town from which it was leased in the event that the Committee decides that such building is no longer needed for the education program of the District. Each of the leases shall contain provisions authorizing the District to insure, repair, improve, alter or remodel any of the leased buildings. No rental shall be charged to the District by any of the member towns. Each lease shall contain identical warranties from the respective member towns warranting that the buildings shall be in good condition at the time of leasing to the District, on the terms as set forth in the leases. Each lease involving a member town shall be on such other terms and conditions as may be determined by the Selectmen thereof and the Committee, who shall execute the lease for the member town and the District, respectively.

The unpaid balance on the outstanding bonds (school bonds authorized for the purpose of constructing or improving the above-reference facilities) at the time of leasing of said buildings and facilities shall remain the obligation of the member town.

SECTION 4. APPORTIONMENT AND PAYMENT OF COSTS

(a) Definition of Costs

For the purpose of apportioning assessments levied by the District against the member towns, costs shall be divided into three (3) categories, as follows:

(1) Capital costs, which shall consist of the costs of: acquiring land and constructing, reconstructing, adding to, and equipping a school building or buildings; remodeling and making extraordinary repairs to a school building or buildings; constructing sewerage systems and sewerage treatment and disposal facilities; purchasing or using such sewerage systems with municipalities; leasing, with an option to purchase, equipment for educational purposes; any other projects or acquisitions of a capital nature which the District is or may be authorized to finance by borrowing; and debt service on bonds or notes of the District issued to finance capital costs.

(2) Special operating costs, which shall consist of the cost of evening, graduate, and extension courses or any other types of courses, including vocational educational programs but excluding summer school programs, that are offered by the District to persons other than pupils attending a regular District comprehensive school program in any of the grades kindergarten through twelve, inclusive.

(3) Operating costs, which shall consist of all costs of the District other than capital costs and special operating costs. Operating costs shall consist of "instructional costs" and "non-instructional costs", and the categorization of all operating costs into these two sub-categories shall be determined by the Regional District School Committee in accordance with any definitions that may be promulgated from time to time by the Massachusetts Department of Education.

(b) Apportionment of Capital Costs

Capital costs shall be apportioned as follows:

(1) Fifty percent (50%) on the basis that the equalized valuation of each member town pursuant to the latest equalized valuation of such town, as set forth in Chapter 559 of the Acts of 1945 entitled "An Act Establishing the Basis of Apportionment of State and County Taxes" ("Chapter 559"), or any later equalized valuations as may be enacted by the Commonwealth next preceding each bond issue, bears to the sum of all such equalized valuations of all member towns; and

(2) Fifty percent (50%) on the basis that the respective populations of each member town based on the most recent decennial U.S. Census (or any official census prepared by the U.S. Census bureau that calculates the populations of each member town, such census being referred to herein as the “Federal Census”) bears to the total combined populations of all member towns in that same Federal Census.

(c) Apportionment of Special Operating Costs

Special operating costs shall be apportioned to the member towns on the basis that the enrollment of pupil hours of residents of each member town in courses described in paragraph 2 of subsection 4 (a) above for the fiscal year next preceding the fiscal year for which the apportionment is determined bears to the total enrollment of pupil hours in such courses from

residents of both member towns on such date. Enrollment in such courses shall be determined on the basis of those pupils enrolled in each of said courses as of the first Tuesday after the first Monday of the week that said courses commence.

(d) Apportionment of Operating Costs

Operating costs shall be expressed as "instructional costs" and "non-instructional costs", and the categorization of costs into either of these sub-categories are to be determined by the Regional District School Committee, in accordance with any definitions that may be promulgated from time to time by the Massachusetts Department of Education.

.(1) Non-instructional operating costs shall be apportioned to the member towns as follows:

(i) Twenty-five percent (25%) on the basis that the "Average Equalized Valuation" (as defined below) of each member town bears to the "Total Equalized Valuation" (as defined below) of all member towns; and

(ii) Seventy-five percent (75%) on the basis that the population of each member town according to the most recent Federal Census bears to the combined populations of all member towns according to the same Federal Census.

(2) Instructional operating costs shall be apportioned to the member towns as follows:

(i) Twenty-five percent (25%) on the basis that the Average Equalized Valuation of each member town bears to the Total Equalized Valuation of all member towns; and

(ii) Seventy-five percent (75%) on the basis that the "Average Respective Pupil Enrollments" (as defined below) of each member town in all Regional School District schools bears to the "Total Pupil Enrollment" (as defined below).

(3) For purposes of this Agreement:

(i) the Average Equalized Valuation of each member town for fiscal year 2008 shall mean the "Latest Equalized Valuation of such Member Town" (as defined below);

(ii) the Average Equalized Valuation of each member town for fiscal year 2009 shall mean the arithmetic average of the Latest Equalized Valuation of such Member Town for fiscal year 2008 and fiscal year 2009;

(iii) the Average Equalized Valuation of each member town for fiscal year 2010 and each fiscal year thereafter shall mean the arithmetic average of the Latest Equalized Valuation of such Member Town for such fiscal year and the two immediately preceding fiscal years;

(iv) the Latest Equalized Valuation of such Member Town shall mean, with respect to any fiscal year, the equalized valuation of such member town as set forth in Chapter 559 most recently made publicly available prior to the beginning of such fiscal year;

(v) the Total Equalized Valuation of the member towns for any fiscal year shall mean the sum of the Latest Equalized Valuations of all member towns used in computing the Average Equalized Valuation for any member town for such fiscal year;

(vi) the Average Respective Pupil Enrollment of each member town for fiscal year 2008 shall mean such member town's pupil enrollment in the Regional School District on October 1, 2006;

(vii) the Average Respective Pupil Enrollment of each member town for fiscal year 2009 shall mean the arithmetic average of such member town's pupil enrollment in the Regional School District on October 1, 2007 and October 1, 2006;

(viii) the Average Respective Pupil Enrollment of each member town for fiscal year 2010 and each fiscal year thereafter shall mean the arithmetic average of such member town's pupil enrollment in the Regional School District on October 1 within each of the three (3) most recently ended fiscal years immediately prior to the fiscal year for which the determination is to be made; and

(ix) the Total Pupil Enrollment for any fiscal year shall mean the sum of the total pupil enrollments in the Regional School District on each October 1 used in computing the Average Respective Pupil Enrollment for any member town for such fiscal year.

(e) Times of Payments of Apportioned Costs

(1) Capital costs. At least fifteen (15) days prior to the date on which any indebtedness (consisting of interest or principal and interest on bonds and notes) incurred by the District to finance capital costs is payable, each member town shall pay to the District its respective share of the amount that is so payable by the District on said date. All other capital costs incurred by the District not consisting of payments on account of indebtedness as aforesaid shall be paid in the same manner as operating costs.

(2) Special Operating Costs and Operating Costs. Each member town shall pay to the District in each fiscal year its proportionate share, determined as provided in subsections 4 (c) and 4(d) above, of the special operating costs and operating costs. The annual share of each member town shall be paid in twelve (12) equal installments at such times that each installment except the first shall be paid on or before the first day of each month of the fiscal year, and the first such installment shall be paid on or before the fifteenth (15th) day of the first month of the first fiscal year.

SECTION 5. TRANSPORTATION

School transportation shall be provided by the District and the cost thereof shall be apportioned to the member towns as an operating cost.

SECTION 6. AMENDMENTS

This Agreement may be amended from time to time in the manner hereinafter provided, but no amendment shall be made that shall substantially impair the rights of the holders of the bonds or notes or other evidence of indebtedness of the District then outstanding, or the rights of the District to procure the means for payment thereof, provided nothing in this provision shall prevent the admission of a new town or towns to the District and the reapportionment accordingly of capital costs of the District represented by bonds or notes of the District then outstanding and of interest thereon.

Any proposal for amendment, except for a proposal for amendment providing for the withdrawal of a member town (which shall be acted upon as provided in Section 8), may be initiated by a majority vote of the Committee or by a petition signed by ten percent (10%) of the registered voters in said town according to the most recent voting list and the number of signatures on the petition which appear to be the names of registered voters of said town and said petition

shall be presented to the Secretary of the Committee. In either case, the Secretary shall mail a notice in writing to the Board of Selectmen of each member town that a proposal to amend this Agreement has been made and shall enclose a copy of such proposal (without the signatures in the case of a proposal by petition). The Selectmen of each member town shall include in the warrant for the next annual town meeting or a special town meeting called for the purpose an article stating the proposal or the substance thereof. Such amendment shall take effect upon its acceptance by each of the member towns, acceptance by each member town to be by a majority vote at a town meeting as aforesaid.

SECTION 7. ADMISSION OF ADDITIONAL TOWNS

By an amendment to this Agreement adopted under and in accordance with Section 6 above, any other town or towns may be admitted to the District upon adoption as therein provided of such amendment and upon acceptance by the town or towns seeking admission of the Agreement as so amended and also upon compliance with such provisions of law as may be applicable and upon such terms as may be set forth in such amendment.

SECTION 8. WITHDRAWAL

The withdrawal of a member town from the District may be affected by an amendment to this agreement in the manner hereinafter provided by this section. Any member seeking to withdraw shall, by vote at an annual or special town meeting, request the Committee to draw up an amendment to this Agreement setting forth the terms by which such town may withdraw from the District, provided:

(a) that the town seeking to withdraw shall remain liable for any unpaid operating costs which have been certified by the District treasurer to the treasurer of the withdrawing town, including the full amount so certified for the fiscal year in which such withdrawal takes effect; and

(b) that said town shall remain liable to the District for its share of the indebtedness, other than temporary debt in anticipation of revenue, of the District outstanding at the time of such withdrawal, and for interest thereon, to the same extent and in the same manner as though the town had not withdrawn from the District, except that such liability shall be reduced by any amount that such town has paid over at the time of withdrawal and which has been applied to the payment of indebtedness. The clerk of the town seeking to withdraw shall notify in writing the Committee that

such town has voted to request the Committee to draw up an amendment to the Agreement (enclosing a certified copy of such vote). Thereupon, the Committee shall draw up an amendment to the Agreement setting forth such terms of withdrawal as it deems advisable, subject to the limitations contained in the first paragraph of Section 6. The Secretary shall mail or deliver a notice in writing to the Board of Selectmen of each member town that the Committee has proposed an amendment (enclosing a copy of the proposed amendment). The Selectmen of each member town shall include in the warrant for the next annual town meeting or a special town meeting called for the purpose, an article stating the amendment or the substance thereof. Such amendment shall take effect upon its acceptance by all of the member towns, acceptance by each member town to be a majority vote at a town meeting as aforesaid. The withdrawing town's annual share of any future installment of principal and interest on bonds or notes outstanding on the effective date of its withdrawal shall be fixed at the percentage prevailing for such town at the last annual apportionment made next prior to the effective date of withdrawal. Upon the effective date of withdrawal, the terms of office of all members serving on the Committee who reside in the withdrawing town shall terminate.

(c) Money received by the District from the withdrawing town for payment of funded indebtedness or interest thereon shall be used only for such purpose and until so used shall be deposited in trust in the name of the District in the manner provided by law for the deposit of funds of regional school districts.

SECTION 9. AUTHORIZATION OF DEBT

The incurring of indebtedness, except temporary indebtedness in anticipation of revenue, by the District, shall be subject to disapproval by the registered voters in the member towns pursuant to the provisions of clause (d) of Section sixteen of chapter seventy-one of the General Law, as from time to time it may be amended. No such debt shall be incurred unless written notice of the amount of the debt and the general purpose for which it was authorized shall be given to the Board of Selectmen of each member town, nor until the expiration of sixty (60) days from the date on which the Committee votes to authorize said debt. Notwithstanding any provision of applicable law, it shall be the Regional School District's practice that such debt shall not actually be incurred until the amount of the proposed debt has been specifically approved by a two-thirds vote at the

next annual or special town meeting of each member town, to be held within the sixty (60) day notice period set forth in this provision.

SECTION 10. BUDGET

(a) Tentative Budget

No less than fifteen (15) days prior to the date on which the Committee adopts, or is required to adopt, whichever event occurs first, its final budget for the ensuing fiscal year, the Committee shall prepare a tentative operating and maintenance budget including therein provision for any installment of principal or interest to become due in such fiscal year on any bonds, notes or other evidence of indebtedness of the District. Said budget shall be in reasonable detail, including the amounts payable under the classification of expenses recommended by the Massachusetts Department of Education. Copies of such tentative budget shall be mailed to the Chairperson of the Finance Committee and the Board of Selectmen of each member town.

No less than seven (7) or more than fifteen (15) days following the date on which copies of the tentative budget are mailed to the Chairperson of the Finance Committee and the Board of Selectmen of the member towns as aforesaid, the Committee shall hold a public hearing within the District, after posting in at least two (2) public places in each member town at least seven (7) days in advance of the hearing, a notice stating the time, place, and purpose of the hearing, and giving such further notice as may be required by law. At such hearing, the Committee shall present the tentative budget and shall answer any reasonable inquiries with respect thereto.

Nothing in this Section 10 shall limit the ability of the Committee from preparing, reviewing or revising, alone or together with the one or more members of the Boards of Selectmen or Finance Committees of any member town, any preliminary budget in such form as the Committee may deem appropriate.

(b) Annual Budget

The Committee shall adopt an annual operating and maintenance budget on or before the latest date permitted by law therefore. Said budget shall include debt and interest charges as a separate item, and the Committee shall apportion the amount necessary to be raised in order to meet said budget in accordance with the provisions of subsections 4(b), (c) and (d). The amount so apportioned to each member town shall, not later than thirty (30) days following the adoption of the

final annual budget, be certified by the district treasurer to the treasurer of each member town, and each member town shall, at its next annual town meeting, appropriate the amounts so certified to it.

(c) Annual Report

The Committee shall, on or before October 1 of each year, submit an annual report to the Chair of the Board of Selectmen and Finance Committee in each of the member towns, containing a detailed financial statement, and a statement showing the method of computing the annual charges assessed against each member town, together with such additional information relating to the operation and maintenance of the District as may be deemed necessary by the Committee or the selectmen of any member town.

SECTION 11. EMPLOYMENT OF TEACHERS

Any teacher who has professional teacher status or other rights under Chapter 71, Section 41, whose position is superseded by reason of the establishment and operation of the District shall be employed with the same status by the Committee. Any teacher without status in a city or town in the district whose position is superseded by reason of the establishment and operation of the District shall be elected to serve in such District by the Committee; provided, however, that there is an available position which such person is certified to fill. All teachers employed by the District will be entitled to all of the rights set forth in Chapter 71, Section 42B.

SECTION 12. DISPUTE RESOLUTION

Any dispute by a member town or among member towns regarding the provisions of this Agreement or the performance of any member town under this Agreement shall be resolved as follows:

(a) Such dispute shall initially be submitted to the Committee in writing, specifying the dispute.

(b) If the Committee is unable to resolve the dispute within thirty (30) days of the receipt of the written referral to it, the dispute shall be referred to a committee comprised of the Chairs of the Committee and the Boards of Selectmen of each member town.

(c) If this committee is unable to resolve the dispute by unanimous action within fifteen (15) days of the submission of the dispute to it, the dispute shall be referred to a committee comprised of one (1) member of the Board of Selectmen and one (1) member of the Finance

Committee of each member town designated by the respective Board of Selectmen of each member town and a non-voting facilitator, chosen by the Committee, who will chair such committee.

(d) If this committee is unable to resolve the dispute by majority action within sixty (60) days of the submission of the dispute to it, the member towns shall submit such dispute to formal mediation with a professional mediator mutually agreeable to the Board of Selectmen of each member town; provided that if such mutual agreement is not obtained within thirty (30) days of the date the dispute is required to be submitted to formal mediation, the mediator shall be supplied by the nearest office of JAMS (www.jamsadr.com) or any successor organization upon the request of the Board of Selectmen of any member town or the Committee.

(e) The member towns agree not to initiate any litigation relating to a dispute prior to seeking resolution pursuant to the foregoing provisions. Written or oral statements or offers of settlement made in the course of this dispute resolution process will not be offered into evidence or used for any purpose other than this dispute resolution process and shall not constitute any admission or waiver of rights.

SECTION 13. ASSIGNMENT OF PUPILS

All pupils in grades designated by the Committee as elementary school grades, which shall at least be grades Kindergarten through Four (4) in both member towns, shall be guaranteed the opportunity to receive their education in facilities that are located in the respective towns in which the pupils reside, except that in the case of children with special needs, the Committee may provide for appropriate arrangements. For the purposes of this provision, the term "children with special needs" shall have the same meaning as the term "school-age child with special needs" as defined in section one of chapter seventy-one B of the General Laws. Any pupil who has been accepted to attend a public school in either member town other than the one in which he resides pursuant to Chapter 76, Section 12, as of the date that the Regional School District is formed shall be permitted to remain in the District until his high school graduation.

SECTION 14. EFFECTIVE DATE AND JURISDICTION

This Agreement shall take effect upon its acceptance by each of the Towns of Essex and Manchester.

SECTION 15. SEVERABILITY OF SECTIONS

According to Chapter 71. Section 16 (I), in the event that any provision of this Regional School District Agreement is held invalid in any circumstance, such invalidity shall not affect any other provisions or circumstances.

<<<<<<<< END OF DOCUMENT >>>>>>>>

Appendix C: *MERSD Elementary Task Force Recommendations*

MERSD Elementary Configuration Task Force
Task Force Recommendation to MERSD School Committee

Background

The Manchester Essex Regional School District (MERSD) includes two Pre-Kindergarten through Grade 5 Elementary Schools. Following the completion of a preliminary internal assessment of the existing conditions of the two schools in 2012, the District recognized both buildings would require improvements and commissioned a professional study conducted by Habeeb & Associates Architects in early 2013.

The Habeeb study explored three solutions which were determined by MERSD to be the most logical possibilities moving forward:

Option A: Renovations and additions (if needed) to each of the two schools while maintaining the current grade configuration and serving the residents of each respective town.

Option B: Combine the students of each town and consist of renovations and additions (if needed) to each of the two schools while creating an early education center housing Pre-K, K, 1 and 2 at one of the schools, and grades 3 through 5 at the other.

Option C: Combine the students of each town in a new facility appropriately located on a new site.

The projected cost of the options range from $40MM to $47MM, and the Habeeb report included information about existing educational spaces, required educational spaces, operating capacities, size of additions and projected costs for upgrades, additions, and new structures.

Considering the significant investment that will be required by Essex and Manchester taxpayers to improve the District's aging elementary schools, MERSD fielded a Facilities Expansion Survey in both communities, and formed an Elementary Configuration Task Force in the of Fall 2013. The goal of these two initiatives was to gauge community awareness of critical facilities issues, and learn stakeholder priorities and preferences.

Formation of Elementary Configuration Task Force

The task force is chaired by Caroline Weld and Jim Haskell who represent the Facilities Sub Committee of the MERSD School Committee. It consists of 10 volunteer residents who represent various constituencies in the towns of Essex and Manchester:

Essex	Manchester
Timothy St. Laurent – Preschool Parent	Krista Jakes – Elem/Preschool Parent
Christine Woodman –Elem Parent	Flo Johnson – Elem/Middle School Parent
Michael Gerhardt –Elem Parent	Regina Villa – Community Member at Large
Rebecca Jones – Community Member at Large	Sue Pick – Finance Committee
Susan Coviello – Board of Selectman	Eli Boling – Board of Selectman

Task Force Objective

The Elementary Configuration Task Force was charged with delivering a recommendation to the MERSD School Committee answering the following question: **Should MERSD maintain the current neighborhood school model or move to a unified elementary model?**

Cost and financial impact to taxpayers in Essex and Manchester is top of mind with building projects of this magnitude. Those issues will be addressed in detail by a Building Committee during the next phase, beginning in Spring 2014.

Discovery Process

Between September and December 2013, members of the task force engaged in the following activities to inform their recommendation:

- Attended presentation and reviewed Facilities Needs Assessment from Habeeb & Associates Architects. For copies of presentations and details, click on visit the Elementary Facilities Project Page.
    - Habeeb & Associates Presentation
    - Habeeb & Associates Facilities Report

- Reviewed MERSD regional agreement. To read this agreement, click on Regional Agreement at.

- Read professional journal articles and secondary research about the pros and cons of different school configurations, renovating or replacing buildings, etc. Elementary Task Force Resources

- Reviewed results from Facilities Expansion Survey fielded by MERSD in conjunction with independent technology and communication firm, K12 Insight. For details, click on Elementary Facilities Survey Overview

- Established format, data recording, and data reporting processes for interviews, constituent meetings and public forums. (See Appendix A for Guiding Questions documents).

- Conducted phone interviews with superintendents in other communities throughout Massachusetts using guiding questions about pros/cons of different school configurations, their process for deciding on the configuration, approach for community involvement and awareness, etc.

- Moderated community focus groups with the following constituencies: Memorial School Council, Manchester PTO, Manchester Council on Aging, MEMHS Staff, Essex PTO, Essex Division Chamber, Essex Council on Aging, Manchester Division Chamber, ME Rotary, Essex Elementary Staff, MEMHS School Council, Pre-K Parents Essex, Pre-K Parents Manchester, Memorial Elementary Staff, Realtors, Essex School Council. (Notes for each meeting available upon request.)

Discovery Process (continued)

- Hosted community forums in Essex and Manchester where participants broke out into smaller groups to share opinions and discuss pros and cons of configuration options. (Notes for each forum available upon request.)

- Met six times as a task force, together with the MERSD Superintendent and Director of Finance & Operations, to review, discuss, and debate results of our findings, and arrive at our final recommendation.

- Developed FAQ and Quick Facts to address questions often heard in various groups and forums. (See Appendix B for the group handout).

Major Learning & Themes

- There is no primary or secondary research that will definitively tell us which model is best. Continue to be transparent, and continue dialogue with the communities at large.

- The superintendents interviewed were from a mix of configurations and school/district sizes, and in most cases there were no significant operational savings for one configuration versus another.

- Advocate for the structure that best meets the needs of the two communities, and stay focused on balancing cost challenges with academic and programmatic benefits for our students.

- Neighborhood K-5 schools are the heart of each town, encourage a strong sense of community, provide a preferred smaller overall student population, allow for walking to school, and the mix of younger and older together gives older students the opportunity to be role models.

- While some elementary staff members at both schools pointed to efficiencies and the ability to better balance resources with other configurations, the consensus was that maintaining the neighborhood model for this age group was most appropriate.

- Members of various constituent groups were somewhat open to different configurations but would need to be better informed about the financial benefit of changing the neighborhood model, and what value it brings to the school, curriculum, and our students.

- People definitely buy a house in either Essex or Manchester and expect their young children will go to school in that town K-5. Local realtors strongly supported neighborhood schools and thought home values and demand would be negatively affected for some time if there was a change in configuration.

Recommendation

Based on the learning from our discovery, the task force recommends maintaining the neighborhood school model for the two elementary schools in MERSD. While there is some traction and interest in the unified elementary model, the collective consensus from a variety of community groups clearly points to the neighborhood model.

Following are a variety of quotes gathered during interviews, focus groups, and forums:

> *"When a student is in a school for six years, there are more opportunities for teachers and students to know one another. A deep understanding of all students is essential for strong academic and social growth."*
>
> *"Lots of kids (900) in one building is too many."*
>
> *"Can't imagine being a preschool parent putting a kid on a bus to a different school. Some 5th grade parents already have trouble with this. At this age group, keep it local."*
>
> *"With 3-5 option, would be worried about all of the test taking grades in one building – how that anxiety might affect the culture, plus an even bigger disconnect with 2nd graders not knowing/being exposed to what's coming up."*
>
> *"Neighborhood is preferred, but understand the practical issue of cost."*

To be clear, there were many questions involving cost and financial impact to the residents of Essex and Manchester for the three options outlined in the Habeeb report. As the MERSD School Committee seats a Building Committee and moves to the next phase of addressing our aging elementary facilities, providing this information in more detail will be imperative.

In addition, people are anxious to hear about the District's plan to address/manage the likely surge in enrollment at the renovated schools as they progress to middle-high school. Many questioned how that facility would be able to handle the growing numbers.

For questions about this recommendation or if you need access to any supplemental documents or websites offered in the discover, please contact Caroline Weld or James Haskell.

Respectfully submitted,

Caroline Weld, Co-chair Facilities subcommittee
James Haskell, Co-chair Facilities subcommittee

Questions for the MERSD School Committee

What would happen to the old buildings if one new building was constructed?

True cost and feasibility of options?

Timing of all the options?

Is there an actual parcel of land available that is viable?

What is the expansion plan for both buildings?

What are the growth numbers for both towns?

Memorial school is in worse shape. How are the costs allocated?

Where do you put the students during renovations?

State funding options?

Appendix A

FOCUS GROUP GUIDELINES TO ELEMENTARY TASKFORCE

Questions

- Would you consider an alternative to neighborhood schools?
- What factors influence or guide your position?
- What information is important for the School Committee to communicate to residents of both towns as they move forward in this process?

Appendix B

Quick Fact Document handed to all forum attendees.

What is prompting the effort to explore elementary school options?
The Habeeb report of 2013 finds $6.7M in repairs between Essex Elementary and Memorial Elementary within the next 1-5 years. Below, we've listed the building elements that will require attention in the next 10 years; these items will all cost the district in excess of $100K each.

Issues estimated in excess of $100K each		
Manchester Memorial		**Essex**
Roof ($1.7M)	Parking Areas/Access Drives	Roof ($1.1M)
Boilers ($175K)	Sidewalks/Paved Play Areas	Boilers ($114K)
Windows ($2.4M)	Handicap Accessibility	Windows ($630K)
HVAC ($118K)	Supplemental Air Conditioning	Fire Protection
Fire Protection	Ceilings	Steam Unit Ventilators ($280K)
Interior and Exterior Doors	Painting	Controls ($142)
Kitchen	Floors	Parking Areas/Access Drives
Electric Service	Window Shades	Sink and Faucet Fixtures
Hot Water Unit Ventilators ($367K)	Sink and Faucet Fixtures	
Controls ($179K)		

Costs for repairs to existing buildings come out of the operating budget—the same budget that pays for salaries and educational expenses. More dollars spent on repairs means less money on education.

Charge to the task force: Make a recommendation to the School Committee regarding elementary school configuration.

What have we learned about operating cost savings from the new middle high school building?
Cost per square foot savings is 58% lower for heating and 17% lower for electricity.

What is the difference between MERSD's operating and capital budget:

Operating costs: annual costs such as teacher/staff salaries and benefits, maintenance, educational materials, etc., contained in the school's annual budget, funded by taxation, and approved at the Annual Town Meeting.

Capital costs: Principal and interest payments on long-term debt (typically maturity of 20-30 years) issued to finance the construction of our Middle High School building. Significant renovations or new construction for elementary facilities would be similarly financed. These are usually funded by a debt exclusion—an action taken by a community through a referendum vote

to raise the funds necessary to pay debt service costs for a particular project from the property tax levy, but outside the limits under Proposition 2.5% .

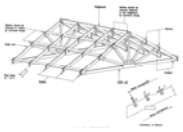
What's the process for renovation/rebuilding of elementary schools going forward?

- Task force makes recommendation to School Committee
- School Committee seats a building committee (Spring 2014)
- Building committee conducts a Feasibility Study (study of all alternatives, including, but not limited to, a final design program, space summary, budget statement for educational objectives, and a proposed total project budget).
- Building Committee prepares a Schematic Design (collaborates with the MSBA and develops a robust schematic design, of sufficient detail, in order to establish the scope, budget, and schedule).
- School Committee brings plan to two towns for a vote.

Where can I find more information about this process?

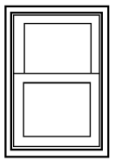
mersd.org go to the district page and look for Elementary Task Force process.

Roofs



Priority 2 (1-5 years); Priority 3 (6-10 years)

Memorial ($1.7M) Priority 2	Essex ($1.1M) Priority 3
	



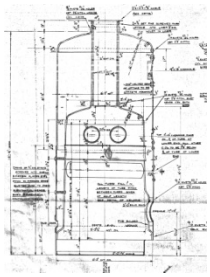
Windows

Memorial ($2.4M) Priority 2	Essex ($630K) Priority 2





Boilers and Controls



Memorial ($175K) Priority 2  ($179K) Priority	Essex ($114K) Priority 3  ($142K) Priority 3

2		

Appendix D: *Configuration Scenario Operational Impact*

Summary of Opertaional Estimated Costs/Savings for Grade Configuration Options 1 & 3

	Configuration Option 1 PreK-3 EES 4-5 @ Memorial	Configuration Option 3 All Students @ Memorial	Notes
Daily Transportation	**$115,200**	**$115,200**	*Additional bus needed in both configurations / Runs to Manchester +6-8 Minutes*
Morning/Afternoon Runs	$92,700	$92,700	
Late Bus	$22,500	$22,500	
Staffing	**$110,000**	**-$135,000**	
Utilities		**-$113,000**	*Assumes a 25K-30K Sq Ft Addition to Current Memorial*
Facilities Rental		**$100,000**	*Assumes Loss of Tennis Courts to Parking Seasonal Tennis Court Rental / $250-500K Replacement + Site Acquistion Cost Unknown*
Estimated Operational Savings / Costs	**$225,200**	**-$32,800**	

K-5 Section/Class Size Distribution Under Grade Level Configuration Scenarios

Modeled Using 2025-2026 Enrollment Data

Configuration 1
Grade PreK-3 @ Essex - Essex Grades 4-5 to Memorial

Essex Elementary		Classrooms Per Grade Level			
Grade Level	Total Students	2	3	4	5
Kindergarten	30	15	10	8	6
First Grade	25	13	10	8	6
Second Grade	37	19	8	6	5
Third Grade	35	18	12	9	7

Memorial School		Classrooms Per Grade Level			
Grade Level	Total Students	2	3	4	5
Kindergarten	36	18	12	9	7
First Grade	45	23	15	11	9
Second Grade	44	22	15	11	9
Third Grade	54	27	18	14	11
Fourth Grade	73	37	24	18	15
Fifth Grade	89	45	30	22	18

EES	
Total Students	117
Avg Class Size	16
# Classrooms	8

Memorial	
Total Students	341
Avg Class Size	19
# Classrooms	18

Configuration 2
Essex Elementary PK-5

Essex Elementary		Classrooms Per Grade Level			
Grade Level	Total Students	2	3	4	5
Kindergarten	30	15	10	8	6
First Grade	25	13	8	6	5
Second Grade	37	19	12	9	7
Third Grade	35	18	12	9	7
Fourth Grade	35	18	12	9	7
Fifth Grade	38	19	13	10	8

Memorial School		Classrooms Per Grade Level			
Grade Level	Total Students	2	3	4	5
Kindergarten	36	18	12	9	7
First Grade	45	23	15	11	9
Second Grade	44	22	15	11	9
Third Grade	54	27	18	14	11
Fourth Grade	73	37	24	18	15
Fifth Grade	89	45	30	22	18

EES	
Total Students	117
Avg Class Size	15
# Classrooms	8

Memorial	
Total Students	341
Avg Class Size	19
# Classrooms	18

Configuration 3
All Students @ Memorial School

Memorial School		Classrooms Per Grade Level			
Grade Level	Total Students	2	3	4	5
Kindergarten	66	33	22	17	13
First Grade	70	35	23	18	14
Second Grade	81	41	27	20	16
Third Grade	89	45	30	22	18
Fourth Grade	73	37	24	18	15
Fifth Grade	89	45	30	22	18

Total Students	506
Avg Class Size	19.5
# Classrooms	26

Staffing Projection Under Grade Level Configuration Scenarios 1 & 3

Modeled Using 2025-2026 Staffing Data

Configuration 1
Grade PreK-3 @ Essex - Essex Grades 4-5 to Memorial

Staffing Categories	Current		PreK-3 EES 4-5 @ Memorial		Change	Estimated Savings/Cost	Notes
	Essex	Manchester	Essex	Manchester			
Principal	1	1	1	1			
Assistant Principal			Stipend			$25,000.00	*Assistant Principal Stipend - support management of additional staff and students*
Pre-K Coordinator							
Admin Assistant	1	1	1	1			
Nurse	1	1	1	1			
Classroom Teachers	8	18	8	18			
General Ed Specialists	3.65	4	2.3	5.35			
Student Services Teachers (MTSS/Coaches/Title 1)	3.75	3.75	3.75	3.75			*District level position assigned based on need*
Special Education Teacher / Prek	4	12	6	11	1	$85,000	*Add Pre-K Teacher*
SPED Team Chair	0.5	0.5	0.5	0.5			
Therapists	0.27	1.8	0.27	1.8			
Counselors & Psychologists	1.4	1.6	1.25	1.75			
Paraprofessionals							
Special Education / Prek	6	16	6	16			*Posiction leve fluid and assigned based on student need not location*
General Education	2.5	2.5	2.5	2.5			
Custodial	2	3	2	3			
Food Service	2	2	2	2			
					1	$110,000	

Configuration 3
All Students @ Memorial School

Staffing Categories	Current		All @ Memorial	Change	Estimated Savings/Cost	Notes
	Essex	Manchester	Memorial			
Principal	1	1	1	-1	-$135,000	
Assistant Principal	0	0	1	1	$95,000	*Reduce to 1 Principal & Assitant Principal for 515 Students*
Pre-K Coordinator			Stipend	NA	$25,000	*Add PreK Director: Stipend Planned + PreK-Expansion*
Admin Assistant	1	1	2			
Nurse	1	1	1	-1	-$85,000	*Reduce to 1 Nurse - Monitor may need additional support for 515 students*
Classroom Teachers	8	18	26			*Maintaing Curent Avg Class Size 19.5*
General Ed Specialists	3.65	4	7.65			
Student Services Teachers (MTSS/Coaches/Title 1)	3.75	3.75	7.5			
Special Education Teacher / Prek	4	12	16	**		*Reduce Special Education Liaison / Add Pre-K Teacher*
SPED Team Chair	0.5	0.5	1			
Therapists	0.27	1.8	2.07			
Counselors & Psychologists	1.4	1.6	3			*Maintain 1:250 Counslor Load through first 2-3 years to support impact of consolidation and reevaluate*
Paraprofessionals						
Special Education / Prek	6	16	22			*Posiction leve fluid and assigned based on student need not location*
General Education	2.5	2.5	4	-1	-$35,000	*Eliminate Library TA Position*
Custodial	2	3	5			
Food Service	2	2	4			
				-2	-$135,000	

Appendix E: *Strategic Plan Overview & District Improvement Plan*

MERSD Strategic Plan Overview

Mission

The Mission of the Manchester Essex Regional School District (MERSD) is to provide a high quality, comprehensive, student-centered educational experience that prepares them for a post-secondary educational or service experience, a career, and life as an engaged member of society.

Vision

MERSD, with the partnership and support of member communities, will provide educational opportunities and resources so that all students can realize their individual, unique, and *highest potential, achieve academic excellence, value integrity and honesty, and become intellectually curious and critical thinkers.*

Core Values

Student Centered

We believe schools must establish a safe environment that supports the development of all students. Schools must engage all aspects of a child's development, including knowledge, a sense of self, emotional well-being, physical health, and skills and strategies to negotiate an ever-changing and unpredictable world.

Student Achievement

We believe MERSD should foster a learning environment that encourages academic achievement, social and emotional freedom and engagement, collaboration and creative problem-solving; the skills to confront new ideas with both rigor and sensitivity, and the awareness to and ability to extend the skills beyond the academic core to include experiential learning, the arts, cultural awareness, and physical and social emotional health.

Equity

We believe our schools must strive to create a just and equitable environment that respects individual differences and the diversity of our communities, country, and world.

Family & Community Partnerships

Schools are a reflection of their communities. We believe that providing a quality education that prepares our students for an unpredictable world is a shared responsibility, fostered by partnerships among the schools, families, educational non-profits, businesses and the community-at-large.

Resources

We believe the District and our community partners should collaborate to provide the necessary funding to equip our students with the essential critical thinking, analytic, communication, and problem-solving skills they need to be productive, contributing members of our local and global communities and deliver on the promise of our students' potential.

Vision of the Graduate

Empathetic Global Citizen Responsible Collaborator	Effective Communicator Critical Thinker Personally Accountable	Social/Emotional Awareness Innovative and Creative

Theory of Action

If we

Keep students at the center of decision making and practice
Cultivate a collaborative and inclusive culture
Articulate the relationship between social emotional well-being and student achievement
Engage in two-way communication with our community

Then…

Students will realize their individual, unique, and *highest potential, achieve academic excellence, value integrity and honesty, and become intellectually curious and critical thinkers.*

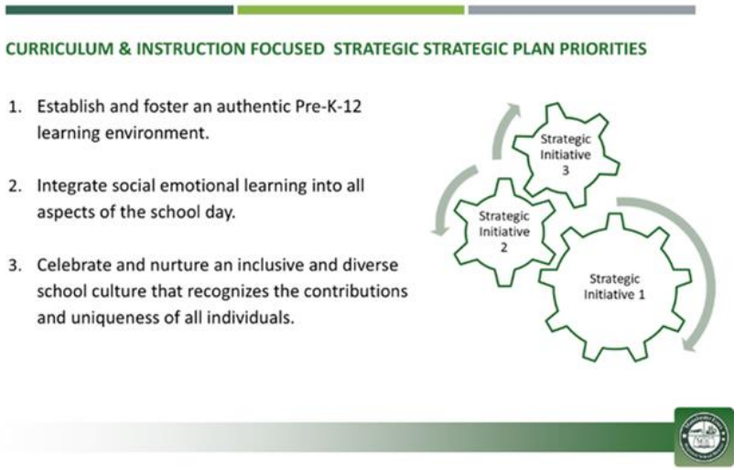
Strategic Priorities

Establish and foster an authentic Pre-K-12 learning environment.	*Integrate social emotional learning into all aspects of the school day.*	*Celebrate and nurture an inclusive and diverse school culture that recognizes the contributions and uniqueness of each learner.*
Maintain a sustainable multi-year operational budget and capital improvement plan.		

MERSD District Improvement Plan 2025–2028

Introduction

This District Improvement Plan (DIP) is the second in a three-cycle sequence designed to carry forward the Manchester Essex Regional School District's long-term Strategic Plan priorities. It outlines the work we will take on between 2025 and 2028 to strengthen teaching and learning, support student well-being, build an inclusive school culture, and maintain sustainable operations.



How Strategic Priorities 1, 2, and 3 Work Together to Improve Instruction and Student Achievement: MERSD's instructional work is intentionally braided across three priorities. Priority 1 centers on authentic learning—coherent PreK–12 curriculum, performance-based assessment, and the Vision of the Graduate—so classroom experiences are rigorous, engaging, and connected to the real world. Priority 2 integrates social-emotional learning (SEL) and a Multi-Tiered System of Supports (MTSS) to ensure students are ready to learn every day through consistent Tier 1 practices, targeted interventions, and partnerships with families. Priority 3 advances Universal Design for Learning (UDL) and inclusive practices so all students can access, participate, and demonstrate mastery in multiple ways. Together, these priorities form the conditions and practices of high-quality instruction: strong core teaching (Priority 1), supportive environments that build readiness and belonging (Priority 2), and universally designed lessons that remove barriers (Priority 3).

This integrated approach strengthens teacher practice and accelerates student learning. Authentic, performance-based tasks demand higher-order thinking; SEL/MTSS routines increase engagement and persistence; and UDL ensures access and challenge for diverse learners. As we build staff capacity through coaching, collaboration, and clear "look-fors," we expect to see higher engagement, more consistent growth across student groups, and measurable gains in academic performance.

Priority 1: Authentic Learning	Priority 2: SEL & MTSS	Priority 3: UDL & Inclusion
• Real-world, inquiry-based tasks • Performance-based assessment • Vision of the Graduate embedded • Teacher coaching & collaboration	• Tier 1 routines for regulation & relationships • Consistent SEL scope & sequence • Data routines for early intervention • Family partnerships	• Flexible design for access & challenge • Multiple means of engagement/representation/action • Model classrooms & peer observation • Coaching aligned to UDL look-fors

Integrated Impact: Strong core instruction + supportive conditions + universally designed lessons ⇒ Higher engagement, access for every learner, and measurable gains in achievement

How to Read This Document

Each section of the DIP is organized under one of the four Strategic Plan priorities. Within each priority, you will find:

- **Objective** – The specific aim or goal we are working toward.
- **Student Impact (if achieved)** – The difference this work will make for students in their daily learning experience.
- **Action Steps / Deliverables** – The concrete tasks, initiatives, or structures we will put in place to reach the objective. These are listed by fiscal year (FY26, FY27, FY28) to show how the work will progress over time.

How to Use This Plan

- Read by Priority to see how the work aligns to our long-term goals.
- Follow the Timeline to understand how initiatives move from foundation to pilot to full implementation.
- Note the Student Impact to see how each action connects back to the classroom experience.
- Use the Glossary as a reference when educational terms appear.

Frequently Used Terms

- **Authentic Learning –** Student-centered authentic learning is an approach to teaching and learning that engages students in inquiry-based experiences that have real-world applications guided by students' experiences, skills, and interests. Authentic learning is grounded in real world issues, problems, and applications. It encourages higher order thinking, empowers students with practical and useful life skills, and invites them to make a difference in their world.
- **Vision of the Graduate (VOG) –** A district-defined set of skills and competencies (e.g., communication, collaboration, critical thinking) that every student should demonstrate by graduation. These skills are embedded into curriculum and assessments across grade levels.
- **MTSS (Multi-Tiered System of Supports) –** A structured framework that provides different levels of academic, behavioral, and social-emotional support. Tier 1 refers to practices all students receive, Tier 2 is targeted support for some, and Tier 3 is intensive support for individual students.
- **SEL (Social-Emotional Learning) –** The process of developing self-awareness, self-management, social awareness, relationship skills, and responsible decision-making.
- **UDL (Universal Design for Learning) –** An instructional approach that ensures lessons are flexible and accessible so all students, regardless of learning style or need, can succeed.
- **Performance-Based Assessment –** An assessment that asks students to demonstrate their learning by doing something meaningful (e.g., creating a presentation, solving a real problem, conducting an experiment) rather than taking a traditional test.
- **Look-Fors –** Agreed-upon indicators that administrators and teachers use to recognize whether a desired practice (such as authentic learning or SEL integration) is happening during classroom visits.
- **FY26, FY27, FY28 –** Fiscal years (July 1 – June 30) that provide a timeline for when action steps will be launched, piloted, or fully implemented.
  This structure is designed to make the DIP both a practical guide for educators and an accessible resource for families and community members who want to understand the district's priorities and track progress over time.

Strategic Priority 1: Establish and foster an authentic PreK-12 learning environment.		
Objective	**Student Impact (if achieved)**	**Action Steps / Deliverables**
Strengthen instructional practice by embedding authentic learning experiences across PreK-12.	Students experience deeper engagement and higher-order thinking through authentic problem-solving opportunities across disciplines.	**FY26 – Expansion of Practices** • Define and articulate shared PreK–12 expectations for "authentic learning experiences." • Conduct an inventory of current practices by grade band and create school-level matrices of strengths and gaps. • Provide ongoing coaching, training, and resources for technology and AI integration to support authentic learning. • Structure professional learning to focus on authentic instruction and assessment practices. **FY27 – Embedding & Piloting** • Pilot expanded student opportunities such as projects, service learning, or capstones. • Strengthen supervision and evaluation routines with "look-fors" for authentic learning, engagement, and higher-order thinking. **FY28 – Implementation & Monitoring** • Scale authentic learning practices across PreK–12. • Memorialize student opportunities (performance, presentation, exhibitions, capstones, service learning, internships etc.) into scope and sequence. • Use observation data and student outcomes to monitor impact and refine practice. **Adopt high-quality inclusive curriculum resources that support real-world, authentic learning in alignment with the Curriculum Review Cycle.*
Align curriculum and assessment to reflect changes in instructional practices, ensuring coherence and consistency across PreK-12.	Students benefit from a coherent PreK-12 curriculum and authentic, performance-based assessments that allow multiple ways to demonstrate mastery in real-world contexts.	**FY 26 – Expansion of Practices** • Audit curriculum maps and assessments PreK–12. • Build shared understanding of authentic, performance-based assessments through professional learning. • Schedule regular routines of data analysis and action planning including formative and performance-based assessments. **FY 27 – Embedding & Piloting** • Design and pilot performance-based assessments. • Develop rubrics, exemplars, and scoring protocols to guide consistency. **FY28 – Implementation & Refinement** • Implement assessments across grades and subjects. • Embed authentic assessments into curriculum maps. • Use student work/data to monitor outcomes and refine practice.

Expand implementation of the Vision of the Graduate by defining developmentally appropriate competencies and embedding them throughout the PreK-12 curriculum.	Students develop competencies like collaboration, communication, and critical thinking through authentic learning opportunities and partnerships that extend beyond the classroom.	**FY 27 – Expansion of Practices** • Respond to NEASC recommendations by creating grade-level benchmarks that define a developmentally appropriate PreK–12 skills continuum. • Align the Vision of the Graduate with classroom opportunities and existing extracurricular/field experiences. **FY 28 – Development & Design** • Develop a matrix illustrating VOG competencies for each grade span. • Embed VOG competencies into curriculum maps and unit design by identifying explicit connections between academic content and VOG skills. • Collect data through observation and student work to monitor success of alignment and guide administrative support. • Provide professional learning to support teacher use of authentic learning strategies to support implementation of Vision of the Graduate. **FY 29 – Implementation & Partnerships** • Implement performance assessments aligned to VOG competencies matrix. • Strengthen partnerships with community organizations by building a district-wide partner network tied to VOG benchmarks.
Elevate student voice by fostering relevance, engagement, and regard for student perspectives in the classroom.	Students will experience learning that is meaningful and relevant, with their perspectives valued in the classroom. This will increase engagement, motivation, and ownership of their learning.	**FY 27 – Foundation** • Establish regular student feedback loops (e.g., surveys, advisory discussions, student-led forums) to inform instructional design and monitor the impact of authentic learning initiatives. • Collect and analyze data on student access, representation, and achievement to identify gaps.

Strategic Priority 2: Integrate social emotional learning into all aspects of the school day.

Objective	Student Impact (if achieved)	Action Steps / Deliverables
Develop and implement a district-wide Multi-Tiered System of Supports (MTSS) model for SEL that supports mental health and wellness.	Students will experience consistent, tiered social-emotional and mental health supports that proactively meet their needs, resulting in increased well-being, improved readiness to learn, and stronger engagement in school.	**FY 26 – Expansion of Practice** • Convene a joint SEL/MTSS leadership team to define essential components of the model. • Audit current SEL and mental health practices across schools; identify strengths, gaps, and existing resources. • Build a foundation for a district-wide data system/process to identify and monitor students in need of SEL/mental health supports.

		• Strengthen access to mental health resources and partnerships with outside providers. **FY 27 – Development & Training** • Establish a district-wide data system/process to identify and monitor students in need of SEL/mental health supports. • Develop tiered supports (universal, targeted, intensive) with clear roles, protocols, and referral pathways. • Systematize tiered supports (universal, targeted, intensive) with clear roles, protocols, and referral pathways. • Targeted training to support SEL tiered supports. • Integrate consistent Tier One practices for emotional regulation and behavior supports across schools. **FY 28 – Implementation & Refinement** • Implement expanded MTSS model across PreK–12. • Establish progress-monitoring routines using student SEL data and well-being indicators. • Develop structured collaboration protocols for student support teams (teachers, counselors, specialists) to align Tier 1 and Tier 2 SEL practices across classrooms. • Refine practices based on evaluation data and stakeholder feedback.
Ensure students experience a consistent, vertically aligned SEL curriculum that builds self-regulation, relationships, and real-world application of SEL skills.	Students gain a foundation of SEL skills and can apply these competencies in school and beyond.	**FY 26 – Alignment & Expansion** • Review and expand existing elementary SEL work (RULER) to ensure alignment with CASEL and other frameworks as appropriate. • Begin developing a PreK–12 SEL scope and sequence (“integration plan”) that articulates tier 1 learning experiences and expectations across grade bands. • Utilize SEL “look-fors” to gather data to inform administrative team of trends, strengths, and areas for growth. **FY 27 – Curriculum & Practice Integration** • Embed SEL competencies into curriculum maps and unit design by identifying explicit connections between academic content and SEL skills. • Extend the K–8 SEL Leadership model to 9–12, with a focus on training staff in strategies that increase student availability for learning. • Launch consistent family engagement routines (e.g., annual SEL forums, ParentSquare updates, family workshops) to communicate SEL goals and strengthen school–home partnership in student well-being. **FY 28 – Implementation & Monitoring** • Finalize and implement the PreK–12 SEL scope and sequence.

		• Integrate SEL “look-fors” into administrative evaluation practices to ensure consistent attention to SEL in instruction. • Monitor student outcomes and refine SEL practices based on feedback and data.
Develop student leadership opportunities through establishing building-level programs that empower students to model and promote RULER Program/CASEL competencies.	Students will gain authentic leadership experiences that build confidence, deepen SEL competencies, and foster a positive school culture where peers model and promote healthy social and emotional behaviors.	**FY 27 – Program Design & Launch** • Establish building-level student leadership teams/programs (e.g., SEL Ambassadors, Peer Leaders, Student Voice Councils) to model RULER/CASEL competencies. • Provide training and mentoring for student leaders to develop facilitation, communication, and peer-support skills. **FY 28 – Student-Led Engagement & Partnerships** • Create opportunities for student leaders to design and lead SEL-focused activities such as school-wide assemblies, advisory sessions, or classroom workshops. • Partner with families and community organizations to host student-led showcases, SEL Family Nights, and collaborative events that reinforce SEL themes. **FY 29 – Expansion & Sustainability** • Formalize recurring structures for student leadership in SEL (e.g., annual leadership retreats, cross-grade mentoring, regular student-led forums). • Integrate leadership opportunities into curriculum and extracurricular programs to ensure equitable access across grade levels. • Monitor impact through student reflections, feedback from peers, and surveys of school culture and climate.
Strategic Priority 3: Celebrate and nurture an inclusive and diverse school culture that recognizes the contributions and uniqueness of each learner.		
Objective (We will…)	**Student Impact (if achieved)**	**Action Steps / Deliverables**
Implement Universal Design for Learning (UDL) practices in all classrooms to create inclusive learning experiences that meet the needs of all students, including those with learning differences.	Students with varied learning profiles will experience instruction that is accessible, engaging, and challenging. All students, including those with learning differences, will be able to participate fully, demonstrate their strengths, and achieve at high levels within a supportive and inclusive classroom environment.	**FY 26 – Foundation & Training** • Establish UDL as a district-wide instructional expectation. • Assess current staff knowledge and training in UDL. • Provide differentiated professional development for staff at varying levels of familiarity with UDL. **FY 27 – Implementation & Support** • Integrate UDL practices into grade level and curriculum teamwork, with teachers sharing strategies and student outcomes. • Identify model classrooms as demonstration sites for UDL in practice.

		• Incorporate ongoing coaching and peer observation focused on UDL implementation. **FY 28 – Monitoring & Accountability** • Focus on UDL "look-fors" during administrative supervision and evaluation practices. • Monitor impact on student access, engagement, and performance through observation and student data. • Adjust training and coaching based on observation and feedback. • Develop family-friendly resources that explain classroom differentiation and UDL strategies, ensuring families understand how instructional practices support diverse learners.
Implement inclusive curriculum and instruction, including diverse voices, perspectives, and cultural experiences across all content areas.	Students will engage with a curriculum that reflects a wide range of experiences and perspectives, helping them feel seen and valued. This exposure fosters empathy, critical thinking, and a deeper understanding of the world, enriching their learning and preparing them for a diverse society.	**Ongoing - Curriculum Review & Equity Lens** • Evaluate instructional materials for bias and inequities to ensure inclusive student learning experiences. **Ongoing - Data & Instructional Practices** • Collect and analyze data on student access, representation, and achievement to identify gaps. • Provide professional learning to support inclusive instructional strategies across grade levels and content areas. **Ongoing - Policy & Systems Alignment** • Use an equity lens rubric to audit and revise school and district policies. **Adopt high-quality inclusive curriculum resources that support real-world, authentic learning in alignment with the Curriculum Review Cycle.*
Provide multilingual learners with high-quality, tailored instruction that supports academic growth and full participation in grade-level learning alongside their peers.	All students benefit from an inclusive learning environment where multilingual learners thrive, fostering stronger peer collaboration, cultural awareness, and a richer classroom experience for everyone.	**FY 26 – Foundations & Capacity** • Ensure all identified teachers are SEI-endorsed. • Adopt an evidence-based ESL/ELD curriculum (WIDA-aligned) that supports MLL students K-12. • Coaching for all teachers with MLL students supporting integration of SEI strategies into daily instruction. • Training for administrators to enhance understanding of SEI strategies **FY 27 – Integration & Implementation** • Implement the ESL/ELD curriculum and align MLL programming with content curriculum and district assessment routines. • Integrate Sheltered English Immersion strategies in all core classes. • Provide ongoing PD/coaching that strengthen teachers' ability to support deeper content understanding, relevance, and transfer of learning for MLL students. **FY 28 – Monitoring & Refinement**

		• Establish a data routine to monitor MLL progress (ACCESS growth, screeners, classroom assessments) and adjust supports. • Calibrate expectations and materials across grades; share exemplars; refine program structure based on results. • Formalize MLL family engagement methods in a regular and ongoing routine.

Standard 4: Maintain a sustainable multi-year operational budget and capital improvement plan.		
Objective (We will…)	**Student Impact (if achieved)**	**Action Steps / Deliverables**
Strengthen financial management systems and processes to support data-driven decision making, operational efficiency, and sustainable resource allocation.	Students benefit from stable, well-resourced schools where funding decisions are efficient, equitable, and aligned to instructional priorities, ensuring that resources directly support teaching, learning, and long-term program sustainability.	**Systems & Tools** • Restructure payroll system; invest in and implement software tools to link payroll and personnel functions, improving reporting and efficiency. **Forecasting & Budget Alignment** • Develop a projection model to assess the long-term impact of increasing numbers of high-needs preschoolers on special education programs and staffing. • Utilize a zero-based budgeting approach in special education to ensure budgets are student-need driven and restructured as required. **Review & Long-Term Planning** • Implement a cyclical review process to evaluate efficiency of major programs and staffing models, reallocating resources to highest-impact areas while identifying opportunities for innovation and cost savings. • Forecast both large-scale and small-scale operational and facilities capital needs. • Advance planning for major capital projects (e.g., High School/Middle School 2034 Renovation Planning).
Optimize organizational structures and resource allocation to increase efficiency, support evolving instructional priorities, and prepare for future growth and program needs.		**Analysis & Immediate Adjustments** • Analyze technology infrastructure for capacity to meet future instructional and operational needs. • Review personnel efficiencies to improve or adjust delivery of programs (carryforward action). • Study options for shared leadership models cross district and the middle/high school.

		Program Expansion & Restructuring • Plan and prepare for the establishment of universal preschool, including classroom space, location, supervisory structures, and staffing needs. • Move special education chairpersons into an administrative role, ensuring program analysis and revisions prioritize efficiency and sustainability. **Long-Term Alignment & Sustainability** • Reorganize professional stipend structure to better align funding with curriculum and instructional improvement goals. • Continue to refine organizational structures and staffing models to support evolving instructional priorities and program growth.
Expand funding opportunities and future-focused planning to ensure the district is well-positioned to address challenges and opportunities.		**Revenue Review** • Review and adjust existing tuition structures (e.g., preschool, specialized programs) for opportunities to increase revenue. • Conduct a fee structure analysis to identify areas for sustainable increases aligned with community capacity. **Expanded Funding Sources** • Seek grant opportunities and alternative funding streams that directly align with district strategic priorities and improvement goals. • Build internal systems for tracking, applying for, and managing grants to maximize impact. **Long-Term Partnerships & Collaboration** • Investigate and pursue opportunities for shared services and collaboration with area school districts to reduce costs and expand resources. • Establish a process for annual review of revenue opportunities, partnerships, and funding models to ensure sustainability.

MERSD School Improvement Plan

Essex Elementary School

2024-2026

Every student is at the center of decision-making.

District Strategic Initiative 1 (DSI:1)

Establish and foster an authentic Pre-K-12 learning environment.

1. *Conduct external elementary school level assessments of current practice inclusive of authentic learning self-study. [Student Centered, Student Achievement]*
2. *Define "student centered authentic learning" and develop internal needs assessments for secondary level schools. [Student Centered, Student Achievement]*
3. *Map and deliver a developmentally differentiated professional development plan informed by the outcomes of school-based assessments.*
4. *Strengthen traditional academic program practices to ensure horizontal and vertical articulation. [Student Centered, Student Achievement]*
5. *Develop community partners to provide opportunities for students to connect learning to real-life application. [Family and Community Partnership]*
6. *Prioritize and support programming to promote creativity, innovation, and the arts. [Student Centered, Family Community Partnership]*

School Goals	Resources & Responsibilities	Deliverables (what & when) Measures of Implementation Documentation
EES will continue the process to receive NEASC Elementary Accreditation. This will be done as a collaborative exercise with our MMES counterparts. One focus area will be to align the authentic learning experiences at both elementary schools. ***DSI 1.1, 1.2, 1.3, 1.4 ****	• EES Principal • Director of Curriculum, Instruction, and Technology • EES Staff	• NEASC Final Report submitted - Sep 24 • NEASC Priority Areas for Growth submitted - Sep 24 • NEASC Report to be received- Nov-Dec '24 • NEASC Steering Committee to review recommendations - Jan '25 • NEASC Report shared with community- April '25 • NEASC Recommendations integrated into SIP Update - Sep '25 • NEASC progress presented during SIP Presentation - Sep '26

MERSD Instructional Coaches will work with teachers to add at least one novel Authentic Learning Activity to each grade level. ***DSI 1.1, 1.2 & 1.5 ****	• EES Principal • Director of Curriculum and Instruction • MERSD Instructional Coaches • EES Teachers	• Current list of authentic learning activities shared and expanded - Oct/Nov '24 • Additional authentic learning activities implemented, evaluated, and documented Oct '24-Jun '26 • Record of identified authentic learning experiences expanded to include novel grade level experiences - June '26
EES will work collaboratively with district staff and MMES staff to design a shared MERSD Elementary Teacher Assistance Team consultation model ***DSI 1.3, 1.4 ****	• EES Principal • Director of Student Services • EES TAT Team	• Best practice and past practice review - Sep '24-Dec '24 • Current practice overview comparison - Sep '24-Dec '24 • MERSD TAT Consultation Model developed and flow chart created/adjusted - Dec '24-Jun '25 • MERSD TAT Consultation Model presented to staff and implemented- Aug '25-Jun '26
EES administration will collaborate with MMES administration and the Director of Curriculum, Instruction, and Technology to develop and implement a plan for instructional coaching in the areas of literacy and mathematics. ***DSI 1.3 1.4 ****	• EES Principal • Director of Curriculum, Instruction, and Technology • MERSD Instructional Coaches	• Monthly Meetings with Instructional Coaches - Sep '24- Jun'26 • Monthly Elementary Leadership Meetings - Sep '24- Jun'26 • Collaborative Evaluations completed - May '25 and May '26
EES will collaborate with MMES administration and staff to align performing arts curriculum and performances. ***DSI 1.6****	• EES Principal • EES Music Teacher • EES Band Instructor	• Common Elementary Music Expectations and Plan Developed - Dec. '24 • Congruent K-5 Winter and Spring Culminating Music Performances Implemented - Dec '24 - Jun '26
EES administration will collaborate with MMES administration to develop and implement a plan for the new Library Teaching Assistant to support students and staff with authentic learning activities ***DSI 1.3 1.4 ****	• MMES Principal • MERSD Librarian • MERSD Library TA	• Quarterly Meetings with Elementary Library Staff - Sep '24- Jun'26 • Monthly Elementary Leadership Meetings - Sep '24- Jun'26

MERSD Instructional Coaches will design and implement an annual Family Literacy Night and Family Mathematics Night to partner with our students' families in each content area. ***DSI 1.1, 1.2 & 1.5****	• EES Principal • Director of Curriculum, Instruction and Technology • MERSD Instructional Coaches • EES Teachers	• Family Literacy/Mathematics Night Plan Developed - Oct-Dec '24 • Opportunities for grant funding explored - Oct-Dec '24 • Family Literacy/Mathematics Night Plan Implemented - Mar '25 • Family Literacy/Mathematics Night Plan Evaluated and Revised - Jun '25- June '26
EES will expand its partnerships with local community organizations and volunteers to offer after school clubs to students. ***DSI 1.5, 1.6***	• EES Principal • Community Partners/Volunteers	• Community outreach to determine club offerings for each session (4-8 clubs for three sessions per year)-- Sept '24 • Implement three sessions (6 weeks each) of afterschool clubs- Ongoing Sept '24 - June '26

Strategic Initiative 2

Integrate social emotional learning into all aspects of the school day.

1. *Create a K-12 SEL Leadership model charged with training staff on ways to integrate a variety of strategies to help increase student availability for learning. [Student Achievement, Student Centered, Equity]*
2. *Create a Vertical SEL Team to support the implementation of SEL informed instruction. [Student Achievement, Student Centered]*
3. *Design an integration plan and rubric to use to measure effectiveness of SEL integration at the individual student and classroom level. [Student Achievement, Student Centered, Equity]*
4. *Involve families and the community in the SEL work that our staff and students are engaged in. [Family and Community Partnerships]*

School Goals	Resources & Responsibilities	Deliverables (what & when) Measures of Implementation Documentation
EES will work with SEL Leadership Team and MMES staff to implement the developed SEL Scope and Sequence. ***DSI 2.2 ****	• EES Principal • EES Teachers • SEL Leadership Team	• Share Scope and Sequence with EES staff- Sep-Oct '24 • Implement scope and sequence during school day- June '25 • Feedback and refinement to SEL Leadership Team- June '25

		• Continued implementation using feedback/revisions- June ‘26
EES staff will provide resources for families (via weekly newsletter) to support students who are facing struggles with anxiety and other mental health challenges. This will include a collaboration with a child psychologist with specific expertise in the area of anxiety. ***DSI 2.4 ****	• EES Principal • EES Counselor • Director of Student Services • Child Psychologist Consultant	• Admin Training - Sep ‘24 • Staff Training - Dec ‘24 • Monthly Newsletter Outreach- Nov ‘24-Jun ‘26
Families will be engaged in the SEL work that our school is undertaking via regular newsletter updates and community SEL opportunities. ***DSI 2.4***	• EES Principal • MERSD SEL Team	• Newsletter and email updates – Sep ‘24-Jun ‘26 • SEL Opportunities at Open House – Sep ‘24 and Sep ‘25 • Family Charter Night- Sep ‘25
EES will establish a dedicated calm space within the school to support students’ sensory needs and enhance self-regulation skills, leading to improved behavior, social emotional learning, and academic performance. ***DSI 2.3***	• EES Principal • School Counselor • Occupational Therapist	• Calm Space set-up and inventory of resources and materials available in the space, including a replenishment plan– Sep - Oct ‘24 • Staff Training and Utilization Guides– Nov ‘24 • Monitoring and Evaluation Report with ongoing refinements based on feedback – Nov ‘24 - June ‘26
	•	•

Strategic Initiative 3

Celebrate and nurture an inclusive and diverse school culture that recognizes the contributions and uniqueness of all individuals.

1. *Identify and hire a consultant/coach to support the district in achieving cultural proficiency in the area of diversity, equity and inclusion. [Student Centered, Student Achievement, Equity, Family and Community Partnership, Resources]*
2. *Conduct a cultural proficiency, diversity, equity, and inclusion assessment. [Student Centered, Student Achievement, Equity, Family and Community Partnership, Resources]*
3. *Build on and expand inclusion and cultural competence training for staff and students.*

School Goals	Resources & Responsibilities	Deliverables (what & when) Measures of Implementation Documentation
EES will implement the "Investigating History" curriculum as it is released by DESE. This will provide more relevant and inclusive perspectives to students when learning about historical events. ***DSI 3.3****	• EES Principal • EES Teachers • MERSD Director of Curriculum	• Grade 5 - Sep '24-Jun '25 • Grade 3 and 4 - Sep '25-Jun'26 (pending DESE release)
EES will collaborate with MMES to expose students to authors from diverse backgrounds to increase global awareness and appreciation of diverse cultures. ***DSI 3.3***	• EES Principal • Elementary Librarian • FOESS	• Hena Kahn - '24-'25 • TBD - '25-'26
EES will evaluate and revise as needed classroom and schoolwide traditions to ensure they are culturally responsive and accessible to all students, reflecting the diversity of our community. ***DSI 3.2, 3.3***	• EES Principal • EES Leadership Team • EES School Council	• Audit of current traditions– Feb '25 • Creation of inclusive events calendar– June '25 • Revision/Implementation of events/traditions– June '26
	•	•

Strategic Initiative 4

Ensure funding for a stable, multi-year budget and capital improvement plan through collaboration with town and community partners.

1. *Develop and pass a budget that maintains quality and forward progress maintaining efficient practices but shifting to greater advocacy for increased funding to the District.*

2. *Articulate large and small scale operational and facilities capital needs and obligations. [Student Centered, Student Achievement, Equity, Family and Community Partnerships, Resources]*
3. *Continue to evolve the central administrative organization structure to efficiently and effectively support district wide improvement goals. [Student Centered, Student Achievement, Resources]*
4. *Review personnel efficiencies to improve or adjust delivery of programs. [Student Centered, Student Achievement, Equity, Resources]*

School Goals	Resources & Responsibilities	Deliverables (what & when) Measures of Implementation Documentation
EES administration will work collaboratively with MERSD district staff to identify materials and staffing gaps in areas highlighted by the NEASC report. ***DSI 4.1-4****	● EES Principal	● Budget Request - Oct '24-Jun '26

**Shared goal with EES*



Every student is at the center of decision-making.

Appendix F: *Grade-Level Curriculum Guides*

MERSD SPECIALS

Grade K, Trimester 3

LIBRARY

In this Trimester, your child will:

- Learn how to independently navigate *PebbleGo*, an online encyclopedia, via an iPad.
- Choose a research topic and understand what questions are going to be researched.
- Use books and *PebbleGo* to find information about a topic and take notes on a graphic organizer.
- Dictate learned facts about the research topic to the Library Teacher to type up.
- Create a final research poster (produced in collaboration with Technology class) and present their work to their class.

TECHNOLOGY

In this Trimester, your child will:

- Learn about computer science.
- Learn how to create basic codes.
- Create code with offline and online activities.
- Learn how to code robots to solve problems.
- Continue to use our mouse skills and navigation skills to produce and complete projects on the computers.

VISUAL ART

In this Trimester, your child will:

- Hear stories of famous artists.
- Learn how to create clay pinch pot.
- Continue to listen to stories and make connections to the story with art lessons.
- Continue to make art by painting, drawing, and printmaking
- Continue using scissors, tracing and glueing to make collages.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Show the difference between high and low sounds through singing and movement.
- Repeat back simple rhythms by ear with body percussion.
- As a class, sing 5 short songs from memory.
- Distinguish between major and minor chords.

WELLNESS / PE

In this Trimester, your child will:

- Try new fitness movements, activities and skills.
- Demonstrate safe and cooperative play with the parachute.
- Demonstrate beginning jump rope skills with self and partner.
- Demonstrate jumping skills over hurdles.
- Demonstrate beginning lacrosse skills such as passing, catching and shooting.
- Demonstrate walking, running, jogging, leaping, sliding, jumping, hopping, skipping, galloping.
- Continue our P.A. curriculum.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

MERSD SPECIALS

Grade K, Trimester 2

LIBRARY

In this Trimester, your child will:

- Demonstrate an understanding of how to locate different genres in the library space.
- Ask and answer questions about key details in a text, with prompting from the Library teacher.
- Will compare and contrast stories.
- Will continue to explore seasonal themes and world traditions via literature, and demonstrate an understanding via student-created projects.

TECHNOLOGY

In this Trimester, your child will:

- Learn about Internet safety and how to stay safe online.
- Create multimedia projects with different apps such as Chatterpix and Book Creator.
- Use their library research to create a multimedia project with digital artwork.
- Create a project that can then be shared with larger audiences.

VISUAL ART

In this Trimester, your child will:

- Create art through printmaking.
- Continue to listen to stories and make connections to the story with art lessons.
- Explore new ways to make art with painting texture with liquid tempera and watercolor paints.
- Learn how to create secondary colors from primary colors.
- Use scissors and glue to create collages.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Show the difference between fast and slow through singing and movement.
- Sing on stage as a group.
- Applaud at appropriate times.

WELLNESS / PE

In this Trimester, your child will:

- Demonstrate beginning Basketball skills.
- Demonstrate moving to various rhythms and demonstrate aerobics to various music.
- Demonstrate appropriate rolling movement turning tumbling.
- Demonstrate skills used in pickleball: striking forehand and backhand.
- Demonstrate moving to various rhythms and can perform dances of various countries.
- Will demonstrate beginning hockey skills.
- Continue our P.A. curriculum.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

MERSD SPECIALS

Grade K, Trimester 1

LIBRARY

In this Trimester, your child will:

- Learn the purpose of the school library and how to check out a book.
- Begin to independently navigate the library's physical space.
- Begin to recognize the difference between fiction and non-fiction books.
- Make predictions about what will happen next in a story.
- Learn about seasonal themes and world traditions via literature, and demonstrate understanding via student-created projects.

TECHNOLOGY

In this Trimester, your child will:

- Learn basic device safety and expectations of device care.
- Identify different kinds of computing devices in the classroom, like the mouse, laptop, printer and ipads.
- Learn how to use the mouse to navigate the computer and different applications.
- Use a program called Kipix to create simple pictures and learn how to type our name.

VISUAL ART

In this Trimester, your child will:

- Students will learn what art is, what an artist does and why art is important to people throughout history and around the world.
- Students will continue to explore new ways to explore artmaking and expressing themselves through drawing, painting, printing, collage and 3D construction.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Recognize music as a cultural universal.
- Sing a variety of songs as a group
- Learn the difference between loud and soft sounds.
- Keep a steady beat using their bodies.
- Respond to music through movement.
- Listen to music silently.

WELLNESS / PE

In this Trimester, your child will:

- Be introduced to a variety of locomotor skills (Hopping, skipping, jumping, leaping, running, galloping and sliding)
- Demonstrate soccer skills including striking, trapping, dribbling, headers, force and passing.
- Begin overhand and underhand throwing and catching
- Take part in Project Adventure curriculum which includes problem solving and teamwork.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

KINDERGARTEN
Trimester 3

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ What **scientific ideas** did you talk about today?
- ❏ How did you contribute to your **community** today?
- ❏ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read various texts, like books, poems, letters, news articles, and Internet pages.
- Speak and listen in formal and informal ways, like presentations and conversations.
- Communicate opinions, information, and experiences in writing for various readers.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In this Trimester, your child will:

- Ask scientific questions about the natural world and things humans design.
- Learn through various experiences, like observations and experiments.
- Solve problems using the skills and tools of engineers and scientists.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use math to make arguments about why something is true or false.
- Use tools, like rulers and calculators, to show mathematical relationships.

HISTORY AND SOCIAL SCIENCE

In this Trimester, your child will:

- Learn about their local community and about the state, country, and world.
- Discover how people and events from the past relate to the present.
- Work to understand how different people see the world differently.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY



Grade K, Trimester 3 Big Ideas and Concepts:

- Read early emergent reader texts with purpose and understanding
- Continue to demonstrate developing phonological awareness (medial vowel sounds, blend and segment CVC words, add and delete sounds in words)
- Continue to know and apply word analysis skills in decoding words
- Read most kindergarten high frequency words
- With help from an adult, use written words and drawings to express an opinion or give information about something
- Participate in shared research and writing projects

By the end of Grade K, Trimester 3 students can:

- Recognize and write all uppercase and lowercase letters and sounds.
- Read decodable texts.
- Capitalize the first word in a sentence.
- Recognize punctuation marks used at the end of sentences.
- Use appropriate word spacing in a sentence.

Questions you can ask your child:

- ★ Which words in this book do you know?

Topics you can discuss with your child's teacher:

- ★ How and where to find appropriate books for your child

Grade K, Trimester 3 Big Ideas and Concepts:

- Compare two numbers between 1 and 10 represented as written numerals
- Fluently add and subtract within 5
- Represent and solve addition and subtraction problems within 10 concretely, verbally and symbolically with expressions and equations
- Describe measurable attributes of objects
- Correctly name basic 2D and 3D shapes
- Count to 100 by 1s and 10s, and count on from various starting points
- Find number pairs that add to ten and record them with drawings or equations
- Teen numbers
- Count 20 objects in various arrangements
- Decompose numbers to ten into pairs in more than one way

Questions you can ask your child:

- How can you solve 5-1? How about 3+2?
- What 3D shapes do you know? Can you find any in the room?
- What goes with 7 to make 10?

Topics you can discuss with your child's teacher:

- Things to work on over the summer
- First grade readiness
- How to build excitement about math skills

By the end of Grade K, Trimester 3 students can:

- Compose, decompose and understand numbers 10-19.
- Compare groups of objects using greater than, less than or equal to.
- Add and subtract mentally within 5.
- Use objects, drawings or strategy to add and subtract within 10.
- Use drawings or equations to represent addition and subtraction problems or number combinations.





MATHEMATICS

SCIENCE AND TECHNOLOGY/ ENGINEERING



Grade K, Trimester 3 Big Ideas and Concepts:

- Observe and communicate that animals (including humans) and plants need food, water, and air to survive. Animals get food from plants or other animals. Plants make their own food and need light to live and grow.
- Recognize that all plants and animals grow and change over time.
- Communicate solutions to reduce the amount of natural resources an individual uses.
- Investigate and communicate the idea that different kinds of materials can be solid or liquid depending on the temperature.
- Make observations to determine that sunlight warms materials on the earth's surface. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.
- Use and share observations of local weather conditions to describe patterns over time.

By the end of Grade K, Trimester 3 students can:

- Describe the life cycle of a plant and tell what plants need to survive.
- Describe ways to reduce, reuse, and recycle.
- Describe how people can build things to protect themselves from the sun's heat.

Questions you can ask your child:

- ★ How do we take care of our house plants?
- ★ How can we take care of the earth?
- ★ How do you protect yourself from the sun?

Topics you can discuss with your child's teacher:

- ★ How science relates to everyday situations in your child's life.
- ★ Places in the community that can help your child learn science.

HISTORY AND SOCIAL SCIENCE

Grade K, Trimester 3 Big Ideas and Concepts:

- Describe the location of people, objects, and places
- With support, explain the similarities and differences between maps and globes
- Explain the location of important places in the student's town.
- Construct maps, drawings, and models of familiar places
- Describe some things people do when they work inside or outside the home
- Ask and answer questions about buying, selling, or trading something and explain how people make choices about the things they need and want
- Give examples of goods and services that people purchase with money they earn

Questions you can ask your child:

- What is your address?
- What is near your school?
- Who helps our community?
- Are toys a want, or a need?

Topics you can discuss with your child's teacher:

- Biographies, autobiographies, and historical fiction
- Celebrations and traditions that are important to our community



By the end of Grade K, Trimester 3 students can:

- Recite their home address.
- Use maps to find familiar locations in familiar places.
- Using relative position, describe the location of objects or places.
- Identify community helpers.
- Tell the difference between wants and needs.
- Explain how money is used.



KINDERGARTEN
Trimester 2

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ How did you contribute to your **community** today?
- ❏ How did someone help you learn today?Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ What **scientific ideas** did you talk about today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read and listen to various texts.
- Speak and listen in formal and informal ways, like presentations and conversations.
- Communicate and express opinions, information, and experiences in drawing and writing.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In this Trimester, your child will:

- Ask questions about the natural world and things humans design.
- Learn through various experiences and observations..
- Think of ideas to solve problems using the skills and tools of engineers and scientists.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use mathematical reasoning to make arguments about why something is true or false.
- Use tools to show mathematical understanding.

HISTORY AND SOCIAL SCIENCE

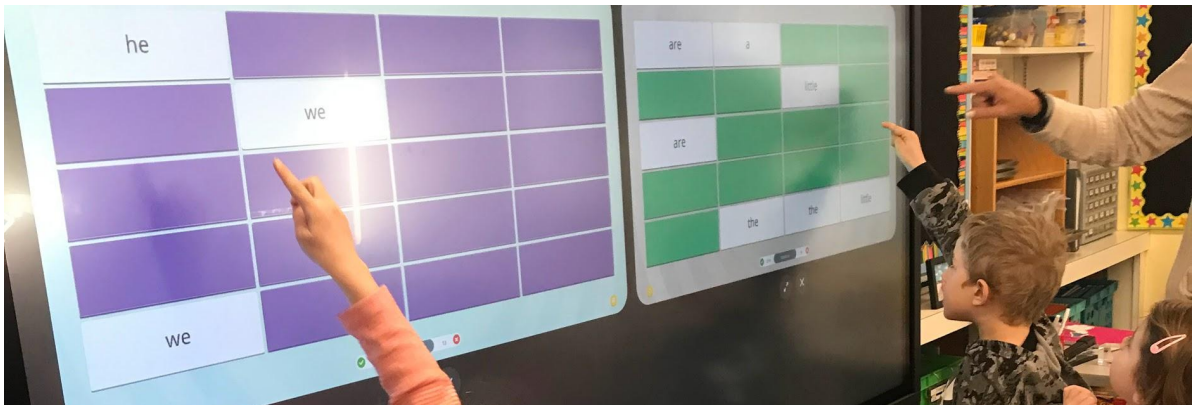
In this Trimester, your child will:

- Learn about their community, the state, country, and world.
- Discover how people and events from the past relate to the present.
- Work to understand how different people see the world differently.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY



Grade K, Trimester 2 Big Ideas and Concepts:

- Compare and contrast familiar stories
- Describe the relationship between illustrations and the story
- Continue to expand knowledge of literary genres
- Continue to demonstrate developing phonological awareness (final sounds, blend and segment CVC words)
- Continue to know and apply word analysis skills in decoding words
- Read more high frequency words
- With support, write a 3-5 word sentence and draw a corresponding picture

By the end of Grade K, Trimester 2 students can:

- Blend and read some CVC words
- Begin to read a sentence containing CVC and high frequency words
- Identify how many sounds are in a word
- Write most uppercase and lowercase letters
- Use high frequency words in their writing

Questions you can ask your child:

- ★ Is this book fiction or nonfiction?

Topics you can discuss with your child's teacher:

- ★ How to practice phonological awareness skills with your child

Grade K, Trimester 2 Big Ideas and Concepts:

- Orally count by 1s to at least 50, from 1 or starting at another number
- Compare numerals between 1 and 10
- Decompose numbers into pairs in more than one way
- Describe the length and weight of objects and compare objects by length
- Read and write numbers 0-20 and represent 20 objects with a numeral
- Solve simple number stories and problems involving addition and subtraction using various strategies
- Find combinations of 10
- Compose and decompose numbers 11-19 into a group of ten and some further 1s
- Use names of shapes and relative positions to describe two-dimensional shapes in the environment
- Classify objects into given categories, count the numbers of objects in each category, and sort categories by count
- Name circles, triangles, squares, rectangles, hexagons and some additional 3-dimensional shapes

Questions you can ask your child:

- ★ Which object is heavier /longer/ shorter/lighter?
- ★ How do we sort the groceries before we put them away?

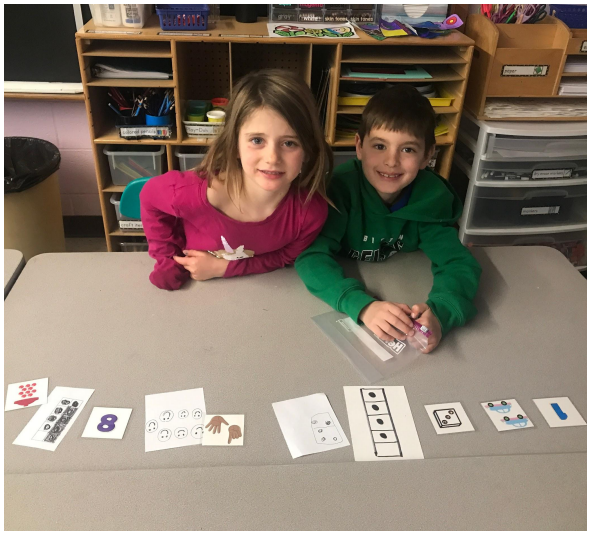
Topics you can discuss with your child's teacher:

- ★ Sorting household objects
- ★ Taking risks, making guesses, double-checking

By the end of Grade K, Trimester 2 students can:

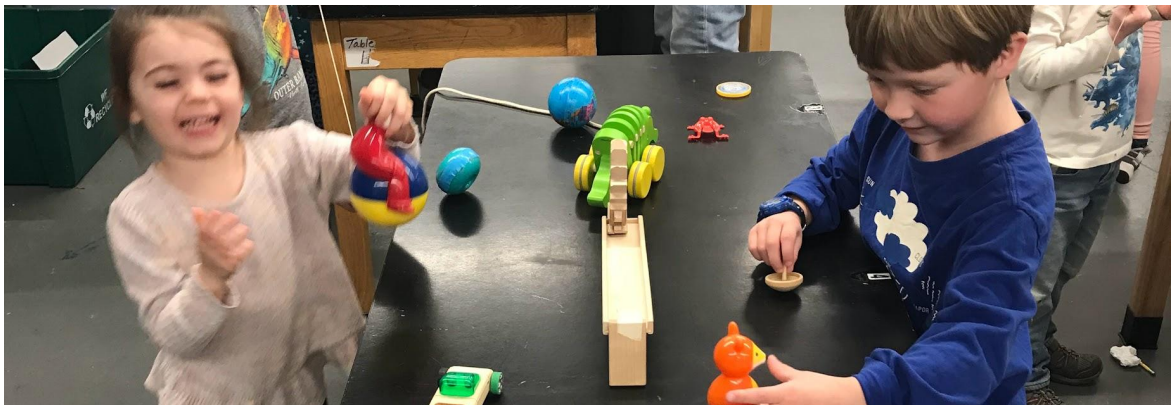
- Represent addition and subtraction concretely and verbally
- Compare quantities and numerals
- Use strategies to make combinations of 10
- Begin to identify 2D and 3D shapes
- Recognize and write teen numbers 10-19
- Sort objects using a rule





MATHEMATICS

SCIENCE AND TECHNOLOGY/ ENGINEERING



Grade K, Trimester 2 Big Ideas and Concepts:

- Investigate and communicate the idea that different kinds of materials can be solid or liquid depending on the temperature
- Compare the effects of different strengths or different directions of pushes and pulls on the motion of an object
- Obtain and use information about weather forecasting to prepare for and respond to different types of local weather
- Construct an argument supported by evidence for how animals can change the environment.
- Use and share observations of local weather conditions to describe patterns over time

By the end of Grade K, Trimester 2 students can:

- Describe what happens to water when it gets cold
- Explain what happens when an object is pushed or pulled
- Describe what an animal needs to survive



Questions you can ask your child:

- ★ Ask your child to describe different habitats
- ★ Would snow melt faster on a sunny day or a cloudy day?

Topics you can discuss with your child's teacher:

- ★ How science relates to everyday situations in your child's life.
- ★ Places in the community that can help your child learn science.

Grade K, Trimester 2 Big Ideas and Concepts:

- With prompting and support, give examples from literature and informational texts read or read aloud of characters who show authority, fairness, caring, justice, responsibility, or who show how rules are created and followed.
- Ask and answer questions and explore books to gain information about national symbols, songs, and texts of the United States.
- Put events from their personal lives, observations of the natural world, and from stories and informational texts read or read aloud in temporal order, using words and phrases relating to chronology and time.

Questions you can ask your child:

- What can you tell me about bald eagles?
- Tell me about what you did in the morning or afternoon today.

Topics you can discuss with your child's teacher:

- Biographies, autobiographies, and historical fiction
- Celebrations and traditions that are important to our community

By the end of Grade K, Trimester 2 students can:

- Discuss positive traits of a character when reading a story with an adult
- Identify the American Flag, bald eagle, Star-Spangled Banner, and Pledge of Allegiance
- Sequence actions, using *first, next*, and *last*





HISTORY AND SOCIAL SCIENCE

KINDERGARTEN
Trimester 1

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❑ How did you contribute to your **community** today?
- ❑ How did someone help you learn today?
- ❑ Can you tell me about something you **read** today?
- ❑ How could you use the **math** you learned today?
- ❑ What **scientific ideas** did you talk about today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read and listen to various texts.
- Develop speaking and listening skills.
- Communicate and express information through drawing and writing.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In this Trimester, your child will:

- Ask questions about the natural world and human-made things.
- Learn through various experiences and observations.
- Solve problems using the skills and tools of engineers and scientists.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use math to make arguments about why something is true or false.
- Use tools to show mathematical umderstanding.

HISTORY AND SOCIAL SCIENCE

In this Trimester, your child will:

- Learn about their local community, the state, country, and world.
- Discover how people and events from the past relate to the present.
- Work to understand how different people see the world differently.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY



Grade K, Trimester 1 Big Ideas and Concepts:

- Engage in group reading activities
- Recognize parts of a book and define author and illustrator
- Recognize common types of texts
- Identify key ideas and details about a text
- Develop understanding of concepts of print
- Demonstrate developing phonological awareness skills (rhyming, syllables, beginning sounds)
- Know and apply word analysis skills in decoding words
- Read some high frequency words
- Beginning letter formation
- Draw simple pictures to express an idea

By the end of Grade K, Trimester 1 students can:

- Tell what a story is about
- Identify a text as fiction or nonfiction
- Recognize and produce rhyming words
- Blend and segment 2-3 syllable words
- Write some uppercase and lowercase letters



Questions you can ask your child:

- ★ Who was in the story? Where did it take place?
- ★ What is the first sound in this word?

Topics you can discuss with your child's teacher:

- ★ Does my child engage in group discussions?

MATHEMATICS

Grade K, Trimester 1 Big Ideas and Concepts:

- Oral and rational counting
- Routines such as counting the days of school, number of the day, calendar, weather and temperature observation and data
- Identify and compare geometric shapes (triangles, circles, rectangles)
- Representing and solving addition and subtraction situations concretely, within 5
- Sort objects into categories using attributes such as color or shape
- Numerals 0-10
- The cardinal principle and the successor function

Questions you can ask your child:

- Can you count stairs as you climb or descend ?
- Do you see any numbers in the grocery store or at home ?
- Where can you find a rectangle at home?

Topics you can discuss with your child's teacher:

- Games and activities for home which support learning
- How to incorporate mathematical thinking every day

By the end of Grade K, Trimester 1 students can:

- Identify and describe triangle, square, rectangle, circle
- Read and write numbers 0-10, count orally to 10
- Count a set of 10 or more objects
- Figure out how many objects when one is added to a group, without starting over
- Compare the number of objects in two groups





SCIENCE AND TECHNOLOGY/ ENGINEERING



Grade K, Trimester 1 Big Ideas and Concepts:

- Use and share observations of local weather conditions to describe patterns over time
- Obtain and use information about weather forecasting to prepare for and respond to different types of local weather
- Observe and communicate that plants need food, water, and air to survive. Plants make their own food and need light to live and grow
- Recognize that plants grow and change over time

By the end of Grade K, Trimester 1 students can:

- Report current weather conditions
- Read and analyze weather and temperature data
- Describe the life cycle of a pumpkin or apple
- Describe how trees change in the fall



Questions you can ask your child:

- What is the life cycle of a pumpkin?
- How should you dress for today's weather?
- What happens to trees in the fall?

Topics you can discuss with your child's teacher:

- How science relates to everyday situations in your child's life.
- Places in the community that can help your child learn science.

HISTORY AND SOCIAL SCIENCE

Grade K, Trimester 1 Big Ideas and Concepts:

- Understand and follow rules, limits and expectations with minimal prompting and assistance; with prompting and support, answer questions about the reasons for rules.
- Describe how some days, called civic holidays, are special because they celebrate important events or people in history.
- Compare and contrast traditions and celebrations of people with diverse cultural backgrounds.

Questions you can ask your child:

- Tell me about your classroom rules and why you have them.
- How were you a good friend today?

Topics you can discuss with your child's teacher:

- Biographies, autobiographies, and historical fiction
- Celebrations and traditions that are important to our community

By the end of Grade K, Trimester 1 students can:

- Explain what it means to be responsible
- Describe similarities and differences between themselves and others
- Take on responsibilities and follow through on them
- Be respectful and helpful to others





MERSD SPECIALS

Grade 1, Trimester 3

LIBRARY

In this Trimester, your child will:

- Review how to independently navigate *PebbleGo*, an online encyclopedia.
- Review the question "what is research?" and choose a research topic and determine what questions to answer.
- Use library books and *PebbleGo* to find information about the topic and take notes on a graphic organizer.
- Be interviewed by the Library Teacher about their research topic and create a collaborative multimedia project with Technology class.
- Share their finished research product in Library class.

TECHNOLOGY

In this Trimester, your child will:

- Create multimedia projects with different apps such as Chatterpix.
- Use their library research to create a multimedia project with apps like Book Creator.
- Create a project that can then be shared with larger audiences.
- Use knowledge from throughout the year to create and edit multimedia projects.

VISUAL ART

In this Trimester, your child will:

- Continue to create pictures through direct step by step observation and from imagination.
- Listen to stories that are inspiration for art lessons.
- Create styrofoam stamps for basic printmaking.
- Learn what organic shapes are vs geometric shapes.
- Paint correctly with pan watercolors.
- Build a small basic pinch pot from clay.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Play mallet instruments with proper technique.
- Distinguish between major and minor keys.
- As a class, sing 10 short songs from memory.
- Stay in rhythm while singing or playing as a class by listening to each other.

WELLNESS / PE

In this Trimester, your child will:

- Try new fitness movements, activities and skills.
- Demonstrate safe and cooperative play with the parachute.
- Demonstrate jump rope skills with self and partner.
- Demonstrate track and field skills such as hurdling.
- Demonstrate beginning lacrosse skills such as passing, catching and shooting.
- Continue our P.A. curriculum.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

MERSD SPECIALS

Grade 1, Trimester 2

LIBRARY

In this Trimester, your child will:

- Learn and demonstrate understanding of elements of a story including, plot, character, setting and theme.
- Practice rephrasing assignments: "what am I supposed to do?"
- Understand the purpose of nonfiction text features including table of contents, captions, index and glossary.
- Continue to learn about seasonal themes and world traditions via literature, and compare and contrast literature via author studies.

TECHNOLOGY

In this Trimester, your child will:

- Learn about Internet safety and how to stay safe online.
- Understand how to be a good digital citizen.
- Learn about computer science.
- Learn how to create basic codes.
- Create code with offline and online activities.
- Learn how to code robots to solve problems.

VISUAL ART

In this Trimester, your child will:

- Create pictures by drawing with lines and shapes through direct step by step observation.
- Listen to stories that are inspiration for art lessons.
- Paint with tempera paints mixing the warm and cool colors.
- Learn what organic shapes are vs geometric shapes.
- Paint correctly with pan watercolors.
- Cut small shapes from papers to make a collage.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Perform on stage as a group, singing at an appropriate volume.
- Identify handheld percussion instruments by sight.
- Improvise short rhythmic ideas on handheld percussion instruments.
- Create percussion instruments to connect with 1st grade sound unit.

WELLNESS / PE

In this Trimester, your child will:

- Continue developing beginning Basketball skills.
- Demonstrate moving to various rhythms and demonstrate aerobics to various music.
- Demonstrate appropriate rolling movement turning tumbling and acrobatics.
- Demonstrate skills used in pickleball: striking forehand and backhand.
- Demonstrate moving to various rhythms and can perform dances of various countries.
- Will demonstrate beginning hockey skills.
- Continue our P.A. curriculum.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

MERSD SPECIALS

Grade 1, Trimester 1

LIBRARY

In this Trimester, your child will:

- Learn and practice strategies to find a "just right" book.
- Distinguish fiction from non-fiction.
- Learn the parts of a library book (front/ back cover, spine, call #, verso page, and barcode.)
- Be introduced to non-fiction text features including table of contents, captions, index and glossary.
- Learn about seasonal themes and world traditions via literature, and demonstrate understanding via student-created projects.

TECHNOLOGY

In this Trimester, your child will:

- Learn basic device safety and expectations of device care for both laptops and ipads.
- Learn about the different parts of the computer
- Practice navigating to different applications and websites on the computer.
- Use the application Kidpix to create pictures and practice typing.

VISUAL ART

In this Trimester, your child will:

- Students will learn what art is, what an artist does and why art is important to people throughout history and around the world.
- Students will continue to explore new ways to explore artmaking and expressing themselves through drawing, painting, printing, collage and 3D construction.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Sing together, matching pitch.
- Repeat back simple rhythms by ear.
- Listen with appropriate audience etiquette.
- Express the emotion in music through movement.

WELLNESS / PE

In this Trimester, your child will:

- Continue developing skills used in a variety of locomotor skills (Hopping, skipping, jumping, leaping, running, galloping and sliding.)
- Demonstrate soccer skills including striking, trapping, dribbling, headers, force and passing.
- Be introduced to ball handling skills.
- Take part in Project Adventure curriculum which includes problem solving and teamwork.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

FIRST GRADE
Trimester 3

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ What **scientific ideas** did you talk about today?
- ❏ How did you contribute to your **community** today?
- ❏ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read various texts, like books, poems, letters, news articles, and Internet pages.
- Speak and listen in formal and informal ways, like presentations and conversations.
- Communicate opinions and fictional stories in writing for various readers.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In this Trimester, your child will:

- Ask scientific questions about the natural world and things humans design.
- Learn through various experiences, like observations and experiments.
- Solve problems using the skills and tools of engineers and scientists.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use math to make arguments about why something is true or false.
- Use tools, such as number grids and pattern blocks, to show mathematical relationships.

HISTORY AND SOCIAL SCIENCE

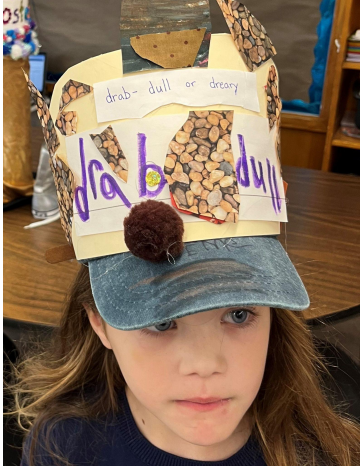
In this Trimester, your child will:

- Learn about their local community and about the state, country, and world.
- Discover how people and events from the past relate to the present.
- Work to understand how different people see the world differently.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY





Grade 1, Trimester 3 Big Ideas and Concepts:

- Know and apply grade-level phonics and word analysis skills to decode unknown words
- Recognize and read irregularly spelled words (including high frequency words)
- Read with sufficient accuracy and fluency to support comprehension
- Demonstrate understanding of spoken words, syllables, and sounds
- Write in various genres

By the end of Grade 1, Trimester 3 students can:

- Decode regularly spelled one-syllable words with vowel teams, r-controlled vowels, diphthongs and more variant vowels.
- Read increasingly complex text with expression and intonation.
- Decode two syllable words following basic patterns.
- Phoneme deletion and substitution.
- Determine central message or lesson of a text.
- Make connections between texts.
- Write about their opinions.
- Write fiction stories.

Questions you can ask your child:

- What lesson can you learn from this book?
- How is this story like another story?
- What story does this remind you of?

Topics you can discuss with your child's teacher:

- Supporting your child's reading fluency with more complex text.
- How to help your child read multisyllabic words.

Grade 1, Trimester 3 Big Ideas and Concepts:

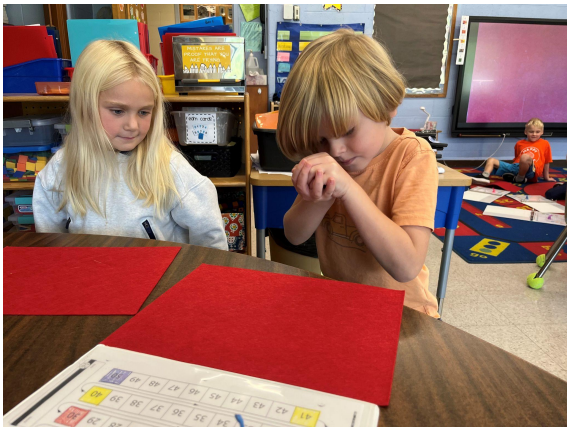
- Understand how counting, addition, and subtraction are related
- Describe geometric shapes
- Reason with shapes and their attributes
- Identify simple fractions
- Tell time to the half hour
- Understand and solve number stories using 2-digit numbers

Questions you can ask your child:

- How much money is this collection of coins worth?
- What time does the clock say?
- What shape has 4 equal sides?
- How do you know this shape is a _____?

Topics you can discuss with your child's teacher:

- What 2D and 3D shapes we study.
- Games that can help your child practice at home.
- Which addition and subtraction strategies work best for your child.



By the end of Grade 1, Trimester 3 students can:

- Know the value of a collection of pennies and dimes.
- Tell the value of a digit in a given number.
- Tell and write time to the hour and half hour on digital and analog clocks.
- Identify attributes of 2D and 3D shapes.
- Separate shapes into equal parts. Describe the parts using the words halves, fourths, and quarters.
- Solve one-step word problems containing 2 digit numbers using addition and subtraction.

MATHEMATICS

SCIENCE AND TECHNOLOGY/ ENGINEERING





Grade 1, Trimester 3 Big Ideas and Concepts:

- Students will identify similarities and differences among plants of the same kind.
- Students will identify similarities and differences among animals of the same kind.

By the end of Grade 1, Trimester 3 students can:

- Identify the parts of a plant (roots, stems, leaves, flowers, fruits).
- Identify the functions of these plant parts.
- Identify characteristics of animals.
- Categorize animals by similar characteristics.

Questions you can ask your child:

- What are the parts of a plant? What do they do?
- What kind of animal is that and how do you know?
- How are animals alike and different?

Topics you can discuss with your child's teacher:

- Play 20 Questions
- How science relates to your child's life (i.e. seasons, plants, animals, tide pools).

HISTORY AND SOCIAL SCIENCE

Grade 1, Trimester 3 Big Ideas and Concepts:

- Identify what goods and services are
- Identify goods and services in their lives
- Concepts of diversity, equity, and inclusion will be integrated and addressed throughout the year including, but not limited to: cultural differences, different types of abilities and disabilities, family make-ups and traditions

Questions you can ask your child:

- What are things we need in our family?
- Is a ____ need or a want?

Topics you can discuss with your child's teacher:

- Concept of saving money.
- Books to look at about H/SS topics.

By the end of Grade 1, Trimester 3 students can:

- Explain what goods and services are.
- Give examples of goods that people buy and use.
- Give examples of services people do for each other.
- Distinguish between needs and wants.
- Explain why people try to save some of their money rather than spend it all.
- Work to understand how different people see the world and live differently.





FIRST GRADE
Trimester 2

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ What **scientific ideas** did you talk about today?
- ❏ How did you contribute to your **community** today?
- ❏ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read various texts, like books, poems, letters, news articles, and Internet pages.
- Speak and listen in formal and informal ways, like presentations and conversations.
- Communicate information in writing for various readers.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In Trimester, your child will:

- Ask scientific questions about the natural world and things humans design.
- Learn through various experiences, like observations and experiments.
- Solve problems using the skills and tools of engineers and scientists.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use math to make arguments about why something is true or false.
- Use tools, such as number lines, to show mathematical relationships.

HISTORY AND SOCIAL SCIENCE

In Trimester, your child will:

- Learn about their local community and about the state, country, and world.
- Discover how people and events from the past relate to the present.
- Work to understand how different people see the world differently.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY



Grade 1, Trimester 2 Big Ideas and Concepts:

- Know and apply grade-level phonics and word analysis skills to decode unknown words.
- Recognize and read irregularly spelled words (including high frequency words).
- Read with sufficient accuracy and fluency to support comprehension.
- Demonstrate understanding of spoken words, syllables, and sounds.
- Write in various genres.

By the end of Grade 1, Trimester 2 students can:

- Decode regularly spelled one-syllable words with digraphs, long vowels with silent “e”, and variant vowel spellings.
- Read words with inflectional endings such as -ed and -ing.
- Read sentences and short passages smoothly.
- Blend and segment sounds in words.
- Identify main topic and supporting details.
- Identify nonfiction text features.
- Write informational pieces.

Questions you can ask your child:

- How do authors show information in a nonfiction book?
- How do you show that an action already happened?
- Can you tell me all the sounds in ____?

Topics you can discuss with your child’s teacher:

- Building your child’s background knowledge to improve reading.
- Supporting your child’s reading fluency.

Grade 1, Trimester 2 Big Ideas and Concepts:

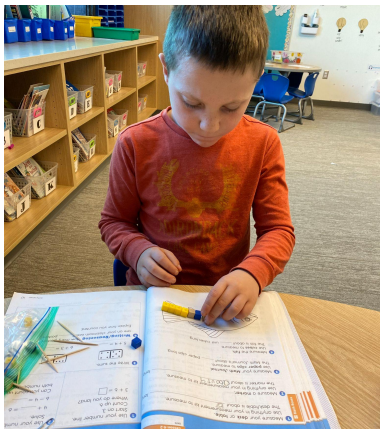
- Understand measurement of length.
- Understand and apply properties of addition and subtraction within 20.
- Understand that two-digit numbers are made of tens and ones (place value).
- Understand and compare numbers using comparison symbols.
- Adding and subtracting two-digit numbers.
- Understanding the basics of telling time.

Questions you can ask your child:

- How many spoons long is ____?
- What are all the doubles facts you know?
- What are some ways to make 10?

Topics you can discuss with your child's teacher:

- How math applies in everyday life.
- Addition and subtraction facts.
- How to practice place value at home.



By the end of Grade 1, Trimester 2 students can:

- Measure length using non-standard tools.
- Solve number stories using addition and subtraction within 20.
- Solve addition and subtraction facts within 20.
- Know doubles facts through 10+10.
- Know complements of 10.
- Tell time to the hour on an analog clock.
- Identify the tens and ones place in a 2-digit number.
- Represent a given number using base-10 blocks.
- Use a tool to add 2 digit numbers.
- Use >,<,= to compare numbers and expressions.
- Identify a penny and a dime.
- Tell the value of a penny and a dime.

MATHEMATICS

SCIENCE AND TECHNOLOGY/ ENGINEERING



Grade 1, Trimester 2 Big Ideas and Concepts:

- Students will learn about the moon and sun.
- Students will identify similarities and differences among animals of the same kind.
- Students will learn about how light and sound travel.

By the end of Grade 1, Trimester 2 students can:

- Identify the phases of the moon.
- Explain the patterns in the sunrise and sunset.
- Explain how animals use their bodies and senses to meet their needs.
- Build something that sends a signal (light or sound) over a distance.
- Identify that sound is created by vibrations.
- Explain the the properties of materials can affect the passage of light.

Questions you can ask your child:

- What do we call tonight's moon?
- What do you notice about the moon?
- How do we hear sound?
- What stops light?

Topics you can discuss with your child's teacher:

- Observe light and sound in everyday life. What affects it?
- How science relates to your child's life (i.e the moon, animals, seasons, light, sound).

Grade 1, Trimester 2 Big Ideas and Concepts:

- Explain what a map is and why it is used.
- Use cardinal directions (north, east, south, west) and various maps to find and describe places.
- Concepts of diversity, equity, and inclusion will be integrated and addressed throughout the year including, but not limited to: cultural differences, different types of abilities and disabilities, family make-ups and traditions.

Questions you can ask your child:

- Where are the cardinal directions on a given map?
- Look at maps that you have and talk about what information they get from the map.
- How to make a map of a room in your home.

Topics you can discuss with your child's teacher:

- What are some resources for using maps at home?
- Activities they can do to practice using maps with their child.



By the end of Grade 1, Trimester 2 students can:

- Identify physical features on a map.
- Identify and use cardinal directions.
- Explain that a map represents spaces.
- Use maps to identify locations.
- Work to understand how different people see the world and live differently.

FIRST GRADE
Trimester 1

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ How did you contribute to your classroom **community** today?
- ❏ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Be exposed to various texts, like books, poems, letters, news articles, and Internet pages.
- Speak and listen in formal and informal ways like presentations and conversations.
- Communicate experiences in writing for various readers.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In this Trimester, your child will:

- Ask scientific questions about the natural world.
- Learn through various experiences and observations.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use math to make arguments about why something is true or false.
- Use tools, such as manipulatives and number lines, to show mathematical relationships.

HISTORY AND SOCIAL SCIENCE

In this Trimester, your child will:

- Learn about their local community and about the state, country, and world.
- Work to understand how different people see the world differently.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY





Grade 1, Trimester 1 Big Ideas and Concepts:

- Know and apply grade-level phonics and word analysis skills to decode unknown words.
- Recognize and read irregularly spelled words (including high frequency words).
- Demonstrate understanding of spoken words, syllables, and sounds.
- Comprehend and write texts of various genres.

By the end of Trimester 1 students can:

- Decode regularly spelled one-syllable words with short vowels and consonant blends.
- Read words and simple sentences smoothly.
- Identify a rhyme.
- Identify beginning sounds.
- Ask and answer questions about key details in a text.
- Make and confirm predictions.
- Identify story elements.
- Write personal narratives.
- Write words using the sounds they hear.

Questions you can ask your child:

- What rhymes with __?
- What do you think will happen?
- What do you do when you don't know how to spell a word? Can you sound out/spell ___?

Topics you can discuss with your child's teacher:

- Ways to practice phonics and phonemic awareness.
- How you can support your child's spelling and writing development.

Grade 1, Trimester 1 Big Ideas and Concepts:

- Understand and solve simple number stories.
- Understand and apply properties of addition and subtraction within 10.
- Students organize, represent, and interpret data.
- Students will read, write, and count single and double digit numbers.
- Students will learn and apply counting strategies.
- Understand and apply counting strategies through the use of tools such as a number line and manipulatives.
- Understand and apply properties of addition and subtraction within 10.
- Understand and solve number stories using addition and subtraction and represent with a number model.
- Recognize and use number patterns to extend the counting sequence.
- Understand how to represent and interpret data using tally marks.
- Apply appropriate tools and strategies to solve a variety of math problems.

Questions you can ask your child:

- ★ What is a given number?
- ★ Given a group of objects, how many are there?
- ★ How do you show a __ with tallies?
- ★ Can you count to 100 by 10s?

Topics you can discuss with your child's teacher:

- ★ Skip counting strategies.
- ★ Types of number stories.
- ★ How math applies in everyday life.

By the end of Trimester 1 students can:

- Read, write, and count the numbers through 50.
- Solve number stories using addition and subtraction within 10.
- Solve addition and subtraction facts within 10.
- Represent a number using tally marks.
- Answer questions about a tally chart.
- Count by 5s up to 50.
- Count by 10s to 100.



MATHEMATICS

SCIENCE AND TECHNOLOGY / ENGINEERING





Grade 1, Trimester 1 Big Ideas and Concepts:

- Students will learn about what a scientist is and what they do.
- Students will learn about seasons.
- Students will learn about the moon and sun.

By the end of Trimester 1 students can:

- Ask questions and make observations.
- Identify the 4 seasons
- Identify the patterns in seasons.
- Collect data on weather patterns.
- Identify the signs of the various seasons.
- Identify a problem and state possible solutions.

Questions you can ask your child:

- What do scientists do?
- What do you observe?
- What season is it now? How do you know it is summer/fall?
- How do scientists solve problems?

Topics you can discuss with your child's teacher:

- Ways you can help your child learn science.
- How science relates to your child's life (i.e. seasons, observations).

Grade 1, Trimester 1 Big Ideas and Concepts:

- Students will understand what it means to be part of a group and the benefits of being part of a group.
- Students will recognize core values of a community.
- Students will have a basic understanding of the democratic process, including voting.
- Concepts of diversity, equity, and inclusion will be integrated and addressed throughout the year including, but not limited to: cultural differences, different types of abilities and disabilities, family make-ups and traditions.

Questions you can ask your child:

- When do you vote in your classroom and how does it work?
- What are the core values of your school and why are they important?
- How do you want to feel at school/home?

Topics you can discuss with your child's teacher:

- How to incorporate elements RULER at home.
- Books to look at about history and other social studies topics.

By the end of Trimester 1 students can:

- Participate as responsible members of the classroom community.
- Identify the core values of the school.
- Identify the communities that they are part of.
- Describe how they want to feel in their school community.
- Explain how voting helps people make decisions in a community.
- Work to understand how different people see the world and live differently.





HISTORY AND SOCIAL SCIENCE

MERSD SPECIALS

Grade 2, Trimester 3

LIBRARY

In this Trimester, your child will:

- Review how to independently navigate online encyclopedias (*PebbleGo* and *Britannica Online*).
- Participate in a group research project to practice teamwork and note-taking skills.
- Use library books and online encyclopedias to find information about their research topic and take notes using keywords and bullet points.
- Create sentences based on keyword notes.
- Create a multimedia project in collaboration with Technology class.

TECHNOLOGY

In this Trimester, your child will:

- Create multimedia projects with different apps such as Book Creator.
- Use their library research to create a multimedia project.
- Create a project that can then be shared with larger audiences.
- Use knowledge from throughout the year. to create and edit multimedia projects text and image features.

VISUAL ART

In Trimester, your child will:

- Review basic types of lines adding spirals to make design patterns with markers.
- Know how to use oil pastels with watercolors to paint a landscape resist.
- Create a basic weaving pot holder on a loam.
- Identify geometric and organic shapes.
- Build a clay slab drape mold bowl that is symmetrical.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Categorize instruments of the orchestra by family.
- Read and write 8th notes and rests.
- Play melodies on instruments.
- Sing 10 short songs and 4 longer songs from memory.

WELLNESS / PE

In this Trimester, your child will:

- Students will continue developing skills used in a variety of locomotor skills (Hopping, skipping, jumping, leaping, running, galloping and sliding.)
- Students will demonstrate soccer skills including striking, trapping, dribbling, headers, force and passing.
- Students will begin overhand and underhand throwing and catching.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

MERSD SPECIALS

Grade 2, Trimester 2

LIBRARY

In this Trimester, your child will:

- Review nonfiction text features (Table of Contents, Glossary, Index, Captions, Photos)
- Understand how nonfiction text features may be used as a resource when doing research.
- Learn and practice how to take a research note.
- Learn and practice how to communicate research facts in their own words.

TECHNOLOGY

In this Trimester, your child will:

- Learn about computer science.
- Learn how to create basic codes.
- Create code with offline and online activities.
- Learn and understand how to code robots to solve problems.
- Learn what an algorithm is and how to create one.

VISUAL ART

In Trimester, your child will:

- Learn how to add a horizon line to show distance in their work.
- Add visual texture to drawings and paintings.
- Learn how to mix tints and shades with tempera paint and oil pastels.
- Identify and be able to cut geometric and organic shapes.
- Create basic weaving placemats from painted papers.
- Use symmetry in basic prints.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Identify instruments of the orchestra by sight.
- Sing on stage as a group, matching pitch and diction.
- Clap on offbeats together as a class.

WELLNESS / PE

In this Trimester, your child will:

- Developing Basketball skills.
- Move to various rhythms and combine dance patterns.
- Demonstrate appropriate rolling movement during tumbling and acrobatics.
- Demonstrate skills used in pickleball: striking forehand and backhand.
- Perform dances of various countries.
- Demonstrate beginning hockey skills i.e. shooting, dribbling, passing and control.
- Continue P.A. curriculum.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

MERSD SPECIALS

Grade 2, Trimester 1

LIBRARY

In this Trimester, your child will:

- Understand the relationship between spine label and book content and recognize the call number as a book's "address."
- Be introduced to the Dewey Decimal System for organizing non-fiction books in libraries.
- Practice organizing books on a shelf to inform browsing for books of interest.
- Practice using *Destiny,* the school library database, independently to search for library books.

TECHNOLOGY

In this Trimester, your child will:

- Learn basic device safety and expectations of device care.
- Learn about the different parts of the computer and what they do.
- Learn and practice using QR codes to scan into their Clever account to access our school's subscription applications
- Learn how we can be safe online and a responsible digital citizen.

VISUAL ART

In this Trimester, your child will:

- Students will learn what art is, what an artist does and why art is important to people throughout history and around the world.
- Students will continue to explore new ways to explore artmaking and expressing themselves through drawing, painting, printing, collage and 3D construction.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Sing together with clear diction, matching pitch.
- Improvise movement ideas.
- Repeat simple rhythms on handheld percussion instruments.
- Use the mood meter to show opinions on the emotion in music.

WELLNESS / PE

In this Trimester, your child will:

- Continue developing skills used in a variety of locomotor skills (Hopping, skipping, jumping, leaping, running, galloping and sliding.)
- Demonstrate soccer skills including striking, trapping, dribbling, headers, force and passing.
- Be introduced to ball handling skills.
- Take part in Project Adventure curriculum which includes problem solving and teamwork.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

SECOND GRADE
Trimester 3

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ What **scientific ideas** did you talk about today?
- ❏ How did you contribute to your **community** today?
- ❏ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read various texts, like books, poems, letters, news articles, and Internet pages.
- Speak and listen in formal and informal ways, like presentations and conversations.
- Communicate opinions, information, and experiences in writing for various readers.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In this Trimester, your child will:

- Ask scientific questions about the natural world and things humans design.
- Learn through various experiences, like observations and experiments.
- Solve problems using the skills and tools of engineers and scientists.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use math to make arguments about why something is true or false.
- Use tools, like rulers and calculators, to show mathematical relationships.

HISTORY AND SOCIAL SCIENCE

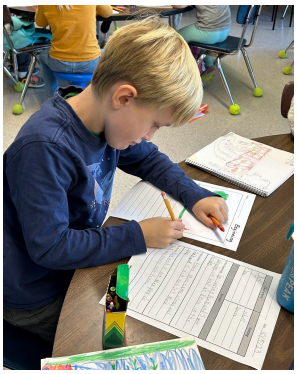
In this Trimester, your child will:

- Learn about their local community and about the state, country, and world.
- Discover how people and events from the past relate to the present.
- Work to understand how different people see the world differently.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY







Grade 2, Trimester 3 Big Ideas and Concepts:

- Know and apply grade level phonics and word analysis skills to decode unknown words
- Recognize and read irregularly spelled words (including high frequency words)
- Read with sufficient accuracy and fluency to support comprehension
- Read various genres including realistic fiction, biography, persuasive text, expository text, myth, and poetry
- Write in various genres
- Apply grade level speaking and listening skills

By the end of Grade 2, Trimester 3 students can:

- Decode and spell words with common vowel teams.
- Decode two-syllable words with long vowels.
- Describe how characters in a story respond to major events and challenges.
- Know and use various text features to locate key facts or information in a text efficiently.
- Write opinion pieces that state an opinion and supply reasons that support the opinion.
- Write informative texts that introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

Questions you can ask your child:

- What problem did the character face? How did they solve it?
- What is your opinion? What are your reasons?
- What does fluent reading sound like?

Topics you can discuss with your child's teacher:

- Strategies for practicing reading and writing over the summer break

Grade 2, Trimester 3 Big Ideas and Concepts:

- Represent and solve problems involving addition and subtraction
- Use place value understanding and properties of operations to add and subtract
- Work with equal groups of objects to gain foundations for multiplication
- Measure and estimate lengths in standard units
- Represent and interpret data
- Reason with shapes and their attributes

Questions you can ask your child:

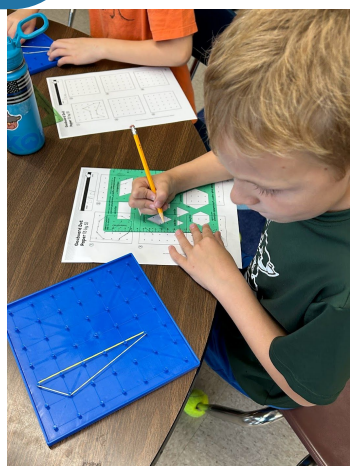
- About how many inches/centimeters is this object?
- What shape is this object?
- Is ___ more or less than ___?

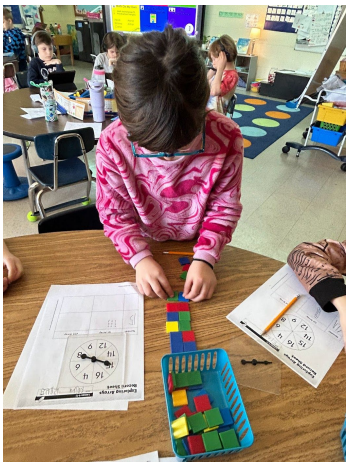
Topics you can discuss with your child's teacher:

- Suggestions for applying math concepts/skills to real-world contexts.
- Strategies for practicing math skills over summer break

By the end of Grade 2, Trimester 3 students can:

- Add up to four 2-digit numbers.
- Compare 3-digit numbers.
- Estimate and measure objects in inches and centimeters.
- Represent data on a line plot.
- Recognize and draw shapes with specific attributes.
- Partition shapes into equal shares.





MATHEMATICS

SCIENCE AND TECHNOLOGY/ ENGINEERING





Grade 2, Trimester 3 Big Ideas and Concepts:

- Develop and use models to compare how plants depend on their surroundings and other living things to meet their needs in the places they live
- Use texts, media, or local environments to observe and compare different kinds of living things in an area, and differences in the kinds of living things living in different types of areas
- Design and conduct an experiment to show the effects of friction on the relative temperature and speed of objects that rub against each other
- Describe and classify different kinds of materials by observable properties of color, flexibility, hardness, texture, and absorbency
- Analyze data from tests of two objects designed to solve the same design problem to compare the strengths and weaknesses of how each object performs

By the end of Grade 2, Trimester 3 students can:

- Describe what plants need to survive.
- Describe how plants and animals depend on each other in an ecosystem.
- Compare and contrast different materials based on their properties.
- Explain why we choose different materials for different purposes.
- Explain what happens to an object when it slides on a rough surface or a smooth surface.

Questions you can ask your child:

- What kind of materials should you use for this task?
- What happens to butter at different temperatures?

Topics you can discuss with your child's teacher:

- Places in the community that can help your child learn science

Grade 2, Trimester 3 Big Ideas and Concepts:

- Investigate reasons why people migrate (move) to different places around the world, recognizing that some migration is voluntary, some forced
- Give examples of why the United States is called "a nation of immigrants"
- Conduct interviews with family members, neighbors, friends, or school staff to discover where their families came from, how and why they moved to where they now live, and when and why their families came to Massachusetts
- Identify what individuals and families bring with them when they move to a different place and identify the significant impacts of migration; identify elements that define the culture of a society; explain how the community is enriched by contributions from all the people who form it today

Questions you can ask your child:

- Why would someone move to a new place?
- What are some of the cultures represented in your class?
- Where did your ancestors come from?

Topics you can discuss with your child's teacher:

- What are some grade level books we can read together to learn more?

By the end of Grade 2, Trimester 3 students can:

- Identify the types of problems people face that might be addressed by migration.
- Explain why people move to a new location or stay in a particular location.
- Give examples of traditions or customs from other countries practiced in the United States today.
- Describe traditional foods, customs, games, and music of the place they, their family, or their ancestors came.



Amazon



HISTORY AND SOCIAL SCIENCE

SECOND GRADE
Trimester 2

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ What **scientific ideas** did you talk about today?
- ❏ How did you contribute to your **community** today?
- ❏ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read various texts, like books, poems, letters, news articles, and Internet pages.
- Speak and listen in formal and informal ways, like presentations and conversations.
- Communicate opinions, information, and experiences in writing for various readers.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In this Trimester, your child will:

- Ask scientific questions about the natural world and things humans design.
- Learn through various experiences, like observations and experiments.
- Solve problems using the skills and tools of engineers and scientists.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use math to make arguments about why something is true or false.
- Use tools, like rulers and calculators, to show mathematical relationships.

HISTORY AND SOCIAL SCIENCE

In this Trimester, your child will:

- Learn about their local community and about the state, country, and world.
- Discover how people and events from the past relate to the present.
- Work to understand how different people see the world differently.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY





Grade 2, Trimester 2 Big Ideas and Concepts::

- Notice and talk about the structure of a text. For example, describe how the beginning of a story introduces the characters, or explain what the last paragraph of an article says.

- Explain the overall purpose of a text: for example, the idea the author is trying to explain or the lesson the author is trying to teach.

By the end of Grade 2, Trimester 2 students can:

- Explain how a picture or diagram helps show what a text is saying.

- Gather information from different texts to answer a question.

- When presenting, speak loudly and clearly enough to be heard and understood.

Questions you can ask your child:

- Who is the story about? What do they do? Why?
- What kinds of things can you do to figure out what a word means?
- What kind of writing did you do in school today?

Topics you can discuss with your child's teacher:

- Books and authors to look for at the library
- Types of writing your child is working on

Grade 2, Trimester 2 Big Ideas and Concepts:

- Continue to understand place value in numbers up to 1,000.
- Use various methods to add and subtract with numbers up to 1,000. For example, find the total cost of three items at a clothing store.
- Understand and use standard units and tools of measurement. For example, estimate the length (in feet or meters) of a row of desks.

Questions you can ask your child:

- ★ Would it take more inches or feet to measure our table?
- ★ How much change will we have after we pay for our snacks with a $10 bill?

Topics you can discuss with your child's teacher:

- ★ Which addition and subtraction strategies work best for your child
- ★ Games that can help your child practice math at home.



By the end of Grade 2, Trimester 2 students can:

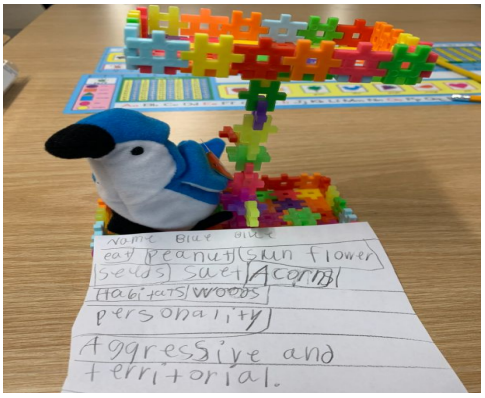
- Add and subtract within 20 quickly and accurately.
- Read, write and count numbers to 1,000.
- Arrange pairs of objects to tell whether a number is odd or even.
- Understand and create visual displays of information, like bar graphs.
- Solve one-step and two-step word problems, including problems involving length.



MATHEMATICS

SCIENCE AND TECHNOLOGY/ ENGINEERING





Grade 2, Trimester 2 Big Ideas and Concepts

- Understand different kinds of plants & animals live in different environments and areas. For example, compare living things in a desert with living things in an ocean.
- Understand how wind and water can change the shape of land, and how people can prevent or slow down those changes by doing things like planting trees and building fences.

By the end of Grade 2, Trimester 2 students can:

- Create maps to show bodies of water and landforms in an area.
- Explain that water exists on Earth in different places and forms.
- Describe and sort materials by how they look, feel, or act.
- Observe that breaking something does not change its material.

Questions you can ask your child:

- ★ Which of these towels is better for wiping up water? Why?
- ★ Where can we find water near our home?

Topics you can discuss with your child's teacher:

- ★ Places in the community that can help your child learn science

Grade 2, Trimester 2 Big Ideas and Concepts:

- Understand how people interact with the physical world (environment).
- Explain why people decide to live in (settle in) particular places and why they move (migrate).
- Describe countries using their physical characteristics (like climate or geography) as well as their human ones (population or culture).

Questions you can ask your child:

- What are some reasons people move to different places around the world?

Topics you can discuss with your child's teacher:

- Places in the community where people work (like homes, schools, stores, restaurants, offices and factories)



By the end of Grade 2, Trimester 2 students can:

- Create maps to show bodies of water and landforms.
- Identify continents, countries, and physical characteristics such as: rivers, deserts & peninsulas.
- Investigate different reasons people migrate and what individuals and families bring with them when they migrate (like memories, objects, ideas, languages & habitats).



HISTORY AND SOCIAL SCIENCE

SECOND GRADE
Trimester 1

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ What **scientific ideas** did you talk about today?
- ❏ How did you contribute to your **community** today?
- ❏ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read various texts, like books, poems, letters, news articles, and Internet pages.
- Speak and listen in formal and informal ways, like presentations and conversations.
- Communicate opinions, information, and experiences in writing for various readers.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In this Trimester, your child will:

- Ask scientific questions about the natural world and things humans design.
- Learn through various experiences, like observations and experiments.
- Solve problems using the skills and tools of engineers and scientists.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use math to make arguments about why something is true or false.
- Use tools, like rulers and calculators, to show mathematical relationships.

HISTORY AND SOCIAL SCIENCE

In this Trimester, your child will:

- Learn about their local community and about the state, country, and world.
- Discover how people and events from the past relate to the present.
- Work to understand how different people see the world differently.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY



Grade 2, Trimester 1 Big Ideas and Concepts:

- Know and apply grade level phonics and word analysis skills to decode unknown words
- Recognize and read irregularly spelled words (including high frequency words)
- Read with sufficient accuracy and fluency to support comprehension
- Read various genres including realistic fiction, fantasy, expository text, fable, and poetry
- Write informational, opinion, and persuasive pieces
- Apply grade level speaking and listening skills

By the end of Grade 2, Trimester 1 students can:

- Decode regularly spelled one-syllable words with short vowels and consonant blends.
- Read words and simple sentences fluently.
- Ask and answer questions about key details in a text.
- Make & confirm predictions.
- Identify story elements within various genres including realistic fiction, fantasy, expository text, fable, and poetry.
- Produce writing that demonstrates increasing knowledge of language and conventions.

Questions you can ask your child:

- What do you believe will happen next?
- What do you do when you don't know how to spell a word? Can you sound out /spell ___?
- Can you retell a story you read in school today?

Topics you can discuss with your child's teacher:

- Ways to practice phonics and phonemic awareness
- How you can support your child's spelling and writing development

Grade 2, Trimester 1 Big Ideas and Concepts:

- Understand & solve simple number stories in addition and subtraction with a number model
- Understand & apply properties of addition and subtraction within 20
- Organize, represent, and interpret data
- Understand & apply counting strategies through the use of tools such as number lines and manipulatives
- Identify coins and their value
- Generate equivalent names for numbers

Questions you can ask your child:

- What is the sum of _ _ + _ _?
- Is a given number of objects odd or even?
- What is a given coin's value?

Topics you can discuss with your child's teacher:

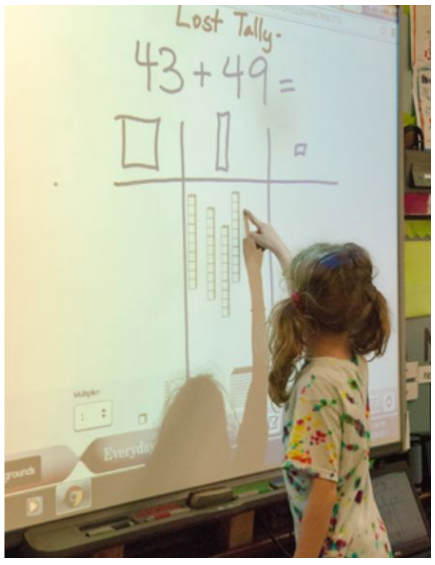
- Strategies to find a sum
- Ways to compare and order numbers
- How math applies in everyday life

By the end of Grade 2, Trimester 1 students can:

- Add and subtract within 10.
- Determine whether a group of objects up to 10 is odd or even.
- Count by 1s, 5s, 10s
- Read and write up to 3-digit numbers.
- Compare and order 2-digit numbers.
- Mentally add or subtract 10 from a given number.
- Plot numbers on a number line by 1s.
- Identify coins and their values.
- Use objects, number lines, or number grids to add a 1-digit number to a 2-digit number.



https://everydaymath.uchicago.edu/parents/2nd-grade/em4-at-home/



https://everydaymath.uchicago.edu/parents/2nd-grade/em4-at-home/

MATHEMATICS

SCIENCE AND TECHNOLOGY/ ENGINEERING



https://www.istockphoto.com/photos/school-science-project



https://www.teachhub.com/

Grade 2, Trimester 1 Big Ideas and Concepts:

- Students will investigate living vs. non-living things
- Students will explore and compare different habitats
- Students will learn about different ecosystems and how they interact

By the end of Grade 2, Trimester 1 students can:

- Ask questions and make observations.
- Identify a problem and state possible solutions.
- Explain how animals depend on their surroundings and other living things to meet their needs in the places they live.
- Explain differences between living and non-living things.

Questions you can ask your child:

- What animals would we find in our neighborhood?
- How do we know if something is living or non-living?

Topics you can discuss with your child's teacher:

- How to support my child's interest in science
- How to support science in the classroom

Grade 2, Trimester 1 Big Ideas and Concepts:

- Community Citizenship
- Concepts of diversity, equity and inclusion will be integrated and addressed throughout the year including, but not limited to: cultural differences, different types of abilities and disabilities, family make ups and traditions
- Map Skills
- Economics
  - Resources
  - Goods/services
  - Saving/spending

Questions you can ask your child:

- How can you be a good citizen?
- What are the "Core Values" of your school and why are they important?
- How do you want to feel at school and at home?

Topics you can discuss with your child's teacher:

- How to incorporate elements of RULER at home
- How to support my child's interest in helping out within our community

By the end of Grade 2, Trimester 1 students can:

- Participate as responsible members of the classroom. and school community
- Identify the "Core Values" of the school.
- Provide examples of traditions from around the world.
- Identify how goods and services provide for our families and communities.
- Read maps and globes.
- Construct a map of a familiar location.



https://www.socialstudies.com/elementary/



https://www.npr.org/2013/06/11/190669029/what-kids-are-reading-in-school-and-out

HISTORY AND SOCIAL SCIENCE

MERSD SPECIALS

Grade 3, Trimester 3

LIBRARY

In this Trimester, your child will:

- Choose a research topic and identify at least 3 sources to research their topic.
- Take research notes and paraphrase them to produce a script written in the third person.
- Record their script for a multimedia project using applications such as *Book Creator* or *iMovie* in collaboration with Technology class.
- Learn what a bibliography (vs. biography) is and its purpose.

TECHNOLOGY

In this Trimester, your child will:

- Learn about computer science.
- Learn how to create basic codes.
- Create code with offline and online activities.
- Learn and understand how to code robots to solve problems.
- Learn what an algorithm is and how to create one.

VISUAL ART

In Trimester, your child will:

- Cut intricate shapes from painted papers to make detailed collages.
- Create a 3D project from clay.
- Learn about local artist ie: Folly Cove Designers
- Review the printmaking process and create a printed art piece.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- As a group, sing and play instruments at the same time.
- Play instruments on stage.
- Compose blues lyrics.

WELLNESS / PE

In this Trimester, your child will:

- Demonstrate jumping rope and skipping by themselves and with a partner.
- Demonstrate introductory lacrosse skills.
- Demonstrate throwing, catching, and striking skills.
- Develop increased critical thinking and communication skills with relation to problem solving.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

MERSD SPECIALS

Grade 3, Trimester 2

LIBRARY

In this Trimester, your child will:

- Be introduced to, and practice using, reference sources (Almanac, Atlas, Thesaurus, etc.) to find specific types of information.
- Review research note-taking practices.
- Learn what plagiarism is and how to avoid it.
- Discuss ethical use of information and definition of copyright.
- Will learn how to share research information in their own words.

TECHNOLOGY

In this Trimester, your child will:

- Learn about Internet Safety and how to stay safe online.
- Learn about Digital Citizenship and how we can demonstrate this when we use devices.
- Create multimedia projects with different apps such as Book Creator or iMovie.
- Use their library research to create a multimedia project that can then be shared with larger audiences.
- Use knowledge from throughout the year to create and edit multimedia projects text and image features.

VISUAL ART

In Trimester, your child will:

- Understand how to use atmospheric perspective to show space and distance in seascapes and landscapes.
- Review the primary and secondary colors, learn what the tertiary and complementary colors are.
- Learn what negative and positive space are.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Play chords on instruments.
- Identify instruments of the orchestra by sight and sound.
- Read and write quarter and eighth notes and rests.

WELLNESS / PE

In this Trimester, your child will:

- Develop stick handling skills.
- Develop increased flexibility, tumbling and balance.
- Increase spatial awareness skills.
- Continue to explore and develop teamwork and communication skills associated with working together.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

MERSD SPECIALS

Grade 3, Trimester 1

LIBRARY

In this Trimester, your child will:

- Learn how to independently use *Destiny*, the library database, and *SORA*, a digital reading app, to search for books in different formats (books, e-books and audio books).
- With assistance, list the criteria for a Book Review assignment.
- Work collaboratively with a peer to choose a picture book to review and complete a Book Review graphic organizer.
- Work with a peer to summarize and paraphrase information about a book to be shared via a Book Trailer created in Technology class next trimester.

TECHNOLOGY

In this Trimester, your child will:

- Review basic device safety and care.
- Learn how to sign into our Google Classroom accounts and complete assignments.
- Learn about the different parts of the computer and how they work.
- Begin using a program called Keyboarding Without Tears to learn how to keyboard with proper finger placement.

VISUAL ART

In Trimester, your child will:

- Learn what art is, what an artist does and why art is important to people throughout history and around the world.
- Continue to explore new ways to explore artmaking and expressing themselves through drawing, painting, printing, collage and 3D construction.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Sing with clear diction and appropriate expression, matching pitch.
- Sing and dance to a variety of songs.
- Play melodies on instruments.
- Read and play quarter and eighth notes and rests.
- Identify instrument families in a recording by sound.

WELLNESS / PE

In this Trimester, your child will:

- Demonstrate soccer skills within small game situations
- Demonstrate throwing, catching and punting a football
- Demonstrate dribbling, passing and shooting of a basketball
- Demonstrate passing and catching skills used during the game of handball
- Take part in Project Adventure curriculum which includes problem solving and teamwork.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

THIRD GRADE
Trimester 3

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ What **scientific ideas** did you talk about today?
- ❏ How did you contribute to your **community** today?
- ❏ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read various texts, like books, poems, letters, news articles, and Internet pages.
- Speak and listen in formal and informal ways, like presentations and conversations.
- Communicate opinions, information, and experiences in writing for various readers.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In Trimester, your child will:

- Ask scientific questions about the natural world and things humans design.
- Learn through various experiences, like observations and experiments.
- Solve problems using the skills and tools of engineers and scientists.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use math to make arguments about why something is true or false.
- Use tools, like rulers and calculators, to show mathematical relationships.

HISTORY AND SOCIAL SCIENCE

In this Trimester, your child will:

- Learn about their local community and about the state, country, and world.
- Discover how people and events from the past relate to the present.
- Work to understand how different people see the world differently.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY





Grade 3, Trimester 3 Big Ideas and Concepts:

- Expectation #1: Independently and proficiently read and comprehend informational texts, including history/social studies, science, mathematical, and technical texts.
- Expectation #2: Use information gained from illustrations (e.g., maps, photographs) and the words, numbers, and symbols in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
- Expectation #3: Improve writing by making changes. Changes can be larger (like explaining ideas more fully) or smaller (like fixing spelling mistakes).

By the end of Grade 3, Trimester 3 students can:

- Outcome #1: Notice differences between written and spoken English.
- Outcome #2: Use glossaries or a beginner dictionary to determine the meaning of key words and phrases.
- Outcome #3: Read aloud smoothly, not just one word at a time. Notice and try to fix mistakes while reading.
- Outcome #4: Read two or more books on the same topic. Notice what is the same and different.

Questions you can ask your child:

- How can you use a dictionary to find the meaning of a word?
- What is a way you like to practice reading fluency?

Topics you can discuss with your child's teacher:

- Recommended authors and titles
- Ways your child can practice writing

Grade 3, Trimester 3 Big Ideas and Concepts:

- **Expectation #1:** Understand connections between multiplication and the areas of shapes. For example, find the area of a room using floor tiles.
- Expectation #2: Describe, analyze, and compare shapes like rectangles and squares. For example, explain that any shape with four sides can be called a quadrilateral.
- Expectation #3: Fractions & Measurement Compare Fractions and collections of Fractions
- Expectation #4: Numbers & Operations: Multiply Multi-digit Numbers

Questions you can ask your child:

- ★ Can you give me an example of when and why we use fractions?
- ★ What makes a shape a quadrilateral?
- ★ What are some ways to compare fractions?

Topics you can discuss with your child's teacher:

- ★ Games to practice at home
- ★ Which ways have you shown to model fractions?
- ★ Which multiplication and division strategies work well for my child?



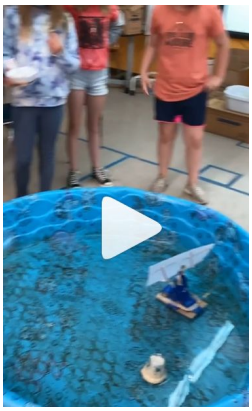
By the end of Grade 3, Trimester 3 students can:

- Outcome #1: Fluently (quickly and correctly) multiply and divide numbers up to 100.
- **Outcome #2:** Explain what the answer to a division problem means in the problem's context.
- **Outcome #3:** Solve problems using units of time (like minutes), mass (like grams), and volume (like liters).
- **Outcome #4:** Sort shapes into categories: for example, shapes with right (90°) angles.
- **Outcome #5:** Explain how to know whether two simple fractions (like ½ and 2/4) are equal.
- **Outcome #6:** Use symbols to compare simple fractions: for example, ½ > 1/3 or 2/5 < 3/5.
- **Outcome #7:** Place fractions on a number line along with whole numbers (like 2 and 5).



MATHEMATICS

SCIENCE AND TECHNOLOGY/ ENGINEERING



Grade 3, Trimester 3 Big Ideas and Concepts:

- Expectation #1: Understand how balanced and unbalanced forces affect an object.
- Expectation #2: Build models to demonstrate the transfer of energy.
- Expectation #3: Use the engineering process to construct a model and improve it.

By the end of Grade 3, Trimester 3 students can:

- Outcome #1: Explore how objects move and affect each other. Explain how they move differently over rough and smooth surfaces.
- Outcome #2: Draw or build models to show possible solutions to a problem (like how to design safe playground equipment).

Questions you can ask your child:

- ★ What is potential energy?
- ★ What is kinetic energy?
- ★ How do forces affect skyscrapers?

Topics you can discuss with your child's teacher:

- ★ The scientific method
- ★ The engineering design process
- ★ Inquiry based learning

Grade 3, Trimester 3 Big Ideas and Concepts:

- Expectation #1: Explain self-government and how it might look in a classroom (with rules, rights, and responsibilities).
- Expectation #2: Explain how Massachusetts people and events contributed to the American Revolution.
- Expectation #3: Use a current map of Massachusetts to locate and describe the city or town where the school students attend is located, its local geographic features and historic landmarks, and their significance.
- Expectation #4: Research the early history of your town or city and of Massachusetts and New England.

Questions you can ask your child:

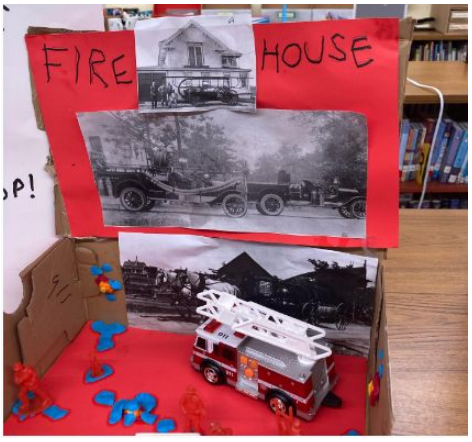
- Why are governments important?
- What rights does the Bill of Rights give people?
- What events led to the American Revolution?

Topics you can discuss with your child's teacher:

- Books about local history to look for at the library

By the end of Grade 3, Trimester 3 students can:

- Outcome #1: Explain how local (town and city) governments are organized in Massachusetts and how to participate in them.
- Outcome #2: Describe the Declaration of Independence, the Constitution (including the Bill of Rights), and the Massachusetts Constitution.
- Outcome #3: Research the demographic origins of our town or city.







HISTORY AND SOCIAL SCIENCE

THIRD GRADE
Trimester 2

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ What **scientific ideas** did you talk about today?
- ❏ How did you contribute to your **community** today?
- ❏ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read various texts, like books, poems, letters, news articles, and Internet pages.
- Speak and listen in formal and informal ways, like presentations and conversations.
- Communicate opinions, information, and experiences in writing for various readers.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In this Trimester, your child will:

- Ask scientific questions about the natural world and things humans design.
- Learn through various experiences, like observations and experiments.
- Solve problems using the skills and tools of engineers and scientists.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use math to make arguments about why something is true or false.
- Use tools, like rulers and calculators, to show mathematical relationships.

HISTORY AND SOCIAL SCIENCE

In this Trimester, your child will:

- Learn about their local community and about the state, country, and world.
- Discover how people and events from the past relate to the present.
- Work to understand how different people see the world differently.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY





Grade 3, Trimester 2 Big Ideas and Concepts:

- Expectation #1: Identify common structural elements of fiction (e.g., problem, solution); describe how each successive part of a text builds on earlier sections.
- Expectation #2: Notice differences between literal and figurative language. For example, the "step" is literal in with the next step he reached the finish line but figurative in the next step is finding a partner.
- Expectation #3: Improve writing by making changes. Changes can be larger (like explaining ideas more fully) or smaller (like fixing spelling mistakes).

By the end of Grade 3, Trimester 2 students can:

- Outcome #1: Use books as well as other sources (like videos and websites) when doing research.
- Outcome #2: Read traditional stories like myths. Understand a story's lesson or message for readers.

Questions you can ask your child:

- ★ What was the problem that was explained in one of the myths that you read?
- ★ What are some of the sources you can use when doing research?

Topics you can discuss with your child's teacher:

- ★ How to practice reading fluency in fun ways
- ★ What are some appropriate level books for my child

Grade 3, Trimester 2 Big Ideas and Concepts:

- Expectation #1: Measure lengths to the nearest half inch and represent the data as a line plot.
- Expectation #2: Fluently (quickly and correctly) multiply and divide numbers up to 100.
- Expectation #3: Solve two-step word problems using multiplication, division, addition, and subtraction.
- Expectation #4: Identify arithmetic patterns in the number grid, multiplication table, etc.
- Expectation #5:Understand fractions as a part of 1 whole.
- Relate area to the operations of multiplication and division.

Questions you can ask your child:

- What is your best strategy for solving multiplication/division facts?
- How would you solve this problem?
- How would you measure ½ cup for a recipe?

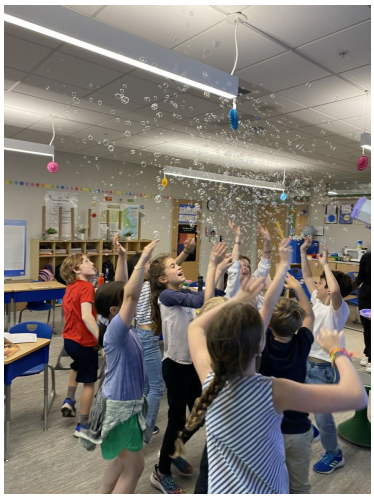
Topics you can discuss with your child's teacher:

- Games/activities to practice skills
- Practical applications for area and perimeter

By the end of Grade 3, Trimester 2 students can:

- Outcome #1: Use a ruler to measure to the nearest half inch
- Outcome #2: Know from memory all products of 1 digit numbers and 10
- Outcome #3: Use adding a group and subtracting a group strategies to multiply
- Outcome #4: Represent and identify fractions using picture, words, and fraction circles, and place fractions on a number line
- Outcome #5: Understand and use area and perimeter and find the area and perimeter of shapes like rectangles





MATHEMATICS

SCIENCE AND TECHNOLOGY / ENGINEERING





Grade 3, Trimester 2 Big Ideas and Concepts:

- Expectation #1: Learn how different organisms have different life cycles.
- Expectation #2: Understand that adaptations develop to help animals survive in their particular ecosystem.
- Expectation #3: Understand the difference between inherited traits and traits that develop due to environmental influences.
- Expectation #4: Understand that environmental changes affect animal survival.

By the end of Grade 3, Trimester 2 students can:

- Outcome #1: Understand that plants and animals can grow and reproduce in different ways.
- Outcome #2: Explain how specific characteristics help living things survive (like how thorns protect roses from being eaten by animals).
- Outcome #3: Explore the difference between inherited traits (like eye color) and traits caused by something in the environment (like when a plant is small because it gets too little sunlight).
- Outcome #4: Explain that when an environment changes, some plants and animals survive and reproduce, some move to other places, and some die.

Questions you can ask your child:

- ★ What is the life cycle?
- ★ What are adaptations?
- ★ How does the environment affect animal survival?

Topics you can discuss with your child's teacher:

- ★ The scientific method
- ★ The engineering design process
- ★ Inquiry based learning

Grade 3, Trimester 2 Big Ideas and Concepts:

- Expectation #1: Analyze the connection between events, locations, and individuals in Massachusetts in the early 1770s and the beginning of the American Revolution, using sources such as historical maps, paintings, and texts of the period.
- Expectation #2: Compare and contrast the roles and leadership decisions of early English leaders of the Puritans of the Massachusetts Bay Colony and the Pilgrims of the Plymouth colony.
- Expectation #3: On a physical map of North America, use cardinal directions, map scales, legends, and titles to locate the Northeast region and identify important physical features (e.g., rivers, lakes, ocean shoreline, capes and bays, and mountain ranges).

Questions you can ask your child:

- What was one goal of the Puritans?
- Where do you live and how does this impact how you live?

Topics you can discuss with your child's teacher:

- Places nearby that are important to the Puritans
- Places in Massachusetts you'd like to visit

By the end of Grade 3, Trimester 2 students can:

- Outcome #1: Use primary sources (like letters and journal entries) to analyze daily life in the Massachusetts Bay Colony.
- Outcome #2: Name the early leaders of the Puritans and describe the Puritans' relationships with Native Peoples.





HISTORY AND SOCIAL SCIENCE

THIRD GRADE
Trimester 1

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ What **scientific ideas** did you talk about today?
- ❏ How did you contribute to your **community** today?
- ❏ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read various texts, like books, poems, letters, news articles, and Internet pages.
- Speak and listen in formal and informal ways, like presentations and conversations
- Communicate opinions, information, and experiences in writing for various readers.
- Use knowledge of English grammar and vocabulary in both speech and writing.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In this Trimester, your child will:

- Ask scientific questions about the natural world and things humans design.
- Learn through various experiences, like observations and experiments.
- Solve problems using the skills and tools of engineers and scientists.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use math to make arguments about why something is true or false.
- Use tools, like rulers and calculators, to show mathematical relationships.

HISTORY AND SOCIAL SCIENCE

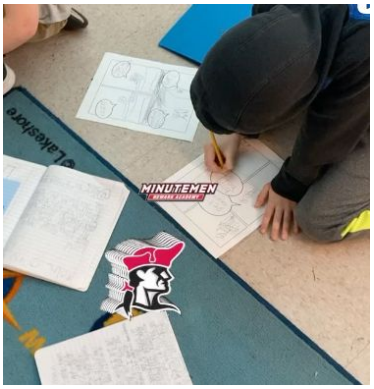
In Trimester, your child will:

- Learn about their local community and about the state, country, and world.
- Discover how people and events from the past relate to the present.
- Work to understand how different people see the world differently.
- Use various sources of information in research, discussion, and inquiry.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY





Grade 3, Trimester 1 Big Ideas and Concepts:

- Expectation #1: Identify different text features and how they help the reader.
- Expectation #2: Retell stories, including realistic fiction, determine the central message, lesson, or moral and explain how it is conveyed through key details in a text.
- Expectation #3: Organize writing in ways that help readers understand. For example, use linking words and phrases like “another reason” and “after that” to connect ideas and information.

By the end of Grade 3, Trimester 1 students can:

- Outcome #1: Stay on topic and ask and answer questions during discussions.
- Outcome #2: Sound out words with two or more syllables. Use story clues to determine what words mean.
- Outcome #3: Use pictures, headings, and other visual clues to help understand a story or article.
- Outcome #4: Describe characters in a story. Explain how their actions affect what happens.

Questions you can ask your child:

- ★ Who is the story about?
- ★ What do you think that word might mean? How can you figure it out?

Topics you can discuss with your child’s teacher:

- ★ Books and authors to look for at the library
- ★ Types of writing your child is working on

Grade 3, Trimester 1 Big Ideas and Concepts:

- Expectation #1: Solve two-step word problems using addition and subtraction.
- Expectation #2: Develop strategies for solving multiplication and related division facts.
- Expectation #3: Tell time on an analog clock and solve problems involving elapsed time.
- Expectation #4: Use place value understanding and properties of operations to perform multi-digit arithmetic.

Questions you can ask your child:

- How do you use your number grid to add or subtract?
- It takes 30 minutes to get to practice, what time will we need to leave to arrive by 5:30?

Topics you can discuss with your child's teacher:

- How can I help my child master addition and subtraction facts?
- Strategies for telling time and elapsed time
- Methods you use for rounding



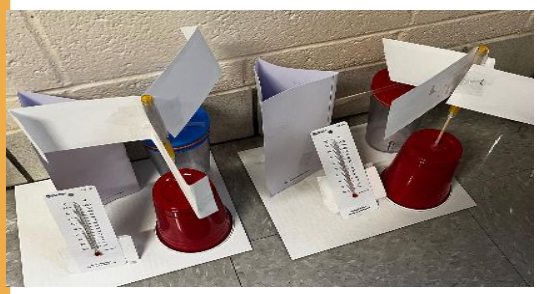
By the end of Grade 3, Trimester 1 students can:

- Outcome # 1: Multiply using strategies for all one-digit numbers times 1, 2, 5 and 10.
- Outcome # 2: Solve two-step word problems with addition, and subtraction using equal groups and arrays.
- Outcome # 3: Add/Subtract within 1,000 using strategies based on place value.
- Outcome # 4: Round numbers to the nearest 10 and nearest 100.
- Outcome # 5: Tell time to the nearest 5 minutes and use a number line to determine elapsed time.
- Outcome # 6: Represent and interpret data on a scaled bar graph.



MATHEMATICS

SCIENCE AND TECHNOLOGY/ ENGINEERING





Grade 3, Trimester 1 Big Ideas and Concepts:

- Expectation #1: The role of a scientist.
- Expectation #2: The role of an engineer.
- Expectation #3: Introduction and application of the scientific method.
- Expectation #4: Introduction and application of the engineering design process.
- Expectation #5: Create and interpret scientific models, including a model of an aluminum atom and the solar system.

By the end of Grade 3, Trimester 1 students can:

- Outcome #1: Use graphs and charts to talk about weather patterns around the world.
- Outcome #2: Use the engineering design process to solve a problem like flooding.
- Outcome #3: Use the scientific method to investigate a question.

Questions you can ask your child:

- What is an atom?
- Why is gravity important?
- What is a scientist?
- What is an engineer?

Topics you can discuss with your child's teacher:

- The scientific method
- The engineering design process
- Inquiry based learning

Grade 3, Trimester 1 Big Ideas and Concepts:

- Expectation #1: Understand relationships among Native Peoples, Europeans, and Africans in early Massachusetts.
- Expectation #2: Explain how Native Peoples first came into contact with Europeans, and explain why Europeans in the 16th–17th centuries sailed westward across the Atlantic.
- Expectation #3: Explain the diversity of Native Peoples, present and past, in Massachusetts and the New England region.

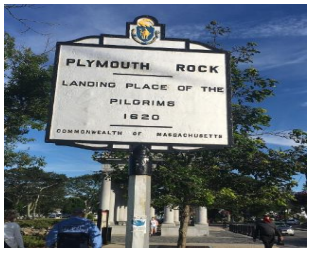
Questions you can ask your child:

- What are the states that make up New England?
- What are some of the Indigenous Tribes in Massachusetts?

Topics you can discuss with your child's teacher:

- Places nearby that are important to the history of Indigenous Peoples
- Books about Native Peoples, Pilgrims, and Explorers





By the end of Grade 3, Trimester 1 students can:

- Objective #1: Find the Northeast United States on a map. Find and name the New England states.
- Objective #2: Describe the various Native Peoples who live or lived in Massachusetts and New England. Explain how the Native Peoples in this area first met Europeans in the 1500s and 1600s.
- Objective #3: Describe what the Europeans thought about the Native Peoples and the environment.
- Objective #4: Explain why the Pilgrims settled in the Plymouth Colony. Describe the Mayflower Compact, the challenges Pilgrims faced, and their relationships with Native Peoples.

MERSD SPECIALS

Grade 4, Trimester 3

LIBRARY

In this Trimester, your child will:

- Choose a research topic and identify authoritative sources for their research.
- Independently conduct research and take notes using at least 3 sources.
- Create a bibliography with assistance, using *EasyBib*, an online citation tool.
- Create a multimedia project based on their research in collaboration with technology class.
- Conduct self-evaluation of their final research product.

TECHNOLOGY

In this Trimester, your child will:

- Create multimedia projects with different Google apps.
- Use their library research to create a multimedia project that can then be shared with larger audiences.
- Learn about computer science.
- Learn and understand how to code robots to solve problems.
- Learn what an algorithm is and how to create one.

VISUAL ART

In this Trimester, your child will:

- Make a clay coil pot.
- Use cut photos and magazine clippings to create a detailed visual self portrait collage.
- Learn about famous folk artists in North America.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Identify pop/rock instruments by sight and sound.
- Play chords on instruments while singing.
- Compose chord progressions.
- Play polyrhythms on percussion instruments.

WELLNESS / PE

In this Trimester, your child will:

- Demonstrate developing lacrosse skills.
- Demonstrate throwing, catching, and striking skills.
- Develop increased critical thinking and communication skills with relation to problem solving.
- Demonstrate a forehand hit in bounds with a tennis/pickleball racquet.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

MERSD SPECIALS

Grade 4, Trimester 2

LIBRARY

In this Trimester, your child will:

- Discuss how to develop a topic for a research project.
- Learn the difference between search engines and websites.
- Practice how to conduct efficient online searches for information.
- Learn how to identify authoritative sources with a focus on publisher, author, and content and, practice evaluating online sources.
- Discuss the importance of citing sources and learn how to use *EasyBib*, an online citation tool, to cite sources.

TECHNOLOGY

In this Trimester, your child will:

- Learn about Internet Safety and how to stay safe online.
- Learn about Digital Citizenship and how we can demonstrate this when we use devices.
- Create multimedia projects to demonstrate how we can be safe online and a good digital citizen.
- Continue to develop our keyboarding skills.

VISUAL ART

In this Trimester, your child will:

- Create a still life from observation.
- Expand on printmaking skills and create a fish print.
- Draw realistically 3D forms using colored pencils.
- Use 1-point perspective in a landscape drawing with oil pastels.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Identify pop/rock instruments by sight and sound.
- Improvise melodies on instruments.
- Perform two-part rounds on stage with appropriate expression.

WELLNESS / PE

In this Trimester, your child will:

- Demonstrate dribbling, shooting, and passing skills.
- Demonstrate volleyball skills i/e setting, bumping, and serving.
- Develop increased flexibility, tumbling and balance.
- Increase spatial awareness skills.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

MERSD SPECIALS

Grade 4, Trimester 1

LIBRARY

In this Trimester, your child will:

- Demonstrate awareness of literature from various cultures and genres, and begin to understand the concept of books as "mirrors or windows" via a Worldly Reading Challenge.
- Learn how to self-check out library books using *Destiny*, the school library database.
- Practice how to conduct an online search for information and begin to learn how to evaluate online sources.

TECHNOLOGY

In this Trimester, your child will:

- Review basic device safety and expectations of device care.
- Practice logging in and getting connected to Google Classroom.
- Review keyboarding finger placement and begin using Learning.com Keyboarding program.
- Focus on accuracy over speed when practicing keyboarding skills.

VISUAL ART

In this Trimester, your child will:

- Students will learn what art is, what an artist does and why art is important to people throughout history and around the world.
- Students will continue to explore new ways to explore artmaking and expressing themselves through drawing, painting, printing, collage and 3D construction.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Connect songs they sing to history and culture.
- Read and play whole, half, quarter and eighth notes and rests.
- Demonstrate context-appropriate audience etiquette.
- Recognize the ways musicians communicate nonverbally.

WELLNESS / PE

In this Trimester, your child will:

- Students will demonstrate soccer skills within small game situations
- Students will demonstrate throwing, catching and punting a football
- Student will demonstrate dribbling, passing and shooting of a basketball
- Students will demonstrate passing and catching skills used during the game of handball
- Students will also take part in Project Adventure curriculum which includes problem solving and teamwork.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

FOURTH GRADE
Trimester 3

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ What **scientific ideas** did you talk about today?
- ❏ How did you contribute to your **community** today?
- ❏ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Plan, draft, and revise free verse poetry
- Plan, draft, and revise an expository essay
- Continue to build fluency skills by strengthening intonation and phrasing

SCIENCE AND TECHNOLOGY/ ENGINEERING

In Trimester, your child will:

- Learn that energy can be transferred in waves, like light, sound, and water
- Explore methods of communication, like Morse Code
- Understand scientific concepts like sound waves through hands on experiments

MATHEMATICS

In this Trimester, your child will:

- Use the four operations to work through multi-step word problems
- Explore the properties of angles and learn how to use protractors to measure them
- Analyze numerical patterns

HISTORY AND SOCIAL SCIENCE

In this Trimester, your child will:

- Learn about the regions of the United States and how their resources, land, people, and important landmarks have helped shape the United States.
- Explore what life is like in the regions of the United States with hands on activities

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY

Grade 4, Trimester 3 Big Ideas and Concepts:

- Students learn to think critically as they explore the expository, narrative nonfiction, and historical fiction genres and apply new knowledge and skills encompassing the four domains of language
- Students will read fluently, with expression, proper intonation, and phrasing
- Students will write an expository essay
- Students will write responses that reflect understanding using evidence from the text
- Students will identify and use adjectives and figurative language correctly
- Students will plan and draft a free verse poem

By the end of Grade 4, Trimester 3 students can:

- cite relevant evidence from text, and make inferences to support understanding.
- evaluate author's use of sequence text structure.
- identify and analyze author's use of imagery.
- identify the story's problem and solution.
- recognize foreshadowing.
- use text evidence to infer a story's theme.
- analyze an author's use of text features.
- evaluate an author's use of literary elements, such as dialogue.
- analyze and explain the theme in a poem.
- identify examples of imagery and personification.
- determine literary elements of free verse.

Questions you can ask your child:

- What is your favorite genre and why?
- Do your like to write stories or poems better and why?
- How does figurative language make your writing more interesting?

Topics you can discuss with your child's teacher:

- How can I encourage my child to read at home?
- What are some authentic types of writing we can do at home?
- What are some nonfiction titles my child might enjoy reading?

Grade 4, Trimester 3 Big Ideas and Concepts:

- Use the four operations with whole numbers to solve multi-step problems
- Generalize and analyze patterns
- Understand concepts of angles and measures angles
- Recognize that angle measures are additive
- Understand decimal notation for fractions and compare decimal fractions
- Represent and interpret data
- Classify shapes by properties of their lines and angles

Questions you can ask your child:

- Where can we find angles in the real world?
- What is your preferred method for solving multiplication problems and why?
- When would you record a remainder as a fraction?

Topics you can discuss with your child's teacher:

- How can I encourage perseverance in solving multi-step problems?
- How can I help my child multiply and divide efficiently?

By the end of Grade 4, Trimester 3 students can:

- multiply up to 4-digit by 1-digit and 2-digit by 2-digit numbers.
- find extended division facts with 1-digit divisors.
- solve area problems with unknown sides.
- add and subtract fractions and mixed numbers.
- Identify and measure acute, obtuse, and right angles.
- add and subtract to find unknown angle measures.
- continue to describe number patterns.
- divide up to 3-digit by 1-digit numbers.
- find multiples of unit fractions.
- multiply a fraction by a whole number.
- organize and represent fractional data on a line plot.
- add two fractions with denominators 10 or 100.
- use decimal notation for fractions with denominators of 10 or 100.
- use the four operations to solve number stories involving whole numbers of measured quantities.

SCIENCE AND TECHNOLOGY/ ENGINEERING

Grade 4, Trimester 3 Big Ideas and Concepts:

- Understand that energy can be transferred from place to place by waves, which can make objects move.
- Understand the relationship between a particular sound and its properties, including its amplitude and frequency.
- Understand how patterns (light, sound, numbers, etc.) can be used to communicate information over a distance.
- Identify which communication solutions, like Morse Code, are more effective than others.

By the end of Grade 4, Trimester 3 students can:

- show how wave patterns carry energy and can cause objects to move.
- developed and used models of transverse and longitudinal waves.
- explore what changes a sound wave's amplitude, volume, and pitch.
- explore how different technologies use patterns to transfer information from one place to another.
- design and test multiple solutions that use light and sound to transfer information over a distance.

Questions you can ask your child:

- What is the difference between pitch and volume?
- How do stringed instruments make sounds?

Topics you can discuss with your child's teacher:

- Ways of applying what your child learns in science to everyday life
- Places in the community that can help your child learn science

Grade 4, Trimester 3 Big Ideas and Concepts:

- Understand the history of the Midwest region of the United States and how its physical features and political events influenced this history and the diverse cultural nature of the region (Native people, Africans, Europeans and other immigrant groups).
- Understand the history of the Southwest region of the United States and how its physical features and political events influenced this history and the diverse cultural nature of the region (Native people, Mexico, Africans, Europeans and other immigrant groups).
- Understand the history of the West region of the United States and how its physical features and political events influenced this history and the diverse cultural nature of the region (Native people, Mexico, Africans, Europeans and other immigrant groups).

Questions you can ask your child:

- What state in these regions would you most want to visit and why?
- How are natural disasters impacting these regions?

Topics you can discuss with your child's teacher:

- Sources to find accurate and up to date information about the topics we are studying
- Where in the community to learn more about North America

By the end of Grade 4, Trimester 3 students can:

- Be able to locate Midwestern states and name their capitals
- Identify the important physical features of the Midwest (mountains, rivers, ports)
- Be able to locate the Southwestern states and name their capitals
- Identify the important physical features of the Southwest (mountains, rivers, ports)
- Be able to locate the Western states and name their capitals
- Identify the important physical features of the West (mountains, rivers, ports)
- Explain how natural disasters impact these regions

FOURTH GRADE
Trimester 2

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ What **scientific ideas** did you talk about today?
- ❏ How did you contribute to your **community** today?
- ❏ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read argumentative texts and think critically about facts and opinions.
- Plan, draft, and revise an essay.
- Continue to refine their "writing about reading" skills by including textual evidence to support their points.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In this Trimester, your child will:

- Continue to understand how earth's four systems are constantly interacting (emphasis on the water cycle.)
- Explore physics concepts like simple machines, forces, energy, and motion.
- Learn how to solve a real-world problem using the process of engineering.

MATHEMATICS

In this Trimester, your child will:

- Learn a variety of strategies for multiplying two-digit numbers.
- Understand the process of ordering fractions based on benchmarks.
- Solve real-world problems involving fractions (adding and subtracting.)

HISTORY AND SOCIAL SCIENCE

In this Trimester, your child will:

- Learn about the regions of the United States and how their resources, land, people, and important landmarks have helped shape the United States.
- Explore what life is like in the regions of the United States with hands-on activities.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY



Grade 4, Trimester 2 Big Ideas and Concepts:

- Students learn to think critically as they explore the realistic fiction, argumentative text, and narrative nonfiction genres and apply new knowledge and skills encompassing the four domains of language
- Students will read fluently with expression
- Students will identify action verbs and analyze the use of verb tenses
- Students will write a realistic fiction narrative to develop experiences or events using effective literary techniques, descriptive details, and clear sequences
- Students will write responses to texts that demonstrate understanding
- Students will plan and draft an essay

By the end of Grade 4, Trimester 2 students can:

- cite relevant evidence from text, and make inferences to support understanding.
- identify point of view.
- analyze the author's use of facts and opinions.
- explain the author's use of flashback.
- identify the sequence of events using timelines.
- explain the use of anecdote.
- use antonyms and synonyms to determine meaning.
- analyze the procedural text structure.
- identify and use text structures.
- describe how the compare and contrast text structure contributes to author's purpose.
- analyze how setting and dialogue develop plot.
- identify and analyze elements of narrative poetry.

Questions you can ask your child:

- ★ Do you prefer to read fiction or nonfiction and why?
- ★ What are you writing about in school this week?
- ★ What is the difference between a fact and an opinion?

Topics you can discuss with your child's teacher:

- ★ How can I encourage my child to read at home?
- ★ What are some authentic types of writing we can do at home?
- ★ Who are some poets my child might enjoy reading?

Grade 4, Trimester 2 Big Ideas and Concepts:

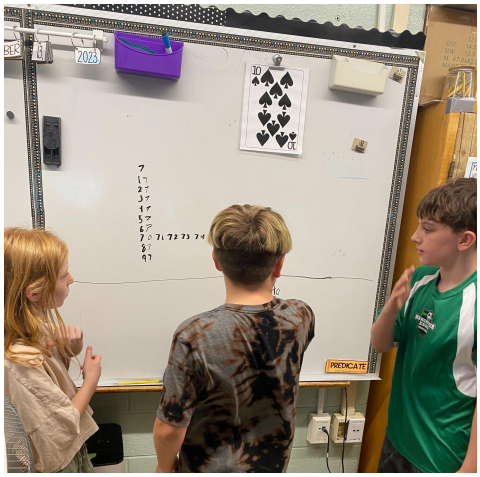
- Understand fraction equivalence and ordering
- Understand the relationship between fractions and decimals
- Understand how to solve problems with whole numbers using the four operations
- Gain familiarity with factors and multiples
- Solve problems involving measurements and conversions of measurements
- Build fractions from unit fractions by applying and extending previous understanding on operations of whole numbers
- Understand properties related to lines, angles and 2-dimensional shapes

Questions you can ask your child:

- What are the different ways you can decompose $^{6}/_{10}$?
- What is your most efficient strategy for multiplication?
- How do we use fractions and decimals at home?

Topics you can discuss with your child's teacher:

- How can I support my child's understanding of fractions and decimals?
- How can I help my child attend to precision when solving problems?

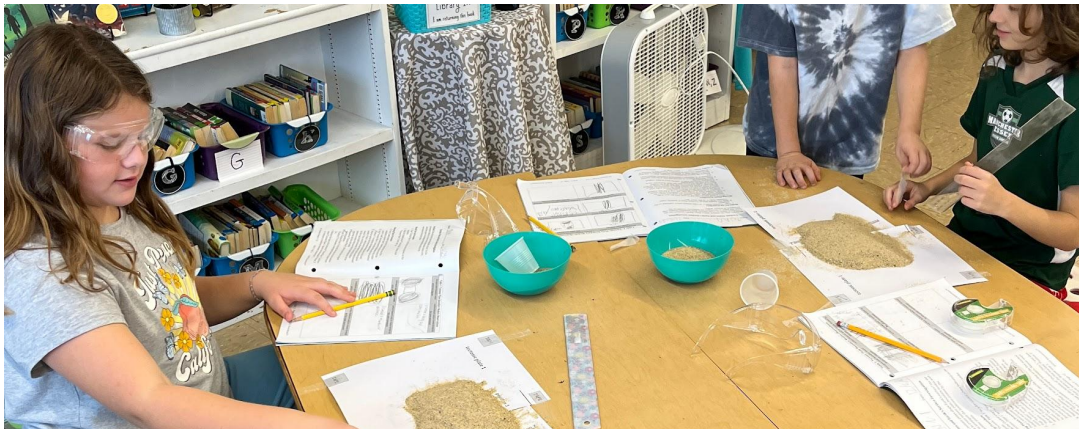


By the end of Grade 4, Trimester 2 students can:

- recognize two equivalent fractions through 12^{ths} using a model.
- recognize that fraction comparisons require same-size wholes.
- compare fractions and decimals using a model.
- represent decimals to hundredths using base-10 numerals.
- translate between decimal notation and fraction with denominators of 10 and 100.
- compare decimals using a model.
- convert between meters, centimeters, and millimeters.
- accurately multiply 2-digit by one-digit whole numbers.
- use a formula to find the perimeter and area of rectangles.
- solve number stories involving units of length, time, and money.
- add and subtract fractions and mixed numbers using a visual tool.
- decompose fraction and represent with an equation.
- solve number stories involving fractions.
- organize and represent data to the ½ and ¼ units on a line plot.
- identify benchmark rotations such as quarter, three-quarter, half, and full turn.
- recognize that angles are measured in iterations of one-degree angles.

MATHEMATICS

SCIENCE AND TECHNOLOGY/ ENGINEERING



Grade 4, Trimester 2 Big Ideas and Concepts:

- Understand how water moves around Earth, interacting with all of Earth's systems and influencing weather.
- Understand the impacts of urban flooding and water pollution.
- Understand how dams provides energy but also impacts the environment.
- Understand that levers are simple machines because they redirect force to make work easier.
- Understand the differences between the scientific method and the engineering design process and how they work together.
- Understand how potential energy becomes kinetic energy.
- Understand the relationship between the structure of matter and electricity.
- Understand how energy is converted from electrical energy into another form of energy in a circuit.

By the end of Grade 4, Trimester 2 students can:

- analyze how water moves around Earth, interacting with all of Earth's systems and influencing weather.
- describe how the use of dams provides energy but also impacts the environment.
- design, test, and evaluate a prototype that reduces the impact of flooding.
- use simple machines to explore the relationship between forces, energy and motion.
- investigate how levers redirect force to make work easier, and test how the positions of the fulcrum, effort force, and load force affect how forces are redirected.
- design and test a prototype catapult to see how well it can change potential energy into kinetic energy.

Questions you can ask your child:

- ★ Where can you find examples of levers in our home?
- ★ Where do transfers of energy happen in your home or community?
- ★ How does a circuit work?

Topics you can discuss with your child's teacher:

- ★ Studying for unit tests
- ★ Inquiry based learning
- ★ How our science curriculum teaches next generation science skills

Grade 4, Trimester 2 Big Ideas and Concepts:

- Understand the history of the Northeast region of the United States and how its physical features and political events influenced this history and the diverse cultural nature of the region (Native people, Africans, Europeans and other immigrant groups).
- Understand the history of the Southeast region of the United States and how its physical features and political events influenced this history and the diverse cultural nature of the region (Native people, Africans, Europeans and other immigrant groups).

Questions you can ask your child:

- What is our nation's capital and what are some important landmarks there?
- What state along the east coast would you most like to visit and why?

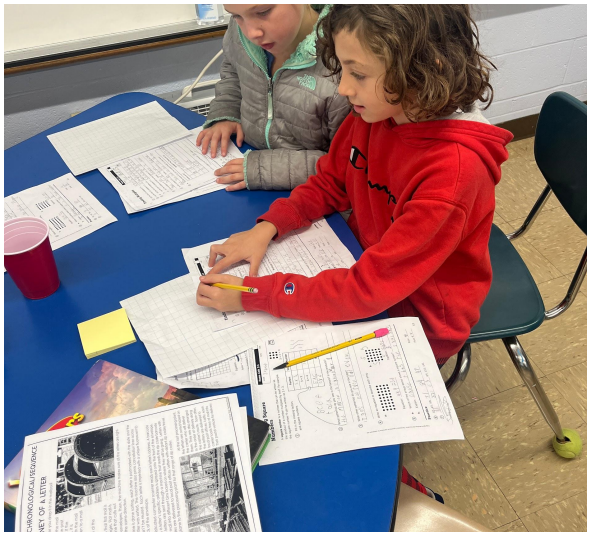
Topics you can discuss with your child's teacher:

- Sources to find accurate and up to date information about the topics we are studying
- Where in the community to learn more about North America

By the end of Grade 4, Trimester 2 students can:

- be able to locate the Northeast states and name their capitals.
- identify the important physical features of the Northeast (mountains, rivers, ports.)
- be able to locate the Southeast states and name their capitals
- identify the important physical features of the Southeast (mountains, rivers, ports.)
- explain how natural disasters impact the northeast and southeast.





HISTORY AND SOCIAL SCIENCE

FOURTH GRADE
Trimester 1

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ What **scientific ideas** did you talk about today?
- ❏ How did you contribute to your **community** today?
- ❏ How did someone help you learn today?

ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read a variety of genres like stories of realistic fiction, and nonfiction articles and texts.
- Strengthen their reading fluency skills by reading aloud and listening to others read.
- Write personal narratives about important moments in their lives.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In this Trimester, your child will:

- Ask scientific questions about the natural world as well as things that humans design.
- Learn through various hands-on experiments.
- Solve problems using the skills and tools of engineers and scientists.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Learn strategies to solve large addition and subtraction problems.
- Be exposed to various methods for rounding large numbers, and learn how rounding can be applied to real-world problems

HISTORY AND SOCIAL SCIENCE

In this Trimester, your child will:

- Learn about their local community and about the state, country, and world.
- Understand the timeline of the first explorers of North America and recognize the impact their settlement had on the land and people.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY



Grade 4, Trimester 1 Big Ideas and Concepts:

- Think critically as they explore the expository and realistic fiction genres and apply new knowledge and skills encompassing the four domains of language
- Read fluently, focusing on rate, accuracy, intonation and expression
- Demonstrate an understanding of sentence structure and the proper usage of nouns
- Write narratives to develop experiences or events using effective literary techniques, well-chosen details, and well-structured sequence
- Write a response to texts using reflective thinking and textual evidence
- Plan and draft a lyric poem

By the end of Grade 4, Trimester 1 students can:

- cite relevant evidence from text, and make inferences to support understanding.
- identify author's use of compare-and-contrast text structure.
- explain the author's purpose and message within a text.
- analyze the author's use of text features.
- identify the problem and solution in plot.
- distinguish between fact and opinion.
- identify how dialogue is used in a story.
- identify main ideas and details.
- summarize, maintaining meaning and logical order.
- analyze how the author shows the changes a character undergoes.
- identify structure of a drama, including acts, scenes, setting, stage directions, and characters.
- analyze point of view.
- describe the purpose of imagery and assonance.

Questions you can ask your child:

- ★ What kinds of things do you like to read and why?
- ★ What are you writing in school this week?
- ★ What new words or phrases did you use in school today?

Topics you can discuss with your child's teacher:

- ★ How can I encourage my child to read at home?
- ★ What are some authentic types of writing we can do at home?
- ★ What is a book series my child might enjoy reading?

Grade 4, Trimester 1 Big Ideas and Concepts:

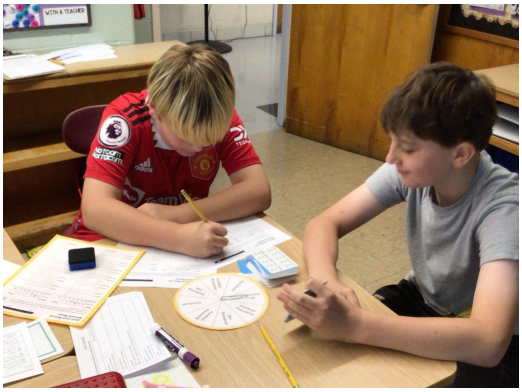
- Understand how to solve problems with whole numbers using the four operations
- Generalize place value understanding
- Understand conversion of measurement from a larger unit to a smaller unit
- Gain familiarity with factors and multiples
- Understand the attributes of lines, line segments, rays and right angles
- Understand the use of formulas to calculate area and perimeter
- Understand the difference between prime and composite numbers

Questions you can ask your child:

- What do you see in nature that is symmetrical?
- Would you measure the length of a driveway in inches or feet?
- What is your preferred method for solving addition problem and why?

Topics you can discuss with your child's teacher:

- How can I help my child to become fluent in math facts?
- How can I encourage perseverance in solving problems?

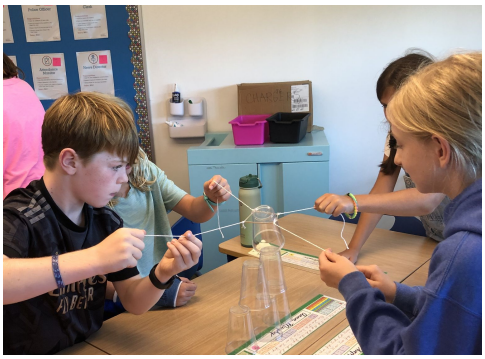


By the end of Grade 4, Trimester 1 students can:

- round number through the 100,000.
- read, write and identify numbers though the 100,000.
- apply the U.S. traditional algorithm for addition and subtraction up to four digit numbers.
- recognize the relationship between place values in a base ten number system.
- convert feet, yards and inches.
- Find the perimeter and area of rectangles.
- Draw and label points, lines, line segments, and rays.
- identify right angles.
- solve multi-step addition and subtraction number stories using an estimate to assess reasonableness of answers
- recognize a number story as additive or multiplicative and explain how they know.
- Identify more than one factor pair for composite numbers less than 40.
- write multiples of a 1-digit number
- identify prime and composite numbers less than 40
- Use fact extensions to multiply by a multiple of 10.
- identify properties of line segments and angles within quadrilaterals and identify right angles within triangles
- identify at least one line symmetry in 2-dimensional symmetric figures.

MATHEMATICS

SCIENCE AND TECHNOLOGY / ENGINEERING





Grade 4, Trimester 1 Big Ideas and Concepts:

- Understand that all matter is made up of atoms and that atoms determine a substance's properties
- Understand the processes that cause Earth's surface to change over time
- Understand how rocks and fossils can be used to identify the processes that have changed Earth's landmass
- Understand the process of weathering and erosion

By the end of Grade 4, Trimester 1 students can:

- follow the scientific method to plan and carry out experiments.
- determine the properties of a solid and find its mass.
- investigate the relationship between an object's speed and its energy.
- predict how energy will change in a collision between a moving marble and a cup at rest.
- model the different ways that tectonic plates move to observe how landforms are created.
- test how the forces of moving water erodes sediment.
- analyze clues in rock to determine how Earth's surface has changed over time.
- analyze and interpret maps of Earth's mountain ranges, volcanoes, and earthquakes to describe patterns.
- explain how non-renewable energy sources are different from renewable resources.

Questions you can ask your child:

- What are the processes that cause earth's surface to change?
- How do mass and speed impact the force of a collision?
- Where in your community are there examples of weathering and erosion?

Topics you can discuss with your child's teacher:

- Ways of applying what your child learns in science to everyday life
- Places in the community that can help your child learn science

Grade 4, Trimester 1 Big Ideas and Concepts:

- Understand how various map features (scales, keys, cardinal directions) help to locate physical features and political regions (countries, states, cities) of North America.
- Understand how archeologists developed theories about ancient migration to North America.
- Students will learn the reasons for early European exploration and conquest of North America.

Questions you can ask your child:

- Ask them to find different places of importance to your family on a map.
- Who do you think migrated to North America first?
- Who were some of the Europeans that first voyaged to North America?

Topics you can discuss with your child's teacher:

- Sources to find accurate and up to date information about the topics we are studying
- Where in the community to learn more about North America

By the end of Grade 4, Trimester 1 students can:

- use map features to locate and identify important physical features in North America.
- on a political map of North America, locate Canada and its provinces, Mexico and its states, the nations of the Caribbean, and the United States of America and its states.
- provide information about the various theories of how ancient people first migrated to North America.
- explain how archeologists conduct research.
- show on a map various European explorations of North America and the Caribbean during the 15th and 16th centuries.





HISTORY AND SOCIAL SCIENCE

MERSD SPECIALS

Grade 5, Trimester 3

LIBRARY

In this Trimester, your child will:

- Independently conduct research and take notes about an activist using authoritative books and online sources.
- Independently create a bibliography using *EasyBib*, an online citation tool.
- Write a script based on their research to be the basis of a self-produced multimedia project using applications such as *BrainPop* in collaboration with Technology class.
- Conduct peer review and evaluation of final video products.

TECHNOLOGY

In this Trimester, your child will:

- Create multimedia/video presentations using Library research.
- Expand on the Library's Worldly Book Challenge by creating movies about Civil Rights Activists.
- Use our knowledge from previous years to develop multimedia projects that incorporate a variety of text, image and video edits and features.

VISUAL ART

In this Trimester, your child will:

- Design a 2D cubist art piece.
- Learn and understand how to draw using cross-hatching basics to show value.
- Create a 2-point perspective dream bedroom.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Analyze the form and harmony of music by listening.
- Make educated guesses about where and when music comes from based on auditory evidence.
- Compose a short piece using digital music software.
- Sing as a group with accurate pitch, rhythm, diction, volume, and expression.

WELLNESS / PE

In this Trimester, your child will:

- Demonstrate developing lacrosse skills.
- Demonstrate throwing, catching, and striking skills.
- Demonstrate an understanding of basic skills associated with track and field.
- Develop increased critical thinking and communication skills with relation to problem solving.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

MERSD SPECIALS

Grade 5, Trimester 2

LIBRARY

In this Trimester, your child will:

- Review prior learning of library research skills.
- Answer the questions: *What are Civil Rights? What is an activist?*
- Be introduced to their capstone research project and all of its components.
- Conduct pre-research on civil rights activists to determine a topic.
- Begin identifying authoritative sources for their research project.

TECHNOLOGY

In this Trimester, your child will:

- Expand on our Computer Science knowledge.
- Learn how to use Scratch to create animations using code.
- Review how to be safe online and a good digital citizen.
- Create multimedia/video presentations on digital citizenship that can be shared with a younger audience using apps such as Green Screen.

VISUAL ART

In Trimester, your child will:

- Design a personal mandala that illustrates things about them.
- Create an abstract drawing using their name and oil pastels, markers, crayon and colored pencils.
- Learn and understand how to draw depth using cross-hatching basics.
- Make a cylinder vase out of clay.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Sing three-part rounds.
- Identify orchestral, pop, and world instruments by sight and sound.
- Place music into genres by listening, supporting choices with auditory evidence.
- Give examples of how the historical and geographical context of music can affect its sound.

WELLNESS / PE

In this Trimester, your child will:

- Demonstrate dribbling, shooting, and passing skills.
- Demonstrate volleyball skills i/e setting, bumping, and serving.
- Develop increased flexibility, tumbling and balance.
- Increase spatial awareness skills specific to spotting, supporting and climbing within the P.A. curriculum.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

MERSD SPECIALS

Grade 5, Trimester 1

LIBRARY

In this Trimester, your child will:

- Continue to explore multicultural literature from various cultures and genres, to expand understanding of literature as "mirrors or windows" via a Worldly Reading Challenge.
- Practice modifying online searches for better results.
- Recognize gaps and inaccuracies in information using critical thinking skills.
- Practice summarizing and paraphrasing information.

TECHNOLOGY

In this Trimester, your child will:

- Review basic device safety and expectations of device care.
- Practice logging in and getting connected to Google Classroom.
- Review keyboarding finger placement and begin using Learning.com Keyboarding program.

VISUAL ART

In this Trimester, your child will:

- Students will learn what art is, what an artist does and why art is important to people throughout history and around the world.
- Students will continue to explore new ways to explore artmaking and expressing themselves through drawing, painting, printing, collage and 3D construction.

MUSIC & PERFORMING ARTS

In this Trimester, your child will:

- Sing rounds.
- Explain the purpose of music in society.
- Play instruments as a group, reading standard notation.
- Read and play whole, half, quarter, eighth, and sixteenth notes and rests.
- Respond to the cues of a conductor.

WELLNESS / PE

In this Trimester, your child will:

- Students will demonstrate soccer skills within small game situations
- Students will demonstrate throwing, catching and punting a football
- Student will demonstrate dribbling, passing and shooting of a basketball
- Students will demonstrate passing and catching skills used during the game of handball
- Students will also take part in Project Adventure curriculum which includes problem solving and teamwork.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

FIFTH GRADE
Trimester 3

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❑ Can you tell me about something you **read** today?
- ❑ How could you use the **math** you learned today?
- ❑ What **scientific ideas** did you talk about today?
- ❑ How did you contribute to your **community** today?
- ❑ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read various texts, like books, poems, letters, news articles, and Internet pages.
- Speak and listen in formal and informal ways, like presentations and conversations.
- Communicate opinions, information, and experiences in writing for various readers.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In Trimester, your child will:

- Ask scientific questions about the natural world and things humans design.
- Learn through various experiences, like observations and experiments.
- Solve problems using the skills and tools of engineers and scientists.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use math to make arguments about why something is true or false.
- Use tools, like rulers and calculators, to show mathematical relationships.

HISTORY AND SOCIAL SCIENCE

In this Trimester, your child will:

- Learn about their local community and about the state, country, and world.
- Discover how people and events from the past relate to the present.
- Work to understand how different people see the world differently.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY

Grade 5, Trimester 3 Big Ideas and Concepts:

- Compare and contrast stories in different literary forms on their approaches to similar themes and topics
- Explain how a series of stanzas fit together to provide the overall structure of a particular poem
- Analyze multiple accounts of the same event or topic noting important similarities and differences
- Use multiple sources and identify relevant information to support expository response
- Write routinely over extended time frames and shorter time frames for a range of purposes and tasks

By the end of Grade 5, Trimester 3 students can:

- Draw inferences from a text.
- Come to discussions prepared and draw on that preparation to explore ideas under discussion.
- Write an expository essay that students have researched.
- Analyze the meaning of a poem and speakers point of view.
- Demonstrate command of standard english conventions.
- Write a conclusion to their narrative that connects to the story and provides closure.
- Use sensory details

Questions you can ask your child:

- What type of writing do you like best?
- What is a limerick?
- What is your favorite type of poem to read?

Topics you can discuss with your child's teacher:

- Summer reading recommendations
- My child's participation in class discussions
- Transition to middle school

Grade 5, Trimester 3 Big Ideas and Concepts:

- Learn how the powers of 10 affect multiplication and division
- Develop strategies for multiplying & dividing decimals to the hundredth place
- Understand properties of different polygons
- Explore different ways to present data
- Solve measurement conversion problems
- Discover methods to calculate the area of triangles

Questions you can ask your child:

- What is 3.4 times 10 to the power of 4?
- What are some properties of a rectangle?
- How many centimeters equals 3 meters?

Topics you can discuss with your child's teacher:

- Math games
- Projects you can do at home to practice metric measurement conversions

By the end of Grade 5, Trimester 3, students can:

- Multiply and divide decimals by powers of 10.
- Create a line plot with data.
- Use a hierarchy chart to classify polygons by characteristics.
- Explore line plots and coordinate grids.
- Convert U. S. customary and metric measurements.
- Use the Rectangle Method to find the area of a triangle.

MATHEMATICS

SCIENCE AND TECHNOLOGY / ENGINEERING

Grade 5, Trimester 3 Big Ideas and Concepts:

- Understand how energy can be transferred from one place to another in a circuit to do work.
- Understand the interactions between electricity and magnetism.
- Understand how sound energy is transferred from one place to another in waves of vibrating molecules and how sound energy is absorbed be different materials.

By the end of Grade 5, Trimester 3 students can:

- Students will be able to create a functioning circuit.
- Create a model of a motor using an electromagnet.
- Design a sound absorbing wall using materials with properties that modify or change sound waves.

Questions you can ask your child:

- What are the differences between a simple, series, and parallel circuit?
- How electromagnets different from permanent magnets?
- How does the sound from your voice from a Kazoo vibrate?

Topics you can discuss with your child's teacher:

- How can you help reinforce classroom instruction at home
- Places in the community that can help your child learn science.

Grade 5, Trimester 3 Big Ideas and Concepts:

- Understand how the Constitution attempted to balance competing interests, the question of power, and the ideas of slavery.
- Explore the responsibilities of the government in the Constitution and the freedoms granted to citizens in the Bill of Rights.

Questions you can ask your child:

- Why have different people had different rights in this country's history?
- What are the responsibilities of the three Branches of Government?

Topics you can discuss with your child's teacher:

- People and places in Massachusetts related to the Constitution
- Books about the Government and Constitution.

By the end of Grade 5, Trimester 3 students can:

- Read the Preamble and understand the purpose of the Constitution.
- Explain how the framers of the Constitution divided and shared powers.
- Explain that voting rights and property rights did not extend to women or slaves.
- Demonstrate understanding of at least one of the freedoms guaranteed to citizens by the United States.

FIFTH GRADE
Trimester 2

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❏ Can you tell me about something you **read** today?
- ❏ How could you use the **math** you learned today?
- ❏ What **scientific ideas** did you talk about today?
- ❏ How did you contribute to your **community** today?
- ❏ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read various texts, like books, poems, letters, news articles, and Internet pages.
- Speak and listen in formal and informal ways, like presentations and conversations.
- Communicate opinions, information, and experiences in writing for various readers.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In this Trimester, your child will:

- Ask scientific questions about the natural world and things humans design.
- Learn through various experiences, like observations and experiments.
- Solve problems using the skills and tools of engineers and scientists.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use math to make arguments about why something is true or false.
- Use tools, like rulers and calculators, to show mathematical relationships.

HISTORY AND SOCIAL SCIENCE

In this Trimester, your child will:

- Learn about their local community and about the state, country, and world.
- Discover how people and events from the past relate to the present.
- Work to understand how different people see the world differently.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY





Grade 5, Trimester 2 Big Ideas and Concepts:

- Determine a theme of a story, drama or poem from detail in the text including how characters in a story respond to challenges.
- Describe how a narrators or speakers point of view impact how events are described in story, myth, or drama.
- Write expository texts to examine a topic and convey ideas and information clearly.
- Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- Engage effectively in range of collaborative discussions with diverse partners on grade 5 topics and texts.

By the end of Grade 5, Trimester 2 students can:

- Summarize a text
- Use common, grade appropriate Greek and Latin roots as clues to the meaning of a word.
- Develop informational, persuasive and argumentative essays with facts, concrete details, with other information.
- Use a comma to separate an introductory element from the rest of the sentence.

Questions you can ask your child:

- What is the meaning of the word "circ"?
- Give an example of a metaphor or simile.
- What is the difference between a persuasive and argumentative essay?

Topics you can discuss with your child's teacher:

- Activities that can be done at home to improve writing
- Good study habits
- Executive functioning skills

Grade 5, Trimester 2 Big Ideas and Concepts:

- Students will explore fractions using fraction circle pieces, diagrams and number lines.
- Students will explore division number stories resulting in fractional answers.
- Students will extend place value patterns to decimals.
- Students will explore the first quadrant in the coordinate grid.
- Students will add, subtract, multiply and divide fractions.

Questions you can ask your child:

- Tell your child a whole number and ask him/her to find a half, third or fourth of the number.
- Practice using maps that use a grid with a map.

Topics you can discuss with your child's teacher:

- Projects that you can do at home to practice solving problems with fractions and decimals.
- Which strategies for finding common denominators work best in given situations.



By the end of Grade 5, Trimester 2 students can:

- Represent compare and rename fractions using models and manipulatives.
- Solve division number stories and write number models to build an understanding of fractions as division.
- Use place value strategies to compare decimals to the thousandths place.
- Plot points on a coordinate grid using ordered pairs.
- Using algorithms to solve Operations(+, −, x, ÷) with fractions.

MATHEMATICS

SCIENCE AND TECHNOLOGY/ ENGINEERING





Grade 5, Trimester 2 Big Ideas and Concepts:

- Understand what a watershed is and how water moves through cycles on Earth: for example how rain can evaporate into the air or be absorbed into the ground.
- Understand how people affect the Earth: for example the effects of chemicals from factories and farms and how people can reduce those effects.
- Understand how the engineering design process can be used to solve real world problems.
- Understand how energy flows and matter cycles through an ecosystem.
- Understand how plants make their own food using water, air, and energy from the sun. Explore how the sun's energy helps plants grow and reproduce.

By the end of Grade 5, Trimester 2 students can:

- Graph and compare the amounts of salt water, fresh water and frozen water (ice) on Earth.
- Test a simple system for filtering water. Use the engineering design process to make improvements.
- Explain how different living things produce, consume, and decompose other things.

Questions you can ask your child:

- ★ What could we invent to make our chores at home easier?
- ★ How does water get from the geosphere to the atmosphere?
- ★ How can a filter improve water quality?
- ★ Describe how the energy from the sun transfers to energy in the body?

Topics you can discuss with your child's teacher:

- ★ How can you help reinforce classroom instruction at home
- ★ Places in the community that can help your child learn science.

Grade 5, Trimester 2 Big Ideas and Concepts:

- Explore the events leading up from the French and Indian War to the Revolutionary War.
- Learn about the reasons for the American Revolution and how it involved Massachusetts people.
- Use primary sources to discuss the importance of the Declaration of Independence.

Questions you can ask your child:

- Who was involved in the French and Indian War?
- What led to the American Revolution?

Topics you can discuss with your child's teacher:

- People and places in Massachusetts related to the Revolutionary War
- Books about the Revolutionary War.

By the end of Grade 5, Trimester 2 students can:

- Explain key British policies and the colonial response to them.
- Explain the relationship between Native Peoples and the French and the British.
- Analyze the role and the significance of Massachusetts people during the pre-revolutionary and revolutionary period.
- Demonstrate understanding of the effects of the Revolutionary War.

FIFTH GRADE
Trimester 1

TALK TO YOUR CHILD ABOUT SCHOOL

You can ask...

- ❑ Can you tell me about something you **read** today?
- ❑ How could you use the **math** you learned today?
- ❑ What **scientific ideas** did you talk about today?
- ❑ How did you contribute to your **community** today?
- ❑ How did someone help you learn today?



ENGLISH LANGUAGE ARTS & LITERACY

In this Trimester, your child will:

- Read grade level text with purpose and understanding.
- Explain how an author uses reasons and evidence to support particular points in a text.
- Produce clear and coherent narrative writing in which the development and organization are appropriate to task, purpose, and audience.

SCIENCE AND TECHNOLOGY/ ENGINEERING

In this Trimester , your child will:

- Ask scientific questions about space and matter.
- Learn through various experiences, such as observations and experiments.
- Answer questions using the scientific method.

MATHEMATICS

In this Trimester, your child will:

- Use math to represent and solve real-world problems.
- Use math to make arguments about why something is true or false.
- Use models to show mathematical relationships, such as area and volume.

HISTORY AND SOCIAL SCIENCE

In this Trimester, your child will:

- Learn about the history of our local community, state, country, and world.
- Discover how people and events from the past relate to the present.
- Understand cultural differences and perspectives.

Manchester Memorial Elementary School
43 Lincoln St.
Manchester-by-the-Sea, MA 01944

Essex Elementary School
12 Story St.
Essex, MA 01929

ENGLISH LANGUAGE ARTS & LITERACY



Grade 5, Trimester 1 Big Ideas and Concepts:

- Use a variety of texts, determine the main idea and supporting details.
- Describe how an author uses one or more text structures to present information in a text.
- Write narratives to develop experiences or events using effective literary techniques, descriptive details, and clear sequence.
- Develop and strengthen writing as needed by planning, revising, editing, rewriting or trying a new approach.
- Determine or clarify the meaning of unknown and multiple meaning words and phrases based on grade 5 reading and content choosing flexibly from a range of strategies.

By the end of Grade 5, Trimester 1 students can:

- Write a story chronologically using appropriate grade level voice, sentence fluency, conventions, word choice, and vocabulary.
- Use a variety of transitional words, phrases and clauses to manage sequence.
- Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives.

Questions you can ask your child:

- What is your favorite genre to read?
- What strategies can you use to construct the meaning of unknown words in a text?
- How do good writers organize their ideas when they are writing?

Topics you can discuss with your child's teacher:

- Choosing an appropriate level book.
- How your child participates in class discussions.
- Available resources to help my child improve in reading.

Grade 5, Trimester 1 Big Ideas and Concepts:

- Students will explore the concept of volume and discover two mathematical formulas for volume.
- Students will review area and develop strategies for finding the area of rectangles in which the length of one side is a fractional part.
- Students will interpret parentheses in mathematical expressions.
- Students will explore place value relationships in multi-digit numbers, powers of ten and exponential notation.
- Students will review familiar and explore new algorithms for multiplying and dividing large numbers.

Questions you can ask your child:

- Which container holds the most? How can you tell?
- What is the value of 4 in 7,401,325?

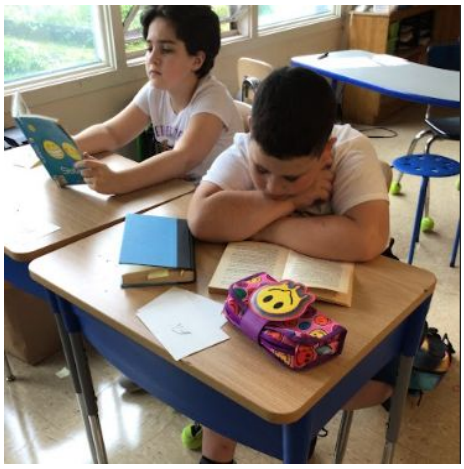
Topics you can discuss with your child's teacher:

- Projects that you can do at home to practice solving problems with volume and area.
- Math games



By the end of Grade 5, Trimester 1, students can:

- Solve area problems using $A = l \times w$.
- Solve volume problems using $V = l \times w \times h$ or $V = B(\text{area of base}) \times h$.
- Write, explain, and compute math expressions using parentheses.
- Understand place value to the millions place. Multiply by the powers of ten.
- Compute problems using US traditional multiplication and division.



MATHEMATICS

SCIENCE AND TECHNOLOGY/ ENGINEERING



Grade 5, Trimester 1 Big Ideas and Concepts:

- Students should understand the Earth's position in our solar system and how it relates with our sun and moon.
- Students will understand the conservation of matter and states of matter.
- Students will be able to distinguish between rock and minerals and understand how minerals are formed and identified based on their properties.

By the end of Grade 5, Trimester 1 students can:

- Use models to explain day and night and how the sun, stars and moon appear in different parts of the sky at different times during a day, month and year.
- Measure, graph and analyze substances before and after a chemical reaction.
- Explain the changes that happen when liquids, gases and solids are heated and cooled.
- Observe properties of various rocks and minerals.

Questions you can ask your child:

- Why does the sun appear larger and brighter than any other star in the sky?
- What is the conservation of matter?
- How can you use properties to identify a mineral?

Topics you can discuss with your child's teacher:

- How can you help reinforce classroom instruction at home?
- Places in the community that can help your child learn science.

Grade 5, Trimester 1 Big Ideas and Concepts:

- Build on prior schema of the New World at the time Christopher Columbus landed and the impact on Native Populations
- Explore the relationships between Native People and European settlers
- Learn about the first English settlements in North America
- Understand how settlements grew into populated colonies
- Explore the similarities and differences between the New England, Middle, and Southern colonies
- Learn about the origins of slavery

Questions you can ask your child:

- How did the colonists and Native People interact?
- How did climate affect the economies of the 3 colonial regions?

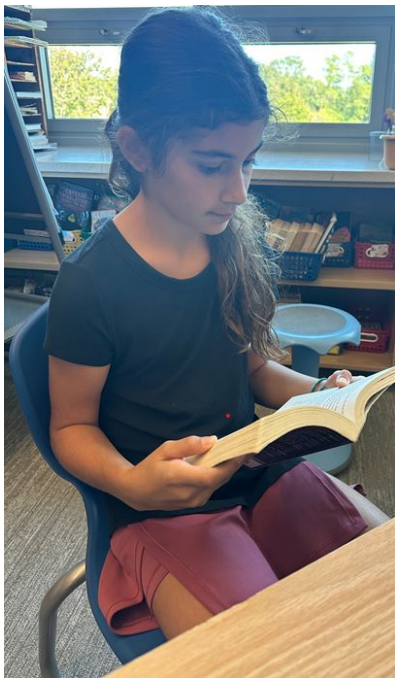
Topics you can discuss with your child's teacher:

- Historical fiction books
- Non fiction books about the American colonies
- Places in the community related to colonial history



By the end of Grade 5, Trimester 1, students can:

- Describe the beginnings and early growth of the American colonies.
- Compare and contrast the three colonial regions
- Explain the Triangular Slave Trade.
- Describe the relationships between Native Peoples and English settlers.



HISTORY AND SOCIAL SCIENCE

Appendix G: *Special Education Program Review*

School Committee Presentation

October 21, 2025

MERSD Special Education

Special education finance and District operating budgets

Navigating volatility, building effective structures, and planning for change

Community	% SPED /Operating Budget
Amesbury	26%
Danvers	26%
Gloucester	27%
Hamilton Wenham	27%
Lynnfield	23%
MASCO	23%
MERSD	26%
Newburyport	27%
North Reading	23%
Pentucket	26%
Rockport	29%
Triton	25%
Massachusetts	22%

Special Education as a Percentage of District Operating Budget

MERSD and Cape Ann Comparables (FY24, RADAR)

Special Education in MERSD

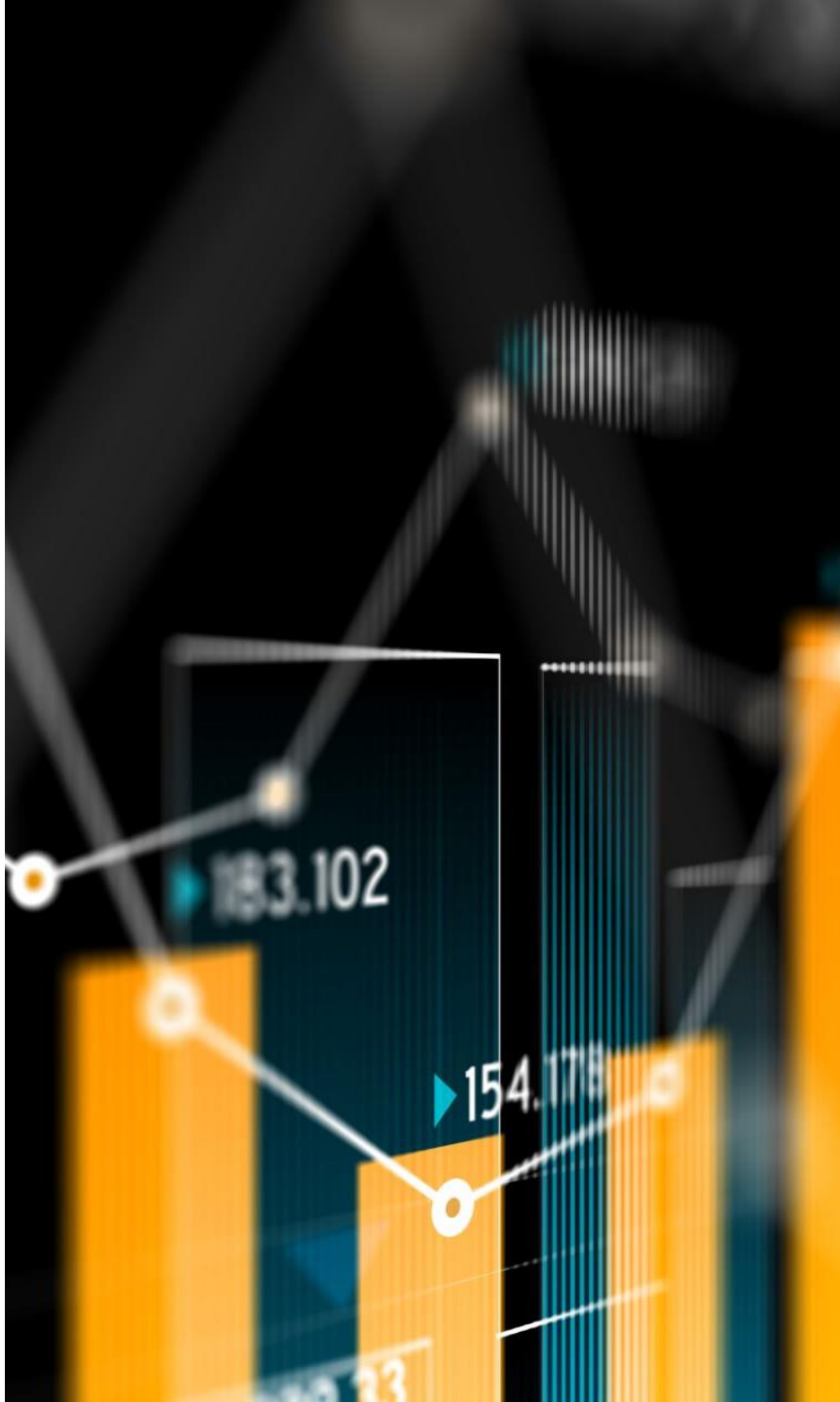
231 Students, 19.6% of all students

- 68% in full inclusion
- 6.5% in partial inclusion
- 17% in substantially separate programs
- 8.5% in out of district placements

Aspen, 10/2025

Data in this presentation

- ASPEN 2026 data
- DESE website state data
- Local databases



Types of Support Provided

- Applied behavioral analysis
- Evaluation and consultation
- Inclusion support and co-teaching
- Language based instructional practices
- Small group academic tutorials and classes
- Speech and language, articulation, and social pragmatics
- Occupational and physical therapies
- Assistive technology

Specialized Programs

Preschool

age 3 and 4

SWD and Peer Pals

RISE

complex needs

ABA methodologies

IRWL

dyslexia

grades 2 through 12

SAIL

autism and emotional/behavioral needs

K-8

ACE

neurological and communication

4-12

Transitions

autism and social/emotional needs

9-12

Out of District Programs

- Collaboratives
- Private Day
- Other Public Schools
- Residential Programs

Understanding Eligibility

Special education regulations, procedures, and parent rights

What is special education and which regulations support it?

Individuals with Disabilities Education Act

- Federal law passed in 1975
- Reauthorized most recently in 2004

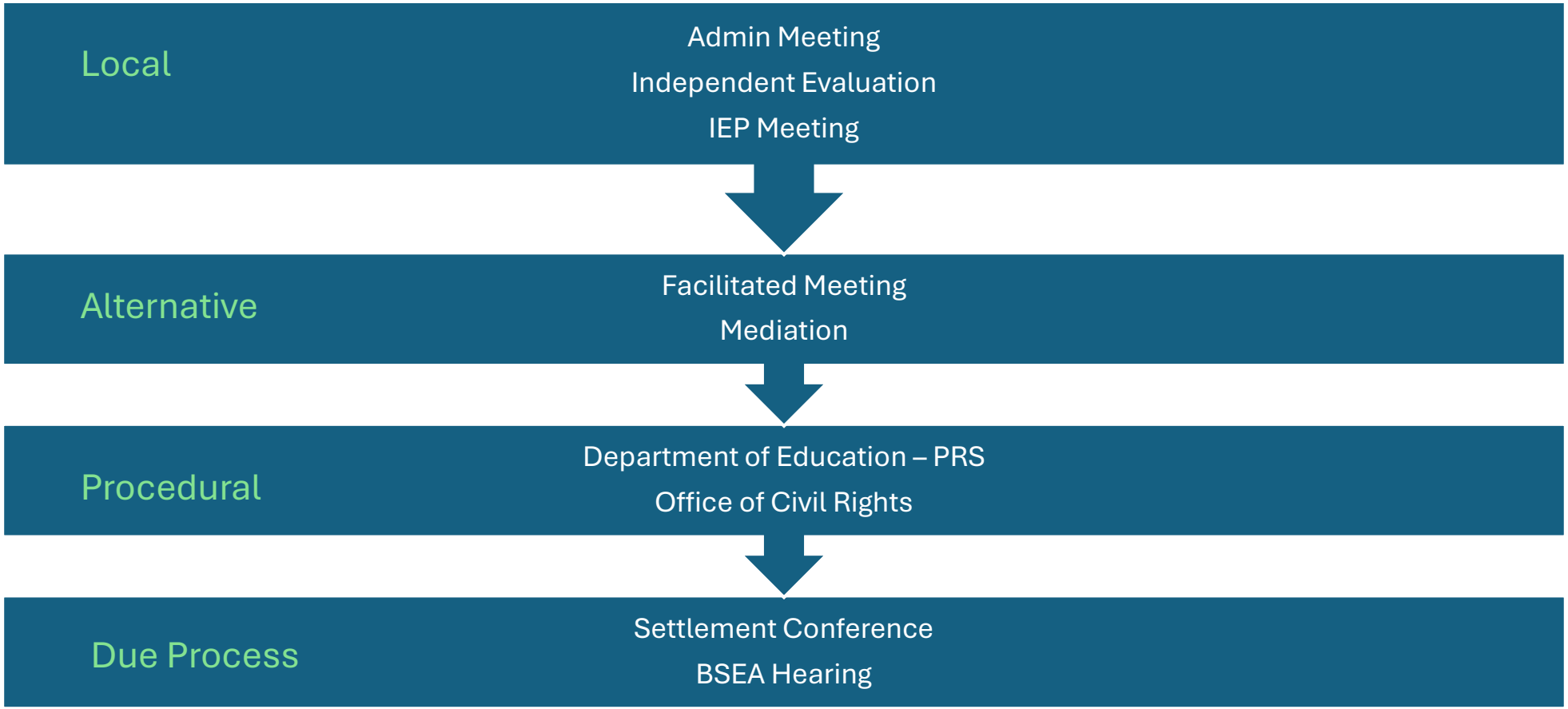
603 CMR 28.00

- Massachusetts special education law
- Last updated in 2022
- Mass special education laws in effect since 1972

Parent Rights under the IDEA

- Prior written notice
- Consent
- Active participation
- Annual IEP meetings and three-year reevaluations
- Independent evaluation
- Access to student record
- Observation of proposed program by parent or designee
- Dispute resolution and due process
- “Stay put” pending appeal

What is dispute resolution?



Special education eligibility criteria

Student has a disability

Lack of effective progress as a result of the disability

Requires specially designed instruction

How do we determine services?

- Team of parents and educators
- Student evaluation, observation, and progress data
- Discussion of disability related needs
- Goal of meaningful educational benefit and effective progress

Special Education in MERSD

Eligibility Data and Trends

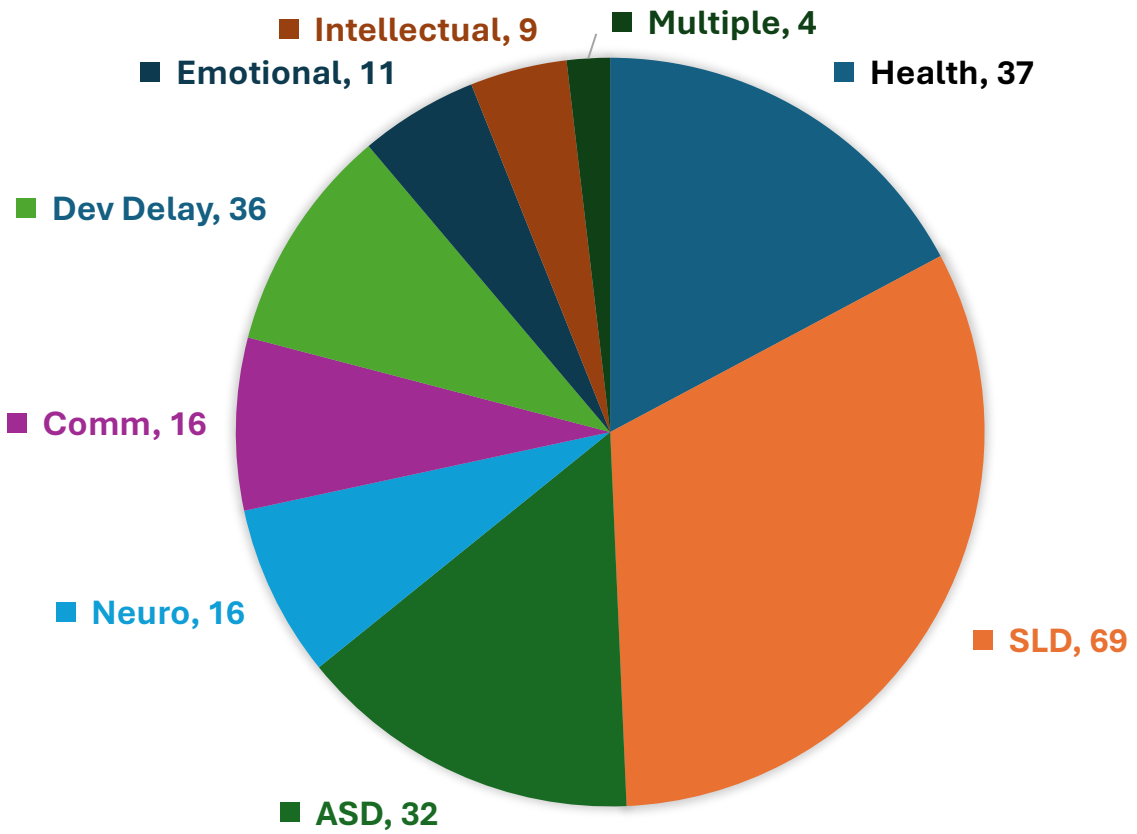
MERSD Eligibility Trends

School Year	Students with Disabilities (SWD)	Percent SWD
25-26	231	19.6
24-25	237	19.6
23-24	232	19
22-23	230	18.5
21-22	225	17.7
20-21	230	18.0
19-20	238	17.1

Eligibility: Cape Ann Comparables (FY25)

District	Percentage Eligible
Amesbury	25.4
Danvers	23.0
Hamilton Wenham	19.4
Gloucester	25.2
Lynnfield	19.3
MASCO	20.5
MERSD	19.6
Newburyport	20.9
North Reading	20.8
Pentucket	23.6
Rockport	24.8
Triton	22.3
Massachusetts	20.6

MERSD Eligibility Categories (FY26)



MERSD Eligibility Trends

Year	Health	SLD	ASD	Neuro-logical	Comm	Dev Delay	Emo-tional	Mult.	Intellec-tual
25-26	37	69	32	16	16	21	11	4	8
24-25	36	72	30	17	21	35	13	4	7
23-24	39	63	27	20	16	36	18	4	6
22-23	39	60	28	21	13	39	18	4	5
21-22	59	56	27	20	12	26	18	4	2
20-21	63	59	26	24	20	18	16	3	0
19-20	65	61	25	22	23	20	18	2	0



Health, Emotional
Communication
Neurological



Autism, SLD,
Multiple, Intellectual

Preschool Enrollment Trends

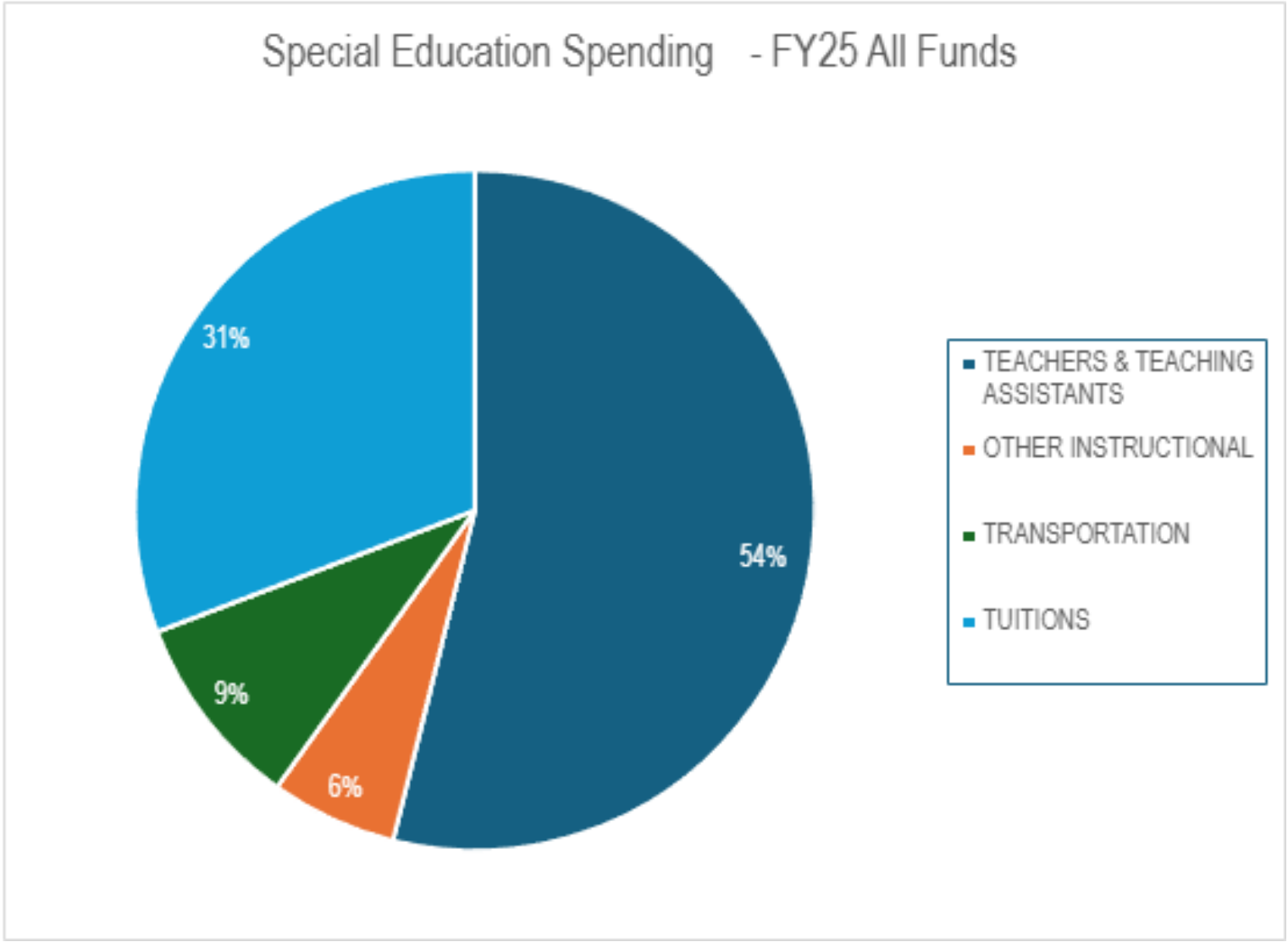
	FY21	FY22	FY23	FY24	FY25	FY26
Total SPED PK	6	5	12	11	13	16
PK SWD with Autism	1	2	3	6	9	6

Special Education Finance

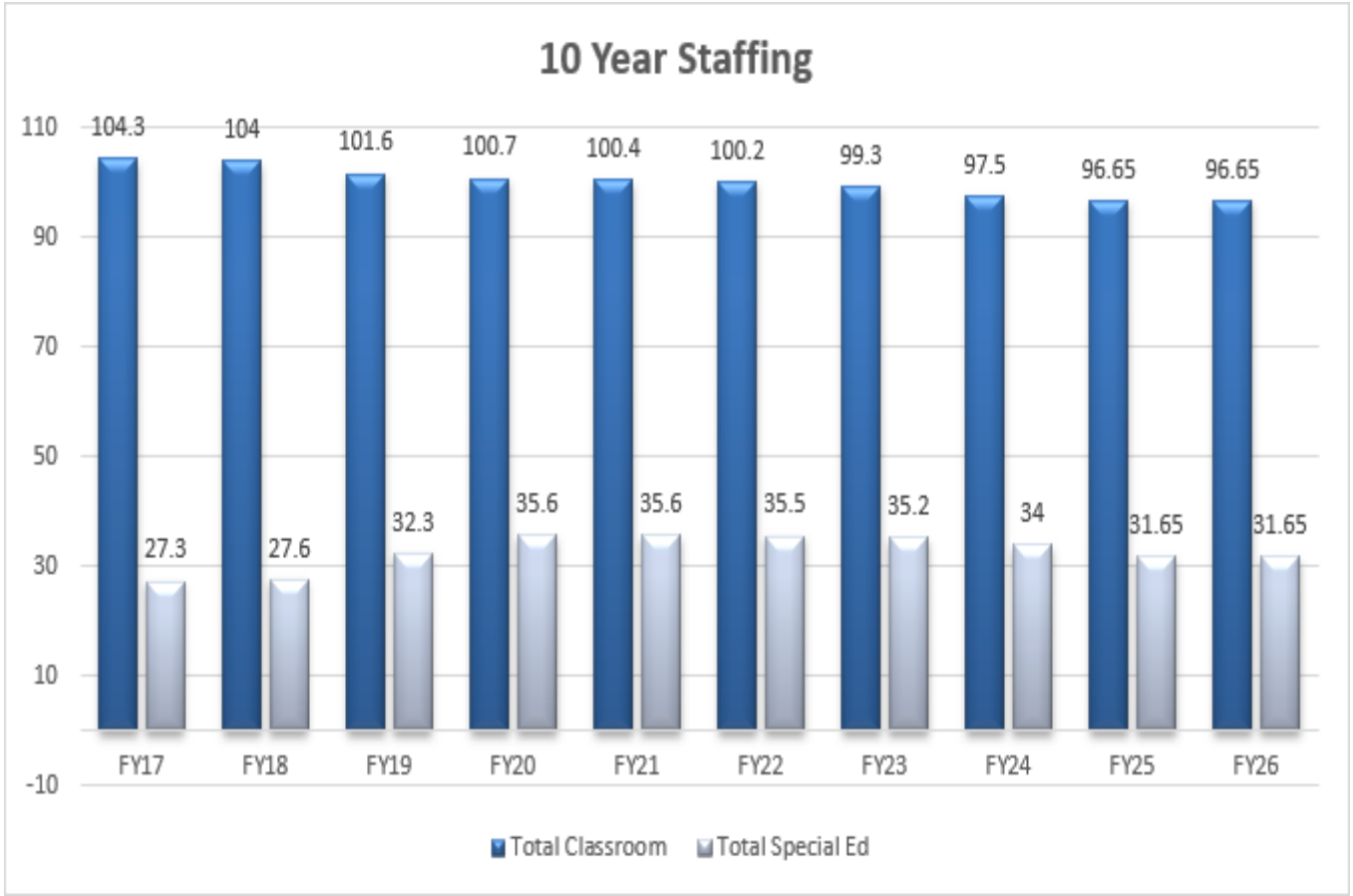
Budgeting Process

- Zero based budget
- Student IEPs and individual needs
- Specialized program enrollment
- Students entering and exiting
- Transitions
  - Early intervention to preschool
  - Preschool to K
  - Post-high school (18-22)

FY26 Special Education Spending

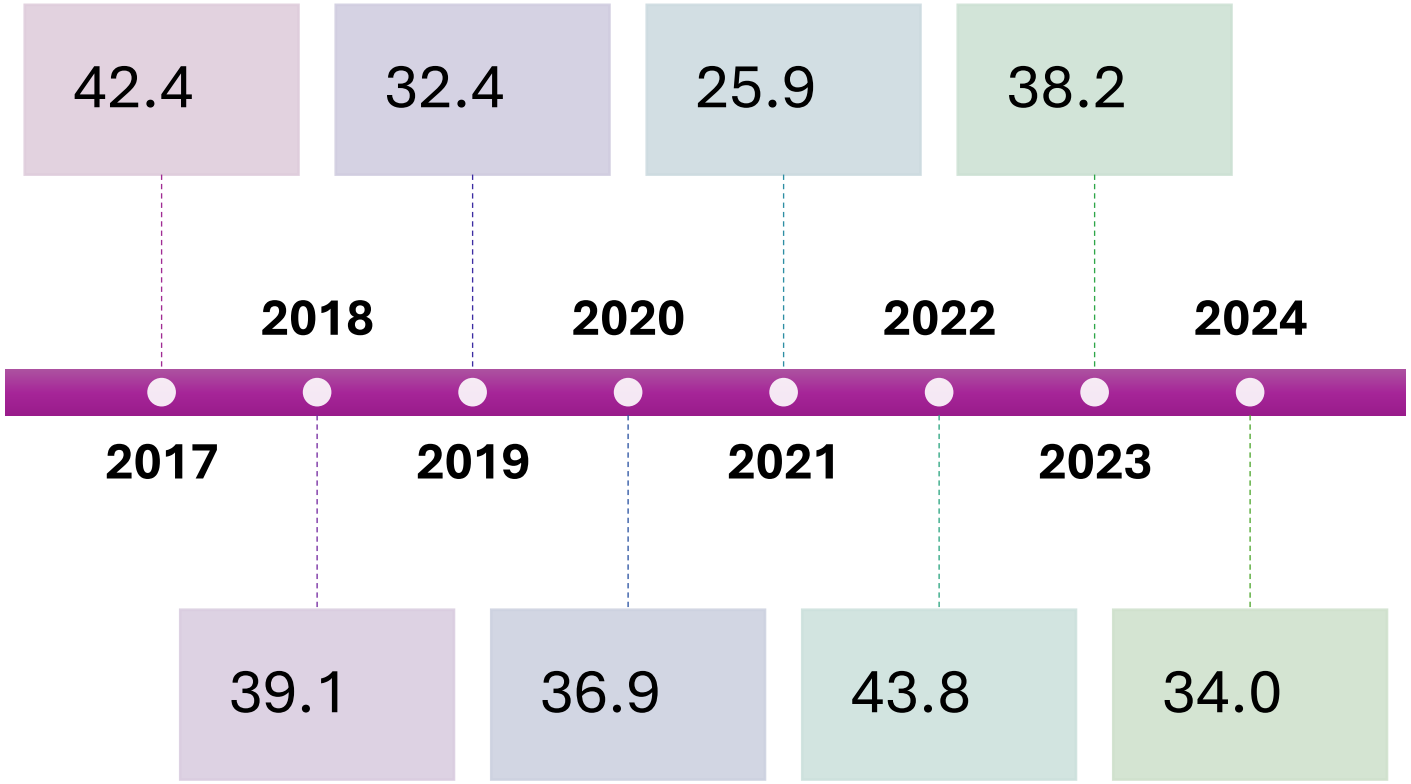


Special Education Teacher Staffing Trend



**Staffing Carried in the Operational Budget Excludes Grant Funded Positions*

Teaching Assistant Trend



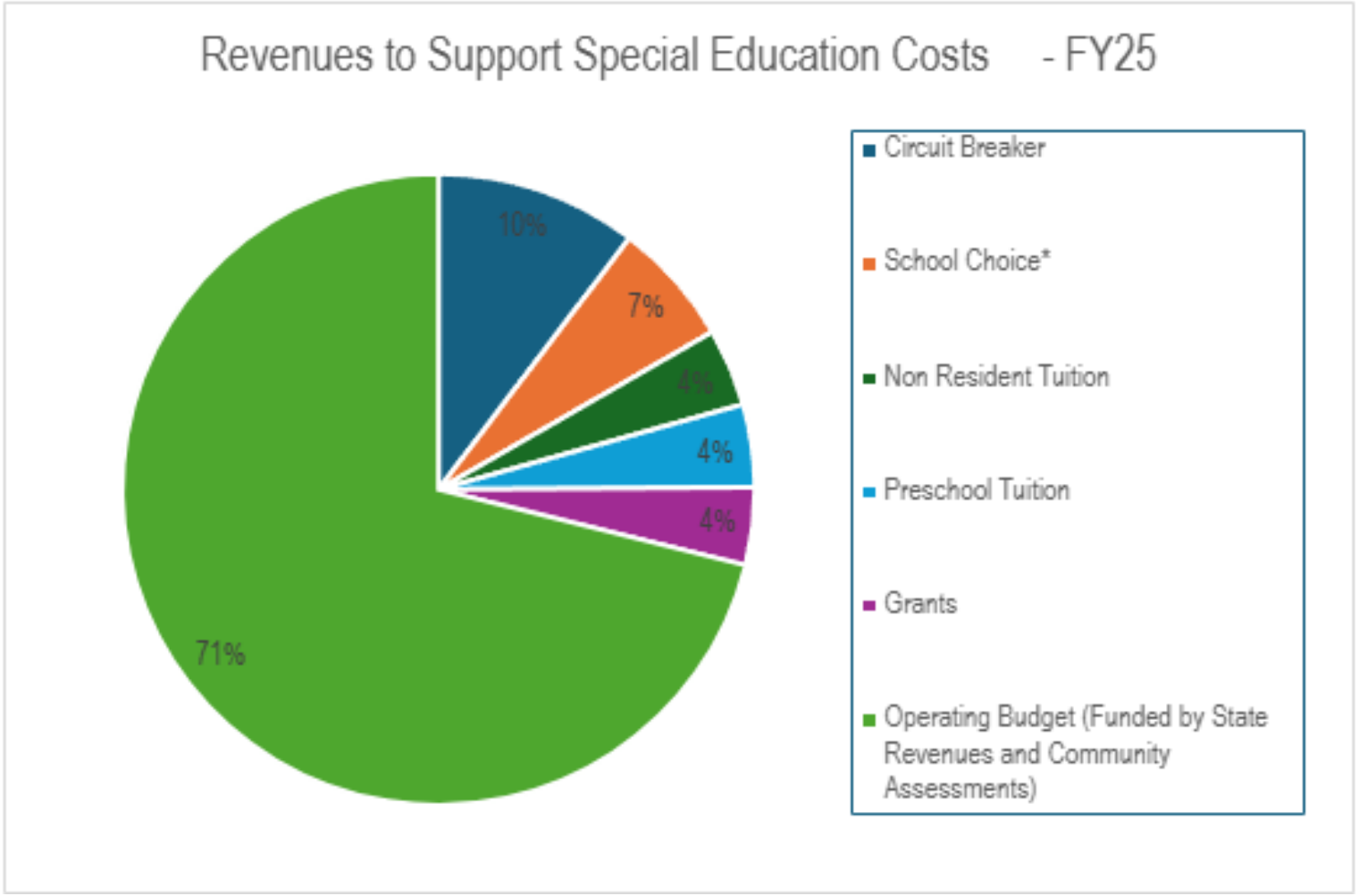
Sources of Revenue

Preschool

Special Education Tuition

Circuit Breaker

Sources of Revenue



Revenue from tuition students (FY26)

Tuition Students	Tuition Amount
SAIL	$75,271
ACE HS (3)	$205,062
Total	$280,333

Current revenue from preschool

28 Peer pals

FY26 Tuition
$400,395

Circuit Breaker

Partial funding of placements above claim threshold

- FY 26 threshold = $53,431

Up to 75% reimbursement for tuitions above threshold

Example

- $100,000 Tuition
- Subtract $53,431 threshold, multiple remaining amount by 75%
- Reimbursement (one year later) = $34,926.75

Out of District

Trends, Analysis, Cost Avoidance

OOD Programs
Funding for Day v. Residential FY26

Program Type	# Students	% of Tuition Costs
Day	17 Students	57%
Residential	4 Students	43%

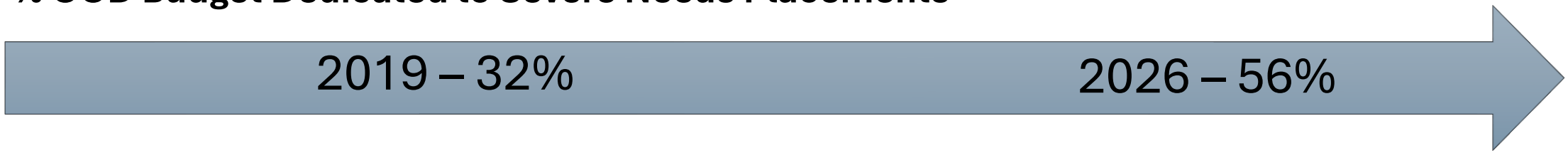
OOD Programs
FY 26 Spending by Disability Type

Disability type	# Students	% of Tuition Costs
Learning disability	24% 5 Students	9%
Mental and behavioral health	28.5% 6 Students	23%
Developmental and severe disabilities (excluding 18-22)	28.5% 6 Students	45%
18-22 programs	19% 4 Students	23%

Changing Cost of a Severe Needs Placement

School	FY2019	FY2026	% Increase
Cotting School	$78,381	$119,501	52.5%
Children's Center for Communication	$90,949	$129,205	42.0%
Hopeful Journeys	$117,340	$160,486	36.8%
Nashoba Learning Group	$108,388	$148,243	36.8%

% OOD Budget Dedicated to Severe Needs Placements



Students attending 18-22 programs

FY20	• 4 Students
FY22	• 5 Students
FY24	• 6 Students
FY26	• 4 Students
FY28	• 8 Students



School Choice and Out of District

District obligated to educate all students accepted via School Choice through graduation

District receives tuition and transportation from sending districts for students who require OOD placements

Specialized programs and OOD cost avoidance

In District vs. OOD

In District Specialized Programs

- Staff salaries
- Benefits
- Tuition revenue

OOD Programs

- Tuition
- Transportation
- Circuit breaker funding

OOD Net Cost – In District Net Cost = Savings from OOD programs

In District Programs FY26

Program	Grades Served	# Students
RISE	K-3	4
SAIL/Transitions	K-12	22
ACE	4-12	24
IRWL	3-12	23
Total Students	K-12	73

Special Education Cost Avoidance Example

- Ms. Sartell's RISE classroom currently has 4 students K-2 requiring intensive, individualized instruction
- One teacher, four assistants

Option 1:

Salary and benefits costs for RISE staff

1 Teacher, 4 Teaching Assistants

$391,687

Option 2	Placement Options	Transportation
Hopeful Journeys	$160,486	225 days x $284/day $63,900
Melmark	$155,772	225 days x $380/day $85,500
KOG	$171,104	225 days x $284/day $63,900
Nashoba Learning Group	$148,243	225 days x $385/day
Average	$158,888	$78,695
Average Tuition and Transport x 4	**$950,332**	

Difference between OOD and In District Costs = $558,645

Anticipated FY27 reimbursement = $316,371

Cost avoidance by program 2026

Program	Grades Served	# Students	Cost Avoidance
RISE	K-3	4	$558,645
SAIL/Transitions	K-12	22	$2,234,299
ACE	4-12	24	$2,556,925
IRWL	3-12	23	$1,224,732
Total		**73**	**$5,023,155**

Estimated Circuit Breaker Reimbursement (FY 27): $2,405,246

OOD and Cost Variability Factors

In-District Programs	Tuition	Transportation	Circuit breaker
• Tuitions and enrollment fluctuate • Must maintain programs for students remaining in District	• Unpredictable, determined annually by OSD • Restructuring	• Rising costs • Personnel shortages • Shared vs. solo runs	• Threshold and percent reimbursement determined annually by state

Cost of Long-Term Placement

- Student with severe special needs
- Enters program grade 2 - FY26
  - Attends local OOD placement with a 1:1 teaching assistant
  - District provides mandated transportation
- Student remains in placement until age 22
- Est. annual cost increase of 4.5%
- Total cost Grade 2 – Program Completion: $5,248,675

Grade	Tuition and Transport	Grade	Tuition and Transport
2	$231,873	9	$315,547
3	$242,307	10	$329,747
4	$253,211	11	$344,585
5	$264,605	12	$360,092
6	$276,513	13	$376,296
7	$288,956	14	$393,229
8	$301,958	15	$410,924
		16	$429,416

Special Education Next Steps

Adapting to changing enrollment

Future Needs and Goals

1

EES building project

- Distribute specialized programs between both buildings
- Preschool, RISE, ACE will be in Essex

2

Student Achievement

- Strengthen Tier 1 instruction
- Prereferral decision making process
- Continue to implement specially designed instruction to close skill gaps

3

Specialized Programs

Maintain high quality in district programs

Expand RISE to prepare for children with autism and developmental disabilities moving through preschool

INITIAL SPACE SUMMARY

SECTION 3.1.3

3.1.3 - INITIAL SPACE SUMMARY

- Initial Space Summary Overview
- Initial Space Summaries – Various Enrolment Options
  - 165 student enrollment, grades K-3 + 30 PreK student enrollment
  - 250 student enrollment, grades K-5 + 30 PreK student enrollment
  - 515 student enrollment, grades K-5 + 60 PreK student enrollment
- Existing Floor Plans
- Variations from MSBA Space Guidelines

INITIAL SPACE SUMMARY OVERVIEW

As defined in the executed Design Enrollment Certification Letter dated August 16, 2024 the Massachusetts School Building Authority (MSBA) and the Manchester Essex Regional School District (District) agreed upon three design enrollments for the Essex Elementary School to be investigated by this study. The first enrollment is for 165 students, serving kindergarten to grade three with the addition of 30 student enrollment serving PreK and is for the town of Essex population, only. The next level of enrollment serves 250 students, serving kindergarten to grade five with the addition of 30 student enrollment serving PreK and is for the town of Essex population, only. The 515-student enrollment will incorporate the students from both Essex and Manchester-By-The-Sea and will serve kindergarten to grade five with the addition of 60 student enrollment serving PreK. For the 2025-2026 school year, the Manchester Essex Regional School District operates the Essex Elementary School with a current enrollment of approximately 200 students serving kindergarten through grade five and the Manchester Memorial Elementary School with a current enrollment of approximately 268 students serving kindergarten through grade five with an additional enrollment of 38 Students in PreK. The options reflect the criteria of the Design Enrollment Certification Letter that is included in Appendix 3.1.8.3 of this report. The following pages contain the Initial Space Summaries for the grade configurations and enrollment levels the MSBA has authorized the District to explore and document.

Proposed Space Summary - Elementary School

Date: 2025-1202 Preliminary Design Program

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT ESSEX ELEMENTARY SCHOOL 165 STUDENT K-3 OPTION	EXISTING CONDITIONS (@ EES)			PROPOSED PROGRAM									VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
				EXISTING TO REMAIN / RENOVATED			NEW CONSTRUCTION			TOTAL									
ROOM TYPE	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	COMMENTS
CORE ACADEMIC			**14,301**			**0**			**12,000**			**12,000**			**4,850**			**7,150**	STE Guidelines Policy
(List rooms of different sizes separately)																			
Kindergarten Classroom with Toilet	857	2	1,714			0	1,200	2	2,400	1,200	2	2,400	0	0	0	1,200	2	2,400	1,100 NSF (minimum size) - 1,300 NSF (maximum size); Minimum of (2) sinks required per Kindergarten Classroom
General Classroom (Two per grade 1-3)	866	10	8,660			0	950	6	5,700	950	6	5,700	0	1	950	950	5	4,750	900 NSF (minimum size) - 1,000 NSF (maximum size); Minimum of (2) sinks required per General Classroom
Project Room (STE)	1,178	2	2,356			0	1,080	1	1,080	1,080	1	1,080	0	1	1,080	1,080	0	-	1,080 NSF (minimum size); Refer to the 2018 STE Guidelines for additional information.
Project Storage Room			0			0	120	1	120	120	1	120	0	1	120	120	0	-	Minimum of (1) 120 NSF STE Storage Room required per STE Room; Refer to the 2018 STE Guidelines for additional information.
World Language			0			0	950	1	950	950	1	950	950	1	950				
MTSS Interventionists Office	857	1	857			0	500	1	500	500	1	500	500	1	500				
MTSS Interventionists Small Group			0			0	250	1	250	250	1	250	250	1	250				
Break-Out			0			0	500	2	1,000	500	2	1,000	500	2	1,000				
Book Storage	238	3	714			0			0	0	0	0	0	0	0				
SPECIAL EDUCATION			**4,846**			**0**			**6,085**			**6,085**			**3,065**			**3,020**	Special Education spaces require DESE review and approval.
(List rooms of different sizes separately)																			
Self-Contained Special Education Classroom (RISE, Gr. K-3)	871	1	871			0	950	1	950	950	1	950	0	-1	-950	950	2	1,900	900 NSF (minimum size) - 1,300 NSF; equal to the size of the proposed General Classrooms that serve the same student population.
Self-Contained Special Education Toilet Room (RISE, Gr. K-3)			0			0	60	1	60	60	1	60	0	-1	-60	60	2	120	
Self-Contained Special Education Classroom (ACE, Gr. K-3)			0			0	600	1	600	600	1	600	600	1	600				
Resource Room	795	2	1,590			0	500	1	500	500	1	500	0	0	0	500	1	500	1/2 size of a General Classroom
Small Group Room			0			0	250	4	1,000	250	4	1,000	-250	3	500	500	1	500	1/2 size of a General Classroom
Equipment Storage (RISE)			0			0	150	1	150	150	1	150	150	1	150				
School Psychologist	128	1	128			0	150	1	150	150	1	150	150	1	150				
Speech and Language	128	1	128			0	150	1	150	150	1	150	150	1	150				
Occupational Therapy (OT)	225	2	450			0	475	1	475	475	1	475	475	1	475				
Physical Therapy (PT)	1,191	1	1,191			0	1,200	1	1,200	1,200	1	1,200	1,200	1	1,200				
Sensory Room (Calming Corner)	163	1	163			0	250	1	250	250	1	250	250	1	250				
PT Storage							250	1	250	250	1	250	250	1	250				
Special Education Team Chair Office	325	1	325			0	150	1	150	150	1	150	150	1	150				
Special Education Conference			0			0	200	1	200	200	1	200	200	1	200				
Public Day Education Spaces (List rooms separately below)																			
			0			0			0	0	0	0	0	0	0				
Collaborative Program Spaces (List rooms separately below)																			
			0			0			0	0	0	0	0	0	0				
ART & MUSIC			**1,750**			**0**			**2,100**			**2,100**			**2,025**			**75**	
Art Classroom (25 seats)	1,035	1	1,035			0	1,000	1	1,000	1,000	1	1,000	0	1	1,000	1,000	0	-	Assumed schedule: 2 times per week per student
Art Workroom with Storage and Kiln			0			0	150	1	150	150	1	150	0	1	150	150	0	-	
Music Classroom / Large Group (25-50 seats)	715	1	715			0	950	1	950	950	1	950	-250	1	950	1,200	0	-	Assumed schedule: 2 times per week per student
Music Practice / Ensemble			0			0			0	0	0	0	-75	-1	-75	75	1	75	
[Enter room type here]			0			0			0	0	0	0	0	0	0				
HEALTH & PHYSICAL EDUCATION			**6,154**			**0**			**7,150**			**7,150**			**850**			**6,300**	Excess Physical Education Spaces Policy
Gymnasium (w/ bleachers)	4,782	1	4,782			0	6,850	1	6,850	6,850	1	6,850	850	0	850	6,000	1	6,000	
Gym Storeroom	435	1	435			0	150	1	150	150	1	150	0	0	0	150	1	150	
Health Instructor's Office with Shower and Toilet	75	1	75			0	150	1	150	150	1	150	0	0	0	150	1	150	
Boys Locker	574	1	574			0			0	0	0	0	0	0	0				
Girls Locker	288	1	288			0			0	0	0	0	0	0	0				

Proposed Space Summary - Elementary School

Date: 2025-1202 Preliminary Design Program

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT ESSEX ELEMENTARY SCHOOL 165 STUDENT K-3 OPTION	EXISTING CONDITIONS (@ EES)			PROPOSED PROGRAM									VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
				EXISTING TO REMAIN / RENOVATED			NEW CONSTRUCTION			TOTAL									
ROOM TYPE	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	COMMENTS
MEDIA CENTER			**1,926**			**0**			**2,020**			**2,020**			**0**			**2,020**	
Media Center / Reading Room	1,775	1	1,775			0	2,020	1	2,020	2,020	1	2,020	0	0	0	2,020	1	2,020	
Media Office / Work	151	1	151			0			0	0	0	0	0	0	0				
DINING & FOOD SERVICE			**5,244**			**0**			**4,238**			**4,238**			**0**			**4,238**	
Cafeteria / Dining	3,035	1	3,035			0	1,238	1	1,238	1,238	1	1,238	0	0	0	1,238	1	1,238	Based on 2 lunch seatings - 15 NSF per seat
Stage	877	1	877			0	1,000	1	1,000	1,000	1	1,000	0	0	0	1,000	1	1,000	
Chair / Table / Equipment Storage			0			0	200	1	200	200	1	200	0	0	0	200	1	200	
Kitchen	1,332	1	1,332			0	1,600	1	1,600	1,600	1	1,600	0	0	0	1,600	1	1,600	1,600 NSF for first 300 students + 1 NSF per additional student
Staff Lunch Room			0			0	200	1	200	200	1	200	0	0	0	200	1	200	20 NSF per student
[Enter room type here]			0			0			0	0	0	0	0	0	0				
MEDICAL			**341**			**0**			**410**			**410**			**0**			**410**	
Medical Suite Toilet	27	1	27			0	60	1	60	60	1	60	0	0	0	60	1	60	
Nurses' Office / Waiting Room	157	1	157			0	250	1	250	250	1	250	0	0	0	250	1	250	
Examination Room / Resting	157	1	157			0	100	1	100	100	1	100	0	0	0	100	1	100	
[Enter room type here]			0			0			0	0	0	0	0	0	0				
ADMINISTRATION & GUIDANCE			**1,296**			**0**			**2,095**			**2,095**			**80**			**2,015**	
General Office / Waiting Room with Toilet	111	1	111			0	300	1	300	300	1	300	0	0	0	300	1	300	
Teachers' Mail and Time Room			0			0	100	1	100	100	1	100	0	0	0	100	1	100	
Copy Room			0			0	150	1	150	150	1	150	0	0	0	150	1	150	
Records Room			0			0	110	1	110	110	1	110	0	0	0	110	1	110	
Principal's Office with Conference Area	184	1	184			0	375	1	375	375	1	375	0	0	0	375	1	375	
Principal's Secretary / Waiting			0			0	125	1	125	125	1	125	0	0	0	125	1	125	
Assistant Principal's Office			0			0			0	0	0	0	-120	0	0	120	0	-	
Supervisory / Spare Office			0			0			0	0	0	0	-120	-1	-120	120	1	120	
Conference Room	342	1	342			0	250	1	250	250	1	250	0	0	0	250	1	250	
School Counselor Office	424	1	424			0	150	1	150	150	1	150	0	0	0	150	1	150	
School Counselor Storeroom			0			0			0	0	0	0	-35	-1	-35	35	1	35	
Teachers' Work Room	718		0			0	300	1	300	300	1	300	0	0	0	300	1	300	
Tech Office	235	1	235			0	235	1	235	235	1	235	235	1	235				
CUSTODIAL & MAINTENANCE			**546**			**0**			**1,900**			**1,900**			**0**			**1,900**	
Custodian's Office	73	1	73			0	150	1	150	150	1	150	0	0	0	150	1	150	
Custodian's Workshop			0			0	375	1	375	375	1	375	0	0	0	375	1	375	
Custodian's Storage	114	1	114			0	375	1	375	375	1	375	0	0	0	375	1	375	
Recycling Room / Trash			0			0	400	1	400	400	1	400	0	0	0	400	1	400	
Receiving and General Supply			0			0	200	1	200	200	1	200	0	0	0	200	1	200	
Storeroom	132	2	264			0	200	1	200	200	1	200	0	0	0	200	1	200	
Network / Telecom Room	95	1	95			0	200	1	200	200	1	200	0	0	0	200	1	200	
[insert room type here]			0			0			0	0	0	0	0	0	0				
OTHER			**0**			**0**			**2,770**			**2,770**			**2,770**			**0**	
(List rooms separately below)																			
Pre-Kindergarten Classroom with Toilet			0			0	1,200	2	2,400	1,200	2	2,400	0	2	2,400	1,200	0	-	1,100 NSF (minimum size) - 1,300 NSF (maximum size)
Pre-Kindergarten Storage			0			0	250	1	250	250	1	250	250	1	250				
Mothers' Room			0			0	120	1	120	120	1	120	120	1	120				
Total Building Net Floor Area (NFA)			**36,404**			**0**			**40,768**			**40,768**			**13,640**			**27,128**	**Total Building Net Floor Area (NFA)**
Proposed Student Capacity / Enrollment																# of Grades	4	**165**	**Total Enrollment (Enter Design Enrollment)**
																K	1	**41**	Kindergarten Enrollment
																Grade 1	1	**83**	Lower Elementary School Enrollment (Grades 1-2)
																Grade 2	1	**41**	Upper Elementary School Enrollment (Grades 3-6)

Proposed Space Summary - Elementary School

Date: 2025-1202 Preliminary Design Program

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT ESSEX ELEMENTARY SCHOOL 165 STUDENT K-3 OPTION	EXISTING CONDITIONS (@ EES)			PROPOSED PROGRAM									VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
				EXISTING TO REMAIN / RENOVATED			NEW CONSTRUCTION			TOTAL									
ROOM TYPE	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	COMMENTS
																Grade 3	1		
																Grade 4	0		
																Grade 5	0		
																Grade 6	0		
NON-PROGRAMMED SPACES					% of GFA	0		% of GFA	20,009		% of GFA	20,009							Complete this category with Schematic Design Submittal
Other Occupied Rooms (List rooms separately below)																			
[Enter room type here]				-	#DIV/0!		-	0.0%		-	0.0%	0							
Unoccupied MEP / FP Spaces	2,358	4.4%	2,358	-	#DIV/0!		-	0.0%		-	0.0%	0							
Unoccupied Closets, Supply Rooms, and Storage Rooms	875	1.6%	875	-	#DIV/0!		-	0.0%		-	0.0%	0							
Toilet Rooms	1,133	2.1%	1,133	-	#DIV/0!		-	0.0%		-	0.0%	0							
Circulation (corridors, stairs, ramps and elevators)	6,813	12.8%	6,813	-	#DIV/0!		-	0.0%		-	0.0%	0							
Remaining[3]	5,453	10.3%	5,453	-	#DIV/0!	0	-	32.9%	20,009	-	32.9%	20,009							
Total Building Gross Floor Area (GFA)[2]			53,036			0			60,777			60,777			31,077			29,700	Total Building Gross Floor Area (GFA)[2]
Grossing Factor (GFA / NFA)			1.46			#DIV/0!			1.49			1.49			0.40			1.09	Grossing Factor (GFA / NFA)

[1] **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

[2] **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls.

[3] **Remaining** Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Building Gross Floor Area and area not accounted for above.

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A true statement, made under the penalties of perjury.

Name of Architecture Firm: JCJ Architecture

Name of Principal Architect: James E. LaPosta Jr., FAIA, LEED AP

Signature of Principal Architect:

Date: 12.19.2025

Proposed Space Summary - Elementary School

Date: 2025-1202 Preliminary Design Program

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT ESSEX ELEMENTARY SCHOOL 250 STUDENT K-5 OPTION	EXISTING CONDITIONS (@ EES)			PROPOSED PROGRAM									VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
				EXISTING TO REMAIN / RENOVATED			NEW CONSTRUCTION			TOTAL									
ROOM TYPE	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	COMMENTS
CORE ACADEMIC			**14,301**			**0**			**17,050**			**17,050**			**6,100**			**10,950**	STE Guidelines Policy
(List rooms of different sizes separately)																			
Kindergarten Classroom with Toilet	857	2	1,714			0	1,200	2	2,400	1,200	2	2,400	0	0	0	1,200	2	2,400	1,100 NSF (minimum size) - 1,300 NSF (maximum size); Minimum of (2) sinks required per Kindergarten Classroom
General Classroom (Two per grade 1-5)	866	10	8,660			0	950	10	9,500	950	10	9,500	0	1	950	950	9	8,550	900 NSF (minimum size) - 1,000 NSF (maximum size); Minimum of (2) sinks required per General Classroom
Project Room (STE)	1,178	2	2,356			0	1,080	1	1,080	1,080	1	1,080	0	1	1,080	1,080	0	-	1,080 NSF (minimum size); Refer to the 2018 STE Guidelines for additional information.
Project Storage Room			0			0	120	1	120	120	1	120	0	1	120	120	0	-	Minimum of (1) 120 NSF STE Storage Room required per STE Room; Refer to the 2018 STE Guidelines for additional information.
World Language			0			0	950	1	950	950	1	950	950	1	950				
MTSS Interventionists Office	857	1	857			0	500	2	1,000	500	2	1,000	500	2	1,000				
MTSS Interventionists Small Group			0			0	250	2	500	250	2	500	250	2	500				
Break-Out			0			0	500	3	1,500	500	3	1,500	500	3	1,500				
Book Storage	238	3	714			0			0	0	0	0	0	0	0				
SPECIAL EDUCATION			**4,846**			**0**			**8,345**			**8,345**			**5,325**			**3,020**	Special Education spaces require DESE review and approval.
(List rooms of different sizes separately)																			
Self-Contained Special Education Classroom (RISE, Gr. K-2)	871	1	871			0	950	1	950	950	1	950	0	-1	-950	950	2	1,900	900 NSF (minimum size) - 1,300 NSF; equal to the size of the proposed General Classrooms that serve the same student population.
Self-Contained Special Education Classroom (RISE, Gr. 3-5)			0			0	950	1	950	950	1	950	950	1	950				
Self-Contained Special Education Toilet Room (RISE)			0			0	60	2	120	60	2	120	0	0	0	60	2	120	
Self-Contained Special Education Classroom (ACE, Gr. K-2)			0			0	600	1	600	600	1	600	600	1	600				
Self-Contained Special Education Classroom (ACE, Gr. 3-5)			0			0	600	1	600	600	1	600	600	1	600				
Resource Room	795	2	1,590			0	500	1	500	500	1	500	0	0	0	500	1	500	1/2 size of a General Classroom
Small Group Room			0			0	250	6	1,500	250	6	1,500	-250	5	1,000	500	1	500	1/2 size of a General Classroom
Equipment Storage (RISE)			0			0	150	2	300	150	2	300	150	2	300				
School Psychologist	128	1	128			0	150	1	150	150	1	150	150	1	150				
Speech and Language	128	1	128			0	150	1	150	150	1	150	150	1	150				
Sensory Room (Calming Corner)	163	1	163			0	250	1	250	250	1	250	250	1	250				
Occupational Therapy (OT)	225	2	450			0	475	1	475	475	1	475	475	1	475				
Physical Therapy (PT)	1,191	1	1,191			0	1,200	1	1,200	1,200	1	1,200	1,200	1	1,200				
PT Storage							250	1	250	250	1	250	250	1	250				
Special Education Team Chair Office	325	1	325			0	150	1	150	150	1	150	150	1	150				
Special Education Conference			0			0	200	1	200	200	1	200	200	1	200				
Public Day Education Spaces (List rooms separately below)																			
			0			0			0	0	0	0	0	0	0				
Collaborative Program Spaces (List rooms separately below)																			
			0			0			0	0	0	0	0	0	0				
ART & MUSIC			**1,750**			**0**			**2,500**			**2,500**			**0**			**2,500**	
Art Classroom (25 seats)	1,035	1	1,035			0	1,000	1	1,000	1,000	1	1,000	0	0	0	1,000	1	1,000	Assumed schedule: 2 times per week per student
Art Workroom with Storage and Kiln			0			0	150	1	150	150	1	150	0	0	0	150	1	150	
Music Classroom / Large Group (25-50 seats)	715	1	715			0	1,200	1	1,200	1,200	1	1,200	0	0	0	1,200	1	1,200	Assumed schedule: 2 times per week per student
Music Practice / Ensemble			0			0	75	2	150	75	2	150	0	0	0	75	2	150	
[Enter room type here]			0			0			0	0	0	0	0	0	0				

Proposed Space Summary - Elementary School

Date: 2025-1202 Preliminary Design Program

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT ESSEX ELEMENTARY SCHOOL 250 STUDENT K-5 OPTION	EXISTING CONDITIONS (@ EES)			PROPOSED PROGRAM									VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
				EXISTING TO REMAIN / RENOVATED			NEW CONSTRUCTION			TOTAL									
ROOM TYPE	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	COMMENTS
HEALTH & PHYSICAL EDUCATION			**6,154**			**0**			**7,150**			**7,150**			**850**			**6,300**	Excess Physical Education Spaces Policy
Gymnasium (w/ bleachers)	4,782	1	4,782			0	6,850	1	6,850	6,850	1	6,850	850	0	850	6,000	1	6,000	
Gym Storeroom	435	1	435			0	150	1	150	150	1	150	0	0	0	150	1	150	
Health Instructor's Office with Shower and Toilet	75	1	75			0	150	1	150	150	1	150	0	0	0	150	1	150	
Boys Locker	574	1	574			0			0	0	0	0	0	0	0				
Girls Locker	288	1	288			0			0	0	0	0	0	0	0				
MEDIA CENTER			**1,926**			**0**			**2,020**			**2,020**			**0**			**2,020**	
Media Center / Reading Room	1,775	1	1,775			0	2,020	1	2,020	2,020	1	2,020	0	0	0	2,020	1	2,020	
Media Office / Work	151	1	151			0			0	0	0	0	0	0	0				
DINING & FOOD SERVICE			**5,244**			**0**			**4,875**			**4,875**			**0**			**4,875**	
Cafeteria / Dining	3,035	1	3,035			0	1,875	1	1,875	1,875	1	1,875	0	0	0	1,875	1	1,875	Based on 2 lunch seatings - 15 NSF per seat
Stage	877	1	877			0	1,000	1	1,000	1,000	1	1,000	0	0	0	1,000	1	1,000	
Chair / Table / Equipment Storage			0			0	200	1	200	200	1	200	0	0	0	200	1	200	
Kitchen	1,332	1	1,332			0	1,600	1	1,600	1,600	1	1,600	0	0	0	1,600	1	1,600	1,600 NSF for first 300 students + 1 NSF per additional student
Staff Lunch Room			0			0	200	1	200	200	1	200	0	0	0	200	1	200	20 NSF per student
[Enter room type here]			0			0			0	0	0	0	0	0	0				
MEDICAL			**341**			**0**			**410**			**410**			**0**			**410**	
Medical Suite Toilet	27	1	27			0	60	1	60	60	1	60	0	0	0	60	1	60	
Nurses' Office / Waiting Room	157	1	157			0	250	1	250	250	1	250	0	0	0	250	1	250	
Examination Room / Resting	157	1	157			0	100	1	100	100	1	100	0	0	0	100	1	100	
[Enter room type here]			0			0			0	0	0	0	0	0	0				
ADMINISTRATION & GUIDANCE			**1,296**			**0**			**2,095**			**2,095**			**80**			**2,015**	
General Office / Waiting Room with Toilet	111	1	111			0	300	1	300	300	1	300	0	0	0	300	1	300	
Teachers' Mail and Time Room			0			0	100	1	100	100	1	100	0	0	0	100	1	100	
Copy Room			0			0	150	1	150	150	1	150	0	0	0	150	1	150	
Records Room			0			0	110	1	110	110	1	110	0	0	0	110	1	110	
Principal's Office with Conference Area	184	1	184			0	375	1	375	375	1	375	0	0	0	375	1	375	
Principal's Secretary / Waiting			0			0	125	1	125	125	1	125	0	0	0	125	1	125	
Assistant Principal's Office			0			0			0	0	0	0	-120	0	0	120	0	-	
Supervisory / Spare Office			0			0			0	0	0	0	-120	-1	-120	120	1	120	
Conference Room	342	1	342			0	250	1	250	250	1	250	0	0	0	250	1	250	
School Counselor Office	424	1	424			0	150	1	150	150	1	150	0	0	0	150	1	150	
School Counselor Storeroom			0			0			0	0	0	0	-35	-1	-35	35	1	35	
Teachers' Work Room	718		0			0	300	1	300	300	1	300	0	0	0	300	1	300	
Tech Office	235	1	235			0	235	1	235	235	1	235	235	1	235				
CUSTODIAL & MAINTENANCE			**546**			**0**			**1,900**			**1,900**			**0**			**1,900**	
Custodian's Office	73	1	73			0	150	1	150	150	1	150	0	0	0	150	1	150	
Custodian's Workshop			0			0	375	1	375	375	1	375	0	0	0	375	1	375	
Custodian's Storage	114	1	114			0	375	1	375	375	1	375	0	0	0	375	1	375	
Recycling Room / Trash			0			0	400	1	400	400	1	400	0	0	0	400	1	400	
Receiving and General Supply			0			0	200	1	200	200	1	200	0	0	0	200	1	200	
Storeroom	132	2	264			0	200	1	200	200	1	200	0	0	0	200	1	200	
Network / Telecom Room	95	1	95			0	200	1	200	200	1	200	0	0	0	200	1	200	
[insert room type here]			0			0			0	0	0	0	0	0	0				
OTHER			**0**			**0**			**2,770**			**2,770**			**2,770**			**0**	
(List rooms separately below)																			
Pre-Kindergarten Classroom with Toilet			0			0	1,200	2	2,400	1,200	2	2,400	0	2	2,400	1,200	0	-	1,100 NSF (minimum size) - 1,300 NSF (maximum size)
Pre-Kindergarten Storage			0			0	250	1	250	250	1	250	250	1	250				
Mothers' Room			0			0	120	1	120	120	1	120	120	1	120				

Proposed Space Summary - Elementary School

Date: 2025-1202 Preliminary Design Program

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT ESSEX ELEMENTARY SCHOOL 250 STUDENT K-5 OPTION	EXISTING CONDITIONS (@ EES)			PROPOSED PROGRAM									VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
				EXISTING TO REMAIN / RENOVATED			NEW CONSTRUCTION			TOTAL									
ROOM TYPE	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	COMMENTS
Total Building Net Floor Area (NFA)			36,404			0			49,115			49,115			15,125			33,990	Total Building Net Floor Area (NFA)
Proposed Student Capacity / Enrollment																# of Grades	6	250	Total Enrollment (Enter Design Enrollment)
																K	1	42	Kindergarten Enrollment
																Grade 1	1	83	Lower Elementary School Enrollment (Grades 1-2)
																Grade 2	1	125	Upper Elementary School Enrollment (Grades 3-6)
																Grade 3	1		
																Grade 4	1		
																Grade 5	1		
																Grade 6	0		
NON-PROGRAMMED SPACES					% of GFA	0		% of GFA	24,558		% of GFA	24,558							Complete this category with Schematic Design Submittal
Other Occupied Rooms (List rooms separately below)																			
[Enter room type here]				-	#DIV/0!		-	0.0%		-	0.0%	0							
Unoccupied MEP / FP Spaces	2,358	4.4%	2,358	-	#DIV/0!		-	0.0%		-	0.0%	0							
Unoccupied Closets, Supply Rooms, and Storage Rooms	875	1.6%	875	-	#DIV/0!		-	0.0%		-	0.0%	0							
Toilet Rooms	1,133	2.1%	1,133	-	#DIV/0!		-	0.0%		-	0.0%	0							
Circulation (corridors, stairs, ramps and elevators)	6,813	12.8%	6,813	-	#DIV/0!		-	0.0%		-	0.0%	0							
Remaining[3]	5,453	10.3%	5,453	-	#DIV/0!	0	-	33.3%	24,558	-	33.3%	24,558							
Total Building Gross Floor Area (GFA)[2]			53,036			0			73,673			73,673			28,673			45,000	Total Building Gross Floor Area (GFA)[2]
Grossing Factor (GFA / NFA)			1.46			#DIV/0!			1.50			1.50			0.18			1.32	Grossing Factor (GFA / NFA)

[1] **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

[2] **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls.

[3] **Remaining** Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Building Gross Floor Area and area not accounted for above.

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A true statement, made under the penalties of perjury.

Name of Architecture Firm: JCJ Architecture

Name of Principal Architect: James E. LaPosta Jr., FAIA, LEED AP

Signature of Principal Architect:

Date: 12.19.2025

Proposed Space Summary - Elementary School

Date: 2025-1024 Preliminary Design Program

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT ESSEX ELEMENTARY SCHOOL 515 STUDENT K-5 CONSOLIDATION OPTION	EXISTING CONDITIONS (@ MMES)			PROPOSED PROGRAM									VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
				EXISTING TO REMAIN / RENOVATED			NEW CONSTRUCTION			TOTAL									
ROOM TYPE	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	COMMENTS
CORE ACADEMIC			**19,850**			**19,850**			**14,120**			**33,970**			**9,920**			**24,050**	STE Guidelines Policy
(List rooms of different sizes separately)																			
Kindergarten Classroom with Toilet	1,200	3	3,600	1,200	3	3,600	1,200	2	2,400	1,200	5	6,000	0	0	0	1,200	5	6,000	1,100 NSF (minimum size) - 1,300 NSF (maximum size); Minimum of (2) sinks required per Kindergarten Classroom
General Classroom (Five per grade 1-3, Four per grade 4-5)	950	15	14,250	950	15	14,250	950	8	7,600	950	23	21,850	0	4	3,800	950	19	18,050	900 NSF (minimum size) - 1,000 NSF (maximum size); Minimum of (2) sinks required per General Classroom
Project Room w/ storage (STE, World Language)	1,000	2	2,000	1,000	2	2,000	1,000	1	1,000	1,000	3	3,000	-80	3	3,000	1,080	0	-	1,080 NSF (minimum size); Refer to the 2018 STE Guidelines for additional information.
Project Room Storage			0			0	120	1	120	120	1	120	0	1	120	120	0	-	Minimum of (1) 120 NSF STE Storage Room required per STE Room; Refer to the 2018 STE Guidelines for additional information.
MTSS Interventionists Office			0			0	500	2	1,000	500	2	1,000	500	2	1,000				
MTSS Interventionists Small Group			0			0	250	2	500	250	2	500	250	2	500				
Break-Out			0			0	500	3	1,500	500	3	1,500	500	3	1,500				
SPECIAL EDUCATION			**6,480**			**6,480**			**8,355**			**14,835**			**9,035**			**5,800**	Special Education spaces require DESE review and approval.
(List rooms of different sizes separately)																			
Self-Contained Special Education Classroom	950	4	3,800	950	4	3,800	950	1	950	950	5	4,750	0	1	950	950	4	3,800	900 NSF (minimum size) - 1,300 NSF; equal to the size of the proposed General Classrooms that serve the same student population.
Self-Contained Special Education Toilet Room	60	3	180	60	3	180	60	1	60	60	4	240	0	4	240	60	0	-	
Self-Contained Special Education Classroom (ACE, Gr. K-2)			0			0	600	1	600	600	1	600	600	1	600				
Self-Contained Special Education Classroom (ACE, Gr. 3-5)			0			0	600	1	600	600	1	600	600	1	600				
Self-Contained Special Education Classroom (RISE, Gr. K-2)			0			0	950	1	950	950	1	950	950	1	950				
Self-Contained Special Education Classroom (RISE, Gr. 3-5)			0			0	950	1	950	950	1	950	950	1	950				
Self-Contained Special Education Toilet Room (RISE)			0			0	60	2	120	120	2	120	120	2	120				
Resource Room	500	4	2,000	500	4	2,000	500	1	500	500	5	2,500	0	2	1,000	500	3	1,500	1/2 size of a General Classroom
Small Group Room	500	1	500	500	1	500	500	1	500	500	2	1,000	0	1	500	500	1	500	1/2 size of a General Classroom
Equipment Storage (RISE)			0			0	150	2	300	150	2	300	150	2	300				
School Psychologist			0			0	150	1	150	150	1	150	150	1	150				
Speech and Language			0			0	150	1	150	150	1	150	150	1	150				
Sensory Room (Calming Corner)			0			0	250	1	250	250	1	250	250	1	250				
Occupational Therapy (OT)			0			0	475	1	475	475	1	475	475	1	475				
Physical Therapy (PT)			0			0	1,200	1	1,200	1,200	1	1,200	1,200	1	1,200				
PT Storage							250	1	250	250	1	250	250	1	250				
Special Education Team Chair Office			0			0	150	1	150	150	1	150	150	1	150				
Special Education Conference			0			0	200	1	200	200	1	200	200	1	200				
Public Day Education Spaces (List rooms separately below)																			
			0			0			0	0	0	0	0	0	0				
Collaborative Program Spaces (List rooms separately below)																			
			0			0			0	0	0	0	0	0	0				
ART & MUSIC			**2,550**			**2,550**			**0**			**2,550**			**-25**			**2,575**	
Art Classroom (25 seats)	1,000	1	1,000	1,000	1	1,000			0	1,000	1	1,000	0	0	0	1,000	1	1,000	Assumed schedule: 2 times per week per student
Art Workroom with Storage and Kiln	150	1	150	150	1	150			0	150	1	150	0	0	0	150	1	150	
Music Classroom / Large Group (25-50 seats)	1,200	1	1,200	1,200	1	1,200			0	1,200	1	1,200	0	0	0	1,200	1	1,200	Assumed schedule: 2 times per week per student
Music Practice / Ensemble	200	1	200	200	1	200			0	200	1	200	125	-2	-25	75	3	225	
[Enter room type here]			0			0			0	0	0	0	0	0	0				

Proposed Space Summary - Elementary School

Date: 2025-1024 Preliminary Design Program

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT ESSEX ELEMENTARY SCHOOL 515 STUDENT K-5 CONSOLIDATION OPTION	EXISTING CONDITIONS (@ MMES)			PROPOSED PROGRAM									VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
				EXISTING TO REMAIN / RENOVATED			NEW CONSTRUCTION			TOTAL									
ROOM TYPE	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	COMMENTS
HEALTH & PHYSICAL EDUCATION			**7,150**			**7,150**			**0**			**7,150**			**850**			**6,300**	Excess Physical Education Spaces Policy
Gymnasium (w/ bleachers)	6,850	1	6,850	6,850	1	6,850			0	6,850	1	6,850	850	0	850	6,000	1	6,000	
Gym Storeroom	150	1	150	150	1	150			0	150	1	150	0	0	0	150	1	150	
Health Instructor's Office with Shower and Toilet	150	1	150	150	1	150			0	150	1	150	0	0	0	150	1	150	
			0			0			0	0	0	0	0	0	0				
			0			0			0	0	0	0	0	0	0				
MEDIA CENTER			**2,478**			**2,478**			**810**			**3,288**			**300**			**2,988**	
Media Center / Reading Room	2,178	1	2,178	2,178	1	2,178			0	2,178	1	2,178	-810	0	-810	2,988	1	2,988	
Leveled Library	300	1	300	300	1	300			0	300	1	300	300	1	300				
Dispersed Library			0			0	810	1	810	810	1	810	810	1	810				
DINING & FOOD SERVICE			**5,660**			**5,660**			**1,410**			**7,070**			**-208**			**7,278**	
Cafeteria / Dining	2,513	1	2,513	2,513	1	2,513	1,350	1	1,350	3,863	2	3,863	0	1	0	3,863	1	3,863	Based on 2 lunch seatings - 15 NSF per seat
Stage	1,000	1	1,000	1,000	1	1,000			0	1,000	1	1,000	0	0	0	1,000	1	1,000	
Chair / Table / Equipment Storage	312	1	312	312	1	312	60	1	60	372	2	372	0	1	0	372	1	372	
Kitchen	1,635	1	1,635	1,635	1	1,635			0	1,635	1	1,635	-180	0	-180	1,815	1	1,815	1,600 NSF for first 300 students + 1 NSF per additional student
Staff Lunch Room	200	1	200	200	1	200			0	200	1	200	-29	0	-29	229	1	229	20 NSF per student
[Enter room type here]			0			0			0	0	0	0	0	0	0				
MEDICAL			**510**			**510**			**0**			**510**			**-100**			**610**	
Medical Suite Toilet	60	1	60	60	1	60			0	60	1	60	0	0	0	60	1	60	
Nurses' Office / Waiting Room	250	1	250	250	1	250			0	250	1	250	0	0	0	250	1	250	
Examination Room / Resting	100	2	200	100	2	200			0	100	2	200	0	-1	-100	100	3	300	
[Enter room type here]			0			0			0	0	0	0	0	0	0				
ADMINISTRATION & GUIDANCE			**2,101**			**2,101**			**385**			**2,486**			**106**			**2,380**	
General Office / Waiting Room with Toilet	318	1	318	318	1	318			0	318	1	318	-90	0	-90	408	1	408	
Teachers' Mail and Time Room	100	1	100	100	1	100			0	100	1	100	0	0	0	100	1	100	
Copy Room	150	1	150	150	1	150			0	150	1	150	0	0	0	150	1	150	
Records Room	110	1	110	110	1	110			0	110	1	110	0	0	0	110	1	110	
Principal's Office with Conference Area	375	1	375	375	1	375			0	375	1	375	0	0	0	375	1	375	
Principal's Secretary / Waiting	125	1	125	125	1	125			0	125	1	125	0	0	0	125	1	125	
Assistant Principal's Office			0			0			0	0	0	0	-120	0	0	120	0	-	
Supervisory / Spare Office	120	1	120	120	1	120			0	120	1	120	0	0	0	120	1	120	
Conference Room	300	1	300	300	1	300			0	300	1	300	50	0	50	250	1	250	
School Counselor Office	150	1	150	150	1	150	150	1	150	150	2	300	0	0	0	150	2	300	
School Counselor Storeroom	35	1	35	35	1	35			0	35	1	35	0	0	0	35	1	35	
Teachers' Work Room	318	1	318	318	1	318			0	318	1	318	-90	0	-90	408	1	408	
Tech Office			0			0	235	1	235	235	1	235	235	1	235				
CUSTODIAL & MAINTENANCE			**1,935**			**1,935**			**120**			**2,055**			**-60**			**2,115**	
Custodian's Office	150	1	150	150	1	150			0	150	1	150	0	0	0	150	1	150	
Custodian's Workshop	375	1	375	375	1	375			0	375	1	375	0	0	0	375	1	375	
Custodian's Storage	375	1	375	375	1	375			0	375	1	375	0	0	0	375	1	375	
Recycling Room / Trash	400	1	400	400	1	400			0	400	1	400	0	0	0	400	1	400	
Receiving and General Supply	212	1	212	212	1	212			0	212	1	212	-60	0	-60	272	1	272	
Storeroom	223	1	223	223	1	223	120	1	120	343	2	343	0	1	0	343	1	343	
Network / Telecom Room	200	1	200	200	1	200			0	200	1	200	0	0	0	200	1	200	
[insert room type here]			0			0			0	0	0	0	0	0	0				
OTHER			**2,650**			**2,650**			**2,770**			**5,420**			**5,420**			**0**	
(List rooms separately below)																			
Pre-Kindergarten Classroom with Toilet	1,200	2	2,400	1,200	2	2,400	1,200	2	2,400	1,200	4	4,800	0	4	4,800	1,200	0	-	1,100 NSF (minimum size) - 1,300 NSF (maximum size)
Pre-Kindergarten Storage	250	1	250	250	1	250	250	1	250	250	2	500	250	2	500				
Mothers' Room			0			0	120	1	120	120	1	120	120	1	120				

Proposed Space Summary - Elementary School

Date: 2025-1024 Preliminary Design Program

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT ESSEX ELEMENTARY SCHOOL 515 STUDENT K-5 CONSOLIDATION OPTION	EXISTING CONDITIONS (@ MMES)			PROPOSED PROGRAM: EXISTING TO REMAIN / RENOVATED			PROPOSED PROGRAM: NEW CONSTRUCTION			PROPOSED PROGRAM: TOTAL			VARIATION TO MSBA GUIDELINES			MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
ROOM TYPE	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	COMMENTS
Total Building Net Floor Area (NFA)			51,364			51,364			27,970			79,334			25,238			54,096	**Total Building Net Floor Area (NFA)**
Proposed Student Capacity / Enrollment																# of Grades	6	515	**Total Enrollment (Enter Design Enrollment)**
																K	1	86	Kindergarten Enrollment
																Grade 1	1	172	Lower Elementary School Enrollment (Grades 1-2)
																Grade 2	1	258	Upper Elementary School Enrollment (Grades 3-6)
																Grade 3	1		
																Grade 4	1		
																Grade 5	1		
																Grade 6	0		
NON-PROGRAMMED SPACES					% of GFA	25,738		% of GFA	13,985		% of GFA	39,667							Complete this category with Schematic Design Submittal
Other Occupied Rooms (List rooms separately below)																			
[Enter room type here]				-	0.0%		-	0.0%		-	0.0%	0							
Unoccupied MEP / FP Spaces	1,174	1.5%	1,174	-	0.0%		-	0.0%		-	0.0%	0							
Unoccupied Closets, Supply Rooms, and Storage Rooms	744	1.0%	744	-	0.0%		-	0.0%		-	0.0%	0							
Toilet Rooms	2,124	2.8%	2,124	-	0.0%		-	0.0%		-	0.0%	0							
Circulation (corridors, stairs, ramps and elevators)	13,322	17.3%	13,322	-	0.0%		-	0.0%		-	0.0%	0							
Remaining[3]	8,374	10.9%	8,374	-	33.4%	**25,738**	-	33.3%	**13,985**	-	33.3%	**39,667**							
Total Building Gross Floor Area (GFA)[2]			**77,102**			**77,102**			**41,955**			**119,001**			**39,219**			**79,782**	**Total Building Gross Floor Area (GFA)[2]**
Grossing Factor (GFA / NFA)			**1.50**			**1.50**			**1.50**			**1.50**			**0.03**			**1.47**	**Grossing Factor (GFA / NFA)**

[1] **Individual Room Net Floor Area (NFA)** Includes the net square footage measured from the inside face of the perimeter walls and includes all specific spaces assigned to a particular program area including such spaces as non-communal toilets and storage rooms.

[2] **Total Building Gross Floor Area (GFA)** Includes the entire building gross square footage measured from the outside face of exterior walls.

[3] **Remaining** Includes exterior walls, interior partitions, chases, and other areas not listed above. Do not calculate this area, it is assumed to equal the difference between the Total Building Gross Floor Area and area not accounted for above.

Architect Certification

I hereby certify that all of the information provided in this "Proposed Space Summary" is true, complete and accurate and, except as agreed to in writing by the Massachusetts School Building Authority, in accordance with the guidelines, rules, regulations and policies of the Massachusetts School Building Authority to the best of my knowledge and belief. A true statement, made under the penalties of perjury.

Name of Architecture Firm: JCJ Architecture

Name of Principal Architect: James E. LaPosta Jr., FAIA, LEED AP

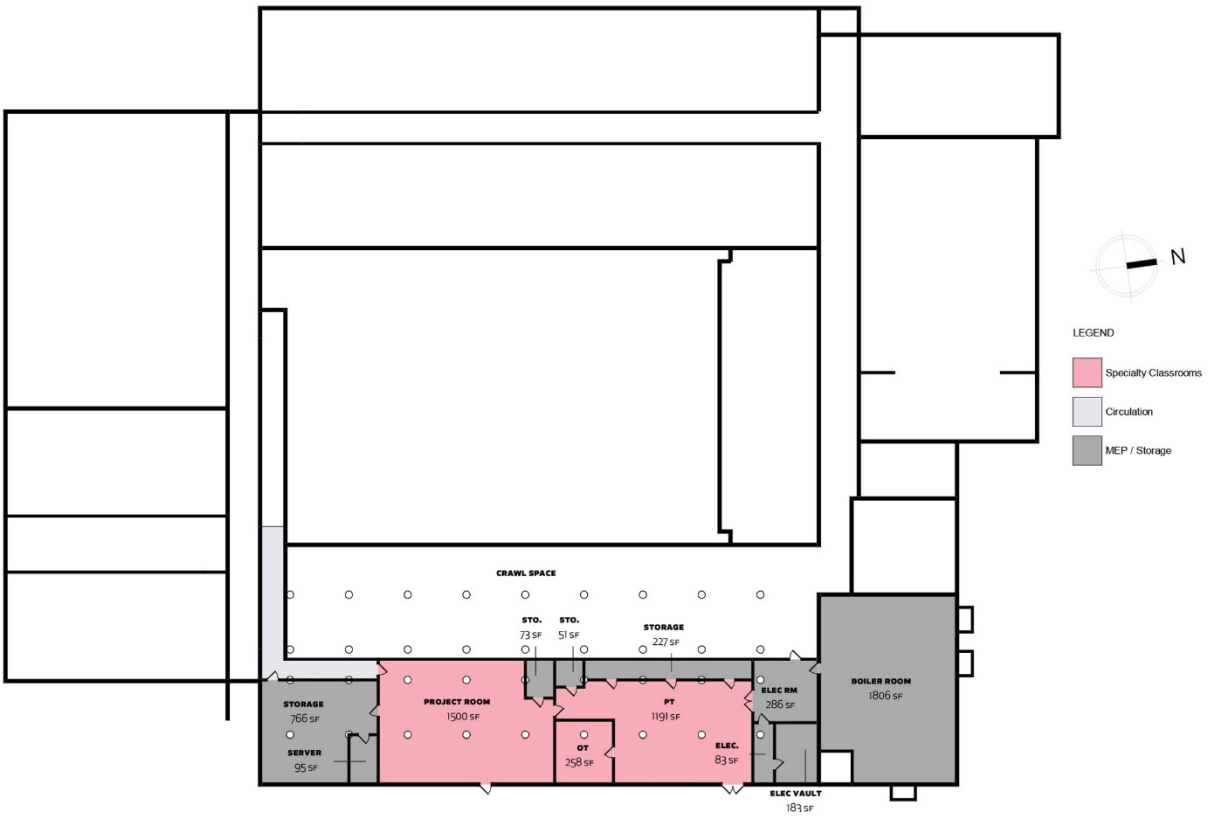
Signature of Principal Architect:

Date: 12.19.2025

EXISTING FIRST FLOOR PLAN



EXISTING BASEMENT FLOOR PLAN



VARIATIONS FROM MSBA SPACE GUIDELINES

Beginning with the MSBA Space Summary template for elementary school spaces, the District developed an education plan to best serve the students into the future. With three levels of enrollment, agreed upon by the District and the MSBA, the differences are as follows:

165 student enrollment, grades K-3 + 30 PreK student enrollment

The 165-student enrollment incorporates the student population from the Town of Essex only.

The Proposed Space Summary totals 40,518 net square feet (nsf) [60,777 gross square feet (gsf) applying a 1.50 grossing factor]. This is 13,640 nsf [31,077 gsf total] larger than the MSBA Guideline of 27,128 nsf [29,700 gsf total] for an elementary school of this enrollment size. Based on the District's Educational Program, the differences from the MSBA Guidelines can be attributed as follows:

Core Academic Spaces

- One (1) additional General Classroom at 950 nsf each [1,425 gsf total] to accommodate the District's teaming model per grade as noted in the Educational Program.
- One (1) additional Project Room (STE) Room at 1,080 nsf each [1,620 gsf total] to accommodate the District's STE curriculum as noted in the Educational Program.
- One (1) additional Project Storage Room at 120 nsf each [180 gsf total] to accommodate the District's STE program as noted in the Educational Program.
- One (1) additional World Language Classroom at 950 nsf each [1,425 gsf total] to accommodate the District's World Language program as noted in the Educational Program.
- One (1) MTSS Interventionist Coach Office at 500 nsf each (750 gsf total) to accommodate the District's curriculum as noted in the Educational Program.
- One (1) MTSS Interventionist Small Group Room at 250 nsf (375 gsf total) located adjacent to the MTSS Interventionalist Coach office to accommodate the District's curriculum as noted in the Educational Program.
- Two (2) additional Break-out spaces at 500 nsf each [1,500 gsf total] distributed throughout the building to accommodate the District's curriculum as noted in the Educational Program.

Special Education

- Minus One (-1) additional Special Education Self-contained Classroom (RISE, Gr. K-3) at 950 nsf each [1,425 gsf total] with Minus One (-1) additional toilet rooms at 60 nsf each (90 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Self-Contained Special Education Classroom (ACE, Gr. K-3) at 600 nsf (900 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- Three (3) Additional Small Group Rooms reduced from 500 nsf to 250 nsf [750 gsf total] to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Equipment Storage (RISE) at 150 nsf (225 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) School Psychologist Office at 150 nsf (225 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Speech and Language Office at 150 nsf (225 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Occupational Therapy Room (OT) at 475 nsf (712.5 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Physical Therapy Room (PT) at 1,200 nsf (1,800 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Physical Therapy Storage Room at 250 nsf (375 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Special Education Team Chair Office at 150 nsf (225 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Special Education Conference Room at 200 nsf each (300 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.

Art & Music

- One (1) Art Classroom at 1,000 nsf [1,500 gsf tota]) to accommodate the District's Art curriculum as noted in the Educational Program.
- One (1) Art Workroom with Storage and Kiln at 150 nsf [225 gsf tota]) to accommodate the District's Art curriculum as noted in the Educational Program.

- One (1) Music Classroom / Large Group (25-50 seats) at 950 nsf [1,425 gsf tota]) to accommodate the District's Performing Arts curriculum as noted in the Educational Program.
- Minus One (-1) Music Practice / Ensemble Room at -75 nsf [-112.5 gsf tota]) not required to accommodate the District's Performing Arts curriculum as noted in the Educational Program.

Health & Physical Education

- Increase the Gymnasium to 850 nsf [1,275 gsf] to accommodate bleacher seating.

Media Center

- No changes

Dining & Food Service

- No changes

Medical

- No changes

Administration & Guidance

- One (1) Tech Office at 235 nsf [352.5 gsf total] to accommodate the District's curriculum as noted in the Educational Program.

Custodial & Maintenance

- No changes

Other

- Two (2) Additional Pre-Kindergarten Classrooms with Toilets at 1,200 nsf each [3,600 gsf total] to accommodate the District's Early Educational curriculum as noted in the Educational Program.
- One (1) Additional Pre-Kindergarten Storage Room at 250 nsf each [375 gsf total] to accommodate the District's Early Educational curriculum as noted in the Educational Program.
- One (1) Additional Mother's Room at 120 nsf each [180 gsf total] to accommodate the District's needs as noted in the Educational Program.

250 student enrollment, grades K-5 + 30 PreK student enrollment

The 250-student enrollment incorporates the student population from the Town of Essex only.

The Proposed Space Summary totals 49,115 net square feet (nsf) [73,673 gross square feet (gsf) applying a 1.50 grossing factor]. This is 15,125 nsf [28,673 gsf total] larger than the MSBA Guideline of 33,990 nsf [45,000 gsf total] for an elementary school of this enrollment size. Based on the District's Educational Program, the differences from the MSBA Guidelines can be attributed as follows:

Core Academic Spaces

- One (1) additional General Classroom at 950 nsf each [1,425 gsf total] to accommodate the District's teaming model per grade as noted in the Educational Program.
- One (1) additional Project Room (STE) Room at 1,080 nsf each [1,620 gsf total] to accommodate the District's STE curriculum as noted in the Educational Program.
- One (1) additional Project Storage Room at 120 nsf each [180 gsf total] to accommodate the District's STE program as noted in the Educational Program.
- One (1) additional World Language Classroom at 950 nsf each [1,425 gsf total] to accommodate the District's World Language program as noted in the Educational Program.
- Two (2) MTSS Interventionist Office at 500 nsf each (1,500 gsf total) to accommodate the District's curriculum as noted in the Educational Program.
- Two (2) MTSS Interventionist Small Group Room at 250 nsf each (750 gsf total) located adjacent to the MTSS Interventionist office to accommodate the District's curriculum as noted in the Educational Program.
- Three (3) additional Break-out spaces at 500 nsf each [2,250 gsf total] distributed throughout the building to accommodate the District's curriculum as noted in the Educational Program.

Special Education

- One (1) Self-Contained Special Education Classroom (ACE, Gr. K-2) at 600 nsf (900 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Self-Contained Special Education Classroom (ACE, Gr. 3-5) at 600 nsf (900 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- Five (5) Additional Small Group Rooms reduced from 500 nsf to 250 nsf each [1,500 gsf total] to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- Two (2) Equipment Storage (RISE) at 150 nsf each (450 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) School Psychologist Office at 150 nsf (225 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Speech and Language Office at 150 nsf (225 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Sensory Room (Calming Corner) at 250 nsf (375 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Occupational Therapy Room (OT) at 475 nsf (712.5 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Physical Therapy Room (PT) at 1,200 nsf (1,800 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Physical Therapy Storage Room at 250 nsf (375 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Special Education Team Chair Office at 150 nsf (225 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Special Education Conference Room at 200 nsf each (300 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.

Art & Music

- No changes

Health & Physical Education

- Increase the Gymnasium to 850 nsf [1,275 gsf] to accommodate bleacher seating.

Media Center

- No changes

Dining & Food Service

- No changes

Medical

- No changes

Administration & Guidance

- One (1) Tech Office at 235 nsf [352.5 gsf total] to accommodate the District's curriculum as noted in the Educational Program.

Custodial & Maintenance

- No changes

Other

- Two (2) Additional Pre-Kindergarten Classrooms with Toilets at 1,200 nsf each [3,600 gsf total] to accommodate the District's Early Educational curriculum as noted in the Educational Program.
- One (1) Additional Pre-Kindergarten Storage Room at 250 nsf each [375 gsf total] to accommodate the District's Early Educational curriculum as noted in the Educational Program.
- One (1) Additional Mother's Room at 120 nsf each [180 gsf total] to accommodate the District's needs as noted in the Educational Program.

515 student enrollment, grades K-5 + 60 PreK student enrollment

The 515-student enrollment incorporates the student population from both the town of Essex and the town of Manchester-By-The-Sea.

The Proposed Space Summary totals 79,334 net square feet (nsf) [119,001 gross square feet (gsf) applying a 1.50 grossing factor]. This is 25,238 nsf [39,219 gsf total] larger than the MSBA Guideline of 54,096 nsf [79,782 gsf total] for an elementary school of this enrollment size. Based on the District's Educational Program, the differences from the MSBA Guidelines can be attributed as follows:

Core Academic Spaces

- Four (4) additional General Classroom at 950 nsf each [5,700 gsf total] to accommodate the District's teaming model per grade as noted in the Educational Program.
- Two (2) additional Project Room (STE) Room at 1,000 nsf each [3,000 gsf total] to accommodate the District's STE as noted in the Educational Program.
- One (1) additional Project Storage Room at 120 nsf each [180 gsf total] to accommodate the District's STE program as noted in the Educational Program.
- One (1) additional World Language Classroom at 1000 nsf each [1,500 gsf total] to accommodate the District's World Language program as noted in the Educational Program.
- Two (2) MTSS Interventionist Office at 500 nsf each (1,500 gsf total) to accommodate the District's curriculum as noted in the Educational Program.
- Two (2) MTSS Interventionist Small Group Rooms at 250 nsf each (750 gsf total) located adjacent to the MTSS Interventionist office to accommodate the District's curriculum as noted in the Educational Program.
- Three (3) additional Break-out spaces at 500 nsf each [1,500 gsf total] distributed throughout the building to accommodate the District's curriculum as noted in the Educational Program.

Special Education

- One (1) additional Special Education Self-contained Classroom (RISE, Gr. K-2) at 950 nsf each [1,425 gsf total] with One (1) additional toilet rooms at 60 nsf each (90 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) additional Special Education Self-contained Classroom (RISE, Gr. 3-5) at 950 nsf each [1,425 gsf total] with One (1) additional toilet rooms at 60 nsf each (90 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.

- One (1) Self-Contained Special Education Classroom (ACE, Gr. K-2) at 600 nsf (900 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Self-Contained Special Education Classroom (ACE, Gr. 3-5) at 600 nsf (900 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- Two (2) Additional Resource Rooms at 500 nsf each [1500 gsf total] to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- Two (2) Additional Small Group Rooms at 500 nsf each [1500 gsf total] to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- Two (2) Equipment Storage (RISE) at 150 nsf each (450 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) School Psychologist Office at 150 nsf (225 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Speech and Language Office at 150 nsf (225 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Sensory Room (Calming Corner) at 250 nsf (375 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Occupational Therapy Room (OT) at 475 nsf (712.5 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Physical Therapy Room (PT) at 1,200 nsf (1,800 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Physical Therapy Storage Room at 250 nsf (375 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Special Education Team Chair Office at 150 nsf (225 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.
- One (1) Special Education Conference Room at 200 nsf each (300 gsf total) to accommodate the District's Special Educational curriculum as noted in the Educational Program.

Art & Music

- One (1) Music Practice / Ensemble room at 200 nsf vs MSBA guidelines allowable Three (3) at 75 nsf for a difference of -25 nsf (-37.5 gsf total) to accommodate the District's Performing Arts curriculum as noted in the Educational Program.

Health & Physical Education

- Increase the Gymnasium to 850 nsf [1,275 gsf] to accommodate bleacher seating.

Media Center

- One (1) Leveled Library at 300 nsf each (450 gsf total) to accommodate the District's Educational curriculum as noted in the Educational Program.

Dining & Food Service

- Existing Kitchen and staff lunchroom slatted to remain are slightly undersized from the MSBA Guidelines resulting in -208 nsf (-312 gsf total) reduction

Medical

- Existing medical suite slated to remain is slightly undersized from the MSBA Guidelines resulting in -100 nsf (-150 gsf total) reduction

Administration & Guidance

- One (1) Tech Office at 235 nsf [352.5 gsf total] to accommodate the District's curriculum as noted in the Educational Program.

Custodial & Maintenance

- Existing Custodial & Maintenance areas slated to remain are slightly undersized from the MSBA Guidelines resulting in -60 nsf (-90 gsf total) reduction

Other

- Four (4) Additional Pre-Kindergarten Classrooms with Toilets at 1,200 nsf each [7,200 gsf total] to accommodate the District's Early Educational curriculum as noted in the Educational Program.
- Two (2) Additional Pre-Kindergarten Storage Room at 250 nsf each [750 gsf total] to accommodate the District's Early Educational curriculum as noted in the Educational Program.
- One (1) Additional Mother's Room at 120 nsf each [180 gsf total] to accommodate the District's needs as noted in the Educational Program.

EVALUATION OF EXISTING CONDITIONS

SECTION 3.1.4

3.1.4 – EVALUATION OF EXISTING CONDITIONS

- Property Ownership
- Property Development
- Historical Significance
- Building Code
- Accessibility
- Geotechnical Evaluation
- Environmental Site Assessment
- Sustainability
- Existing Documentation
- General Existing Conditions
- Existing Floor Plans
- Evaluations of Existing Conditions
    - Architectural
    - Structural
    - HVAC
    - Electrical
    - Plumbing
    - Fire Protection
    - Foodservice
    - AV/Theatre
    - Site/Civil/Survey
    - Landscape Architecture
    - Visual Hazardous Building Materials Review
    - Phase 1 ESA

3.1.4 – EVALUATION OF EXISTING CONDITIONS

PROPERTY OWNERSHIP

The 9.75-acre site located at 12 Story Street Essex Massachusetts, is owned by the town of Essex, MA and leased to the Manchester Essex Regional School District. Copies of the Property Deeds are included in Appendix 3.1.8.9 of this report.

PROPERTY DEVELOPMENT

The site is located in the General Use Zoning District. Educational use is permitted within the General Use Zoning District with Special Permit by the Planning Board Required. Any applicable development restrictions including, but not limited to, municipal open space, property line setbacks and wetland setbacks are addressed by each site in Section 3.1.5 Site Development Requirements and by each option in Section 3.1.6 Preliminary Evaluation of Alternatives of this Report.

HISTORICAL SIGNIFICANCE

A Project Notification Form was submitted to the Massachusetts Historical Commission (MHC) and received on November 24, 2025. After reviewing MHC files and the materials submitted, the MHC determined that this project is neither included in the Inventory nor listed in the National and State Registers of Historic Places. No further review by the MHC is required for the MSBA-funded project. A copy of the MHC recorded Project Notification Form dated December 2, 2025, is included in Appendix 3.1.8.8 of this report.

BUILDING CODE

In accordance with the Massachusetts State Building Code, Tenth Edition, the existing Essex Elementary School is an Educational Group E occupancy with non-separated mixed uses. The building appears to have been constructed in two sections at different times with the original building consisting of an admin area, two core academic wings, and cafetorium with kitchen built in 1958 and a southern addition consisting of a media center and gymnasium with locker rooms built in 1975. The building is not currently protected by a fire sprinkler system. Based on the field observation, the building appears to be Type IIB construction (non-combustible, unprotected). Any future alterations should follow the requirements for Type IIB so that new materials are non-combustible except where permitted by IBC Section 603: Combustible Materials in Types I and II Construction.

Massachusetts General Law MGL c148, s26G, requires that any existing building over 7,500 square feet that undergoes major alterations, modifications or building addition must include a fire sprinkler system.

Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

The proposed scope of work needs to be determined if the project is a major alteration. If the work is considered a major alteration, then an automatic combined sprinkler/standpipe system is required for the entire existing building and any additions.

In addition, the building would also require substantial improvements to the exterior envelope to meet the 2021 International Energy Conservation Code (IECC) & Stretch Energy Code. Thought the Strech Energy Code has not been adopted by the town of Essex it is a requirement of the Massachusetts School Building Authority and therefore will be required for any additions, renovations or new school construction.

The effective code will be based on the date of the building permit application.

ACCESSIBILITY

In general, the building provides accessible routes to all areas and reasonable accommodations have been made to comply with ADA/MAAB; however, the building would require significant alterations to become fully compliant with the accessibility guidelines including, but not limited to, the following:

- Several of the secondary egresses are not on grade and have multiple step egresses.
- Some locations have been modified to provide wooden ramps. Though in most cases these need repair and at the end of their useful life
- Several doors lack ADA/MAAB compliant hardware. Many classroom doors lack the proper push / pull free area clearances.
- Interior signage is not ADA/MAAB compliant in size, location or providing tactile writing.
- Classroom sinks lack knee clearance and are not equipped with accessible faucets.
- Single use toilet rooms are not accessible.

GEOTECHNICAL EVALUATION

The preliminary geotechnical engineering services for the Essex Elementary School Building will commence once the Building Committee votes to advance the Preliminary Design Program (PDP) for further development for evaluation in the Preferred Schematic Report (PSR).

A copy of the geotechnical engineering data report presenting the results of our subsurface exploration program with preliminary recommendations and design criteria for safe and economical foundation design will be submitted with the Preferred Schematic Report.

ENVIRONMENTAL SITE ASSESMENT

The completion of the required Phase I Environmental Site Assessment (ESA) for the 12 Story Street, Essex, MA, property was performed on September 24th, 2025. A copy of the Phase I Environmental Site Assessment (ESA) included in Appendix 3.1.8.14 of this report.

SUSTAINABILITY

The Madchester Essex Regional School District is committed to achieving sustainability.

LEED Requirements: Using LEED-S, achieve a minimum of "Silver", including a minimum total of three points (from seven points available) from the following three categories: MR Building Product Disclosure and Optimization – Material Ingredients; IEQ – Low Emitting Materials; and IEQ – Indoor Air Quality Assessment.

MSBA Energy Efficiency Requirements: Meet the minimum energy efficiency requirements described in the MA DOER "Stretch Code Green Community" Standards.

MSBA Project Advisory #81 Requirements: The District is targeting the additional 3% reimbursement by meeting the minimum energy efficiency requirements described in the MA DOER "Opt-In Specialized Code" standards. The district is targeting the additional 1% reimbursement by achieving five (from seven available points) in the LEED indoor air quality points noted above.

The Sustainability goals will be established at the initiation of the Preferred Schematic Design effort, and an application to register the project for LEED for Schools version 4 will be submitted to the Green Business Certification, Inc. (GBCI) prior to the end of the year.

EXISTING DOCUMENTATION

The Manchester Essex Regional School District made the following documents available to the Designers for review in preparation of this report:

- Construction Documents for the Essex Elementary School New Addition Drawings date May 16th, 1975, prepared by W.H. Jones & Son Architects

- Facility Needs Assessment dated January 27th, 2023, prepared by Habeeb & Associates Architects

GENERAL EXISTING CONDITIONS

The Essex Elementary School, located at 12 Story St, Essex, MA, was originally constructed in 1958. A media center and gymnasium addition were added in 1975. The total facility as it stands today is 53,036 gross square feet and is located on the site of approximately 9.75 acres. The school is a single-story courtyard building with a half-level change accessible via ramps between the 1958 and 1975 portions of the school. There is a portion of the basement that is occupied for school activities that has level access discharge due to site topography.

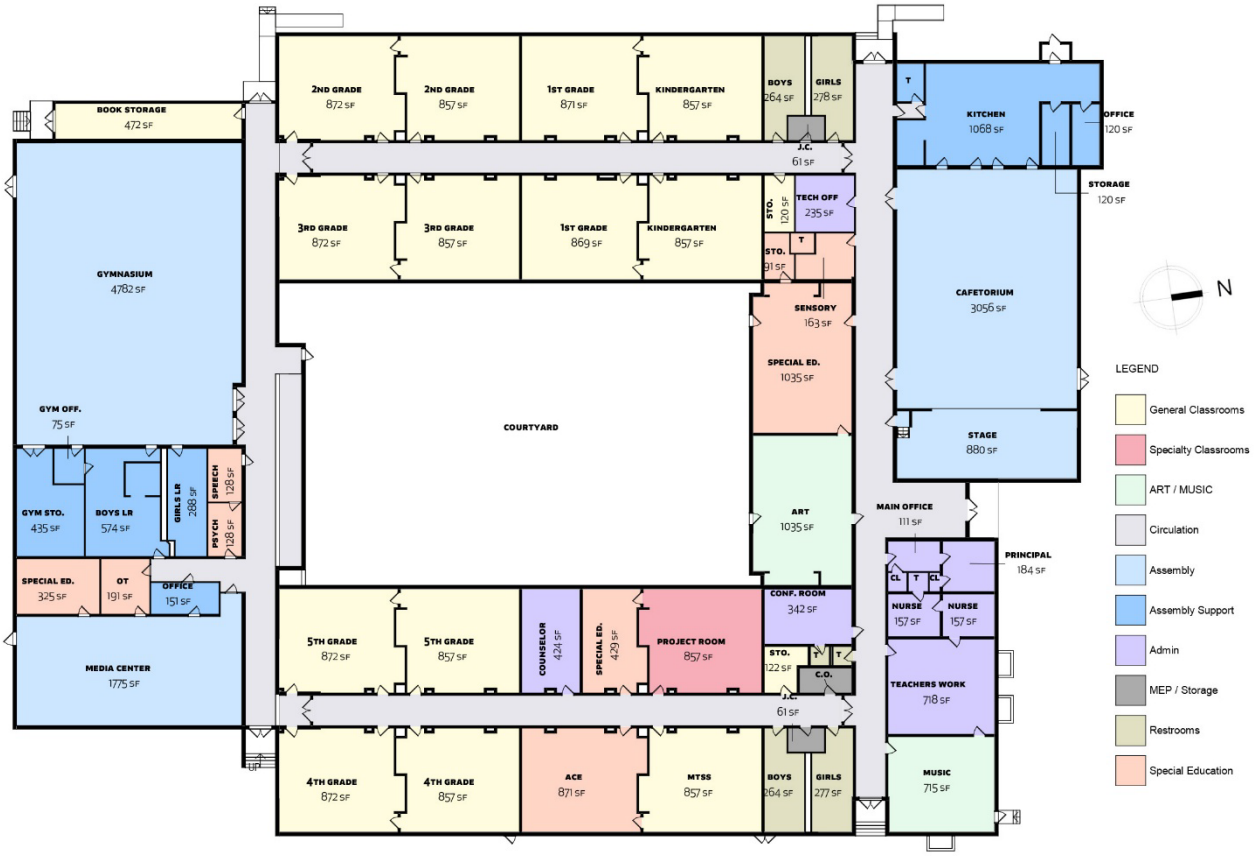
The Essex Elementary School is one of two elementary schools in the Manchester Essex Regional School District. The school's current enrollment is 200 students from grades Kindergarten through 5th grade.

During the fall of 2025, representatives from the architect, civil engineer, landscape architect, structural engineer, mechanical engineer, electrical engineer, plumbing engineer, audio/visual, foodservice, hazardous materials, and technology consultants toured the building to complete a visual assessment of the existing site and building structure, envelope and systems; there was no destructive testing conducted as part of this assessment.

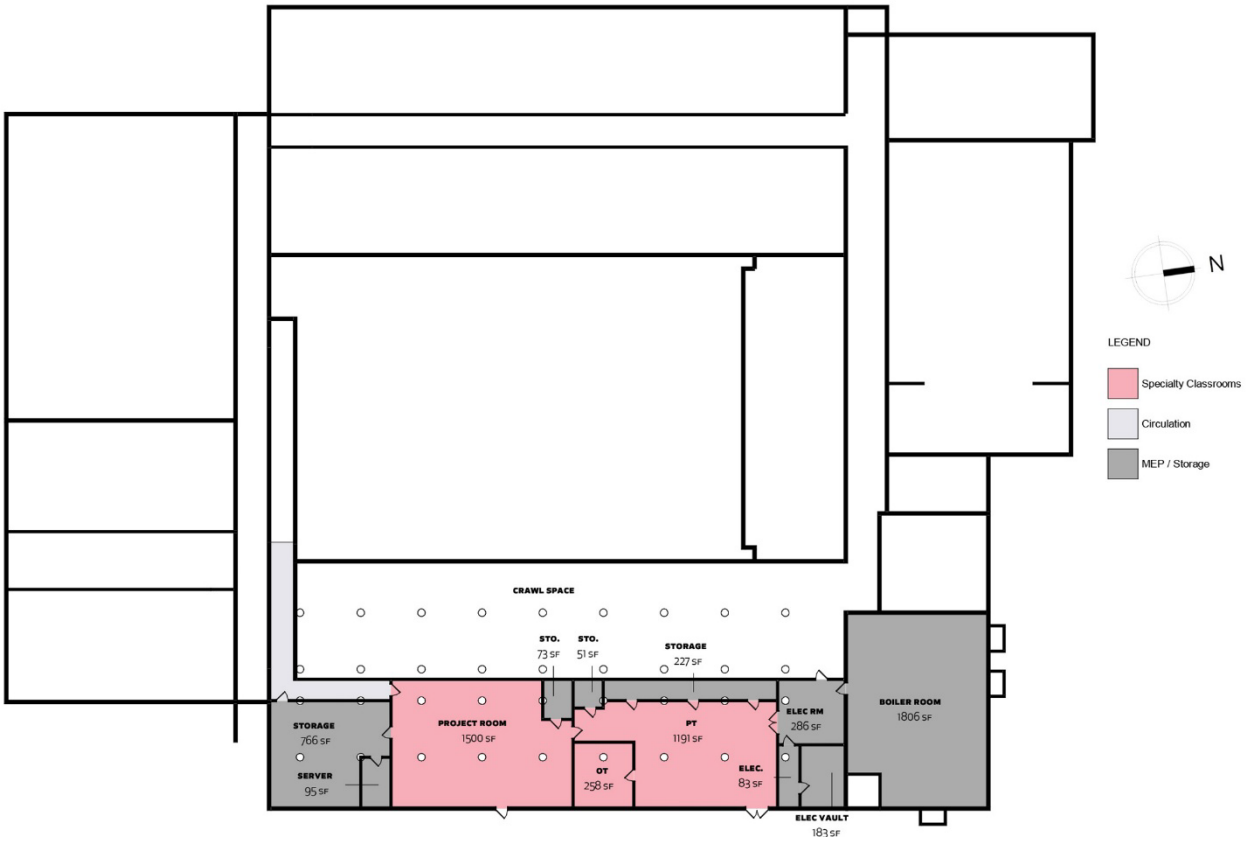
The building has a mostly single story rectangular shaped footprint with a central courtyard. The site is mostly flat except for the east side of the building which steps down to reveal an at grade occupied portion of the basement. There is some visible ledge at the northwest corner of the existing building as well as some visible ledge in the unoccupied portion of the basement. There is a central main entrance at the northern side of the building facing Story Street, to the east is the main office and admin space and to the west is the cafetorium and kitchen. The front entrance has a single set of aluminum storefront doors in a full window wall. There is no entrance vestibule or secure check in area. Corridors on both the east and west side of the building wrap around the courtyard and house the two academic wings of the building. At the southern end of the building the corridors ramp down to the 1975 addition that houses both the media center and gymnasium.

Also, in the southern corridor there is another ramp down to the occupied portion of the basement. The basement classroom once functioned as the art room but in recent years has been converted to project rooms and OT / PT spaces. There is also storage as well as the building's server room located in the basement. The northeast corner of the basement houses the electrical rooms as well as building maintenance storage. Beyond the electrical rooms is a subbasement that houses the buildings boiler room. There is no accessible access to this space. The rest of the basement is mostly unoccupied space that houses mechanical equipment as well as pipe chase for sanitary and HVAC piping.

EXISTING FIRST FLOOR PLAN



EXISTING BASEMENT FLOOR PLAN



3.1.4 – EVALUATION OF EXISTING CONDITIONS – ARCHITECTURE

Prepared by JCJ Architecture

There are several categories of architectural features that will be evaluated as part of the Feasibility Phase to determine the overall scope of the renovation/addition options for the Essex Elementary School.

EXTERIOR ENCLOSURE

Exterior Walls

Most the schools' exterior walls are brick masonry with sections of wood siding, mostly found below the windows in the 1958 portion of the building. The occupied portion of the basement has a solid concrete exterior exposed foundation wall. The roof edge of the 1958 portion of the building has a 3-foot overhang consisting of exposed concrete deck and aluminum edge metal fascia. The exposed deck is visible spalling and damaged in several locations. Rebar is visible in these areas and needs repair or reconstruction. Due to the age and construction of the building it is assumed that all the walls are uninsulated. There are no visible masonry weeps at either the top of bottom of the walls or at any window head locations. There is ongoing issues with water intrusion in the exterior walls of the gyms most likely due to the solid masonry construction and lack of proper weeping of water that is accumulating in the wall during rain events.









Exterior Doors

The exterior doors are a mix of hollow metal, fiberglass reinforced polymer, and aluminum. Most of the door frames appear of the original construction though several of the doors appear to have been replaced over time. Most if not all the doors appear at the end of their useful life and should be considered for replacement. While many exterior doors themselves appear to meet ADA/MAAB requirements several of the main and secondary egress doors do not have at grade exit discharge due to the presence of a step at several of these critical locations. Several locations have been modified to provide egress ramps. However, most of the ramps are of wood construction and need repair or replacement.







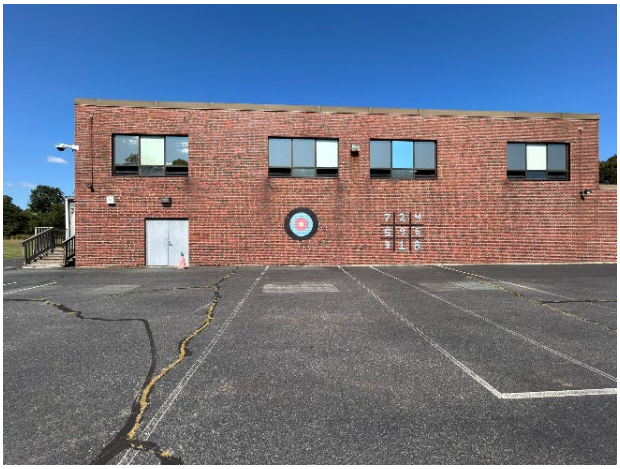


Exterior Windows

There are fixed and operable multi-pane vision glazed openings, while some of the glazing appears it may have been replaced, most of the frames appear to be of the original construction. The original portion of the building has wood framed windows, and the 1975 addition has aluminum framed windows. There is visible rot on the wood framed windows and caulking around the windows is old and cracking and, in many areas, missing. All the windows are at the end of their useful life and should be considered for removal and replace with modern energy efficient glazing and thermally broken framing.









Roofing

The roofing consists of a 60 mil EPDM single-ply roofing membrane installed in 1998. The roofing membrane is in fair condition considering its age, though there are several patches throughout the field of the roof. Most of the roofs are low slope flat roofs with the exception to the cafetorium. It has been well maintained but is at the end of its useful life and needs replacement. There are several large air bubbles forming under the roof and there is the possibility that a large wind event could cause major damage. The current roof does not meet modern energy code and insulation values. Drain placement is poor causing standing and ponding water. There were no reported active leaks as the roof is well maintained by the facilities staff to increase its longevity. The fascia and roof edge for much of the school is aluminum break metal. There are some areas of damage to the facia noticed around the facility. The Gymnasium walls have water infiltration issues. It is unknown currently if those issues are caused by the roof or the wall construction. It would be recommended to replace the roof and explore the walls closer if this portion of the building is to be renovated. There are no roof hatches and no permanent access to the roof. There are no walkway pads located on the roof for extra protection while walking on the roof. There are several skylights throughout the corridors, most of which are in poor condition either cracked or patched and need replacement.





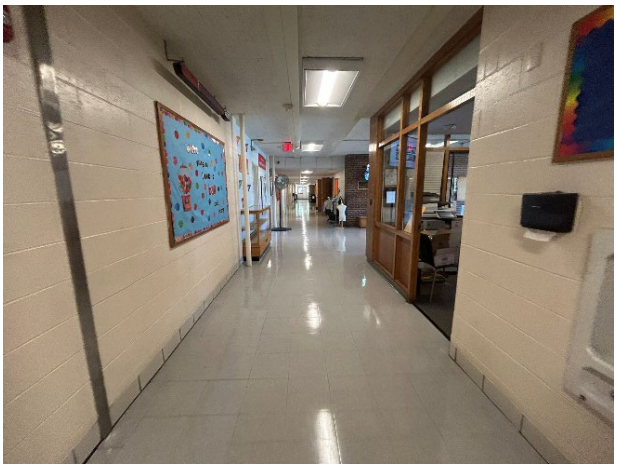
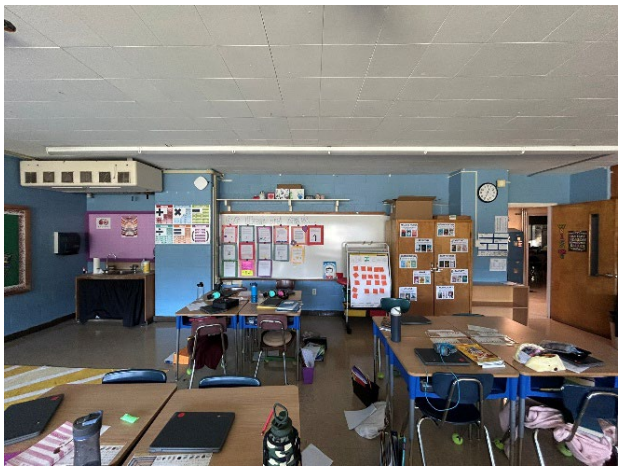


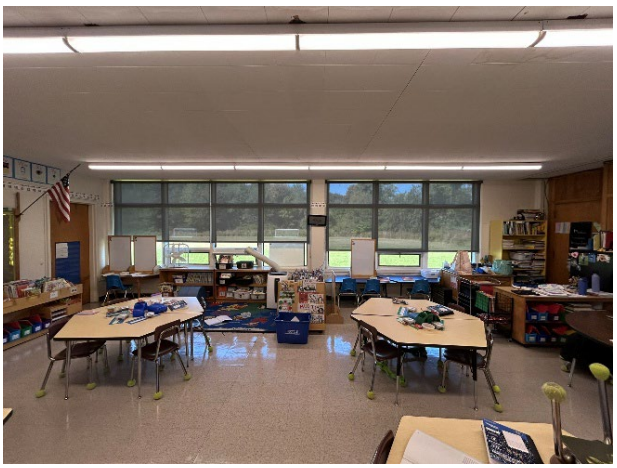
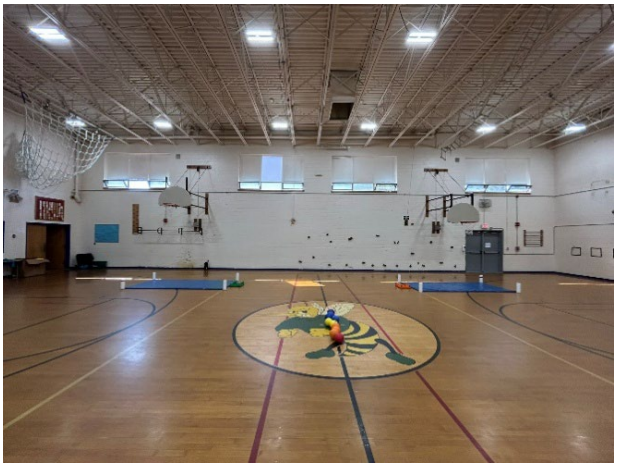


INTERIOR CONSTRUCTION

Interior Partitions

Most of the interior partitions are concrete block masonry. The demising walls between classrooms are of wood construction. Mostly consisting of custom millwork storage units. There are a few gypsums board on metal stud walls mostly in spaces that have been reconfigured in recent years.

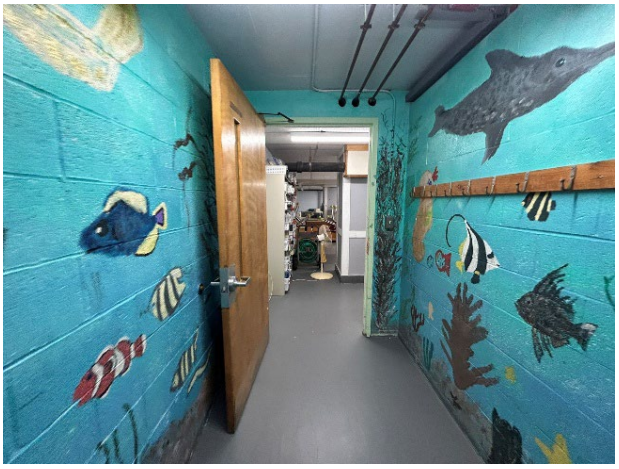




Interior Doors

The interior doors are solid wood doors, many with vision lights in painted metal frames. The doors and frames are in fair condition. Several doors lack ADA/MAAB compliant hardware. Most of the classroom doors lack ADA/MAAB compliant pull side door clearance for accessibility.





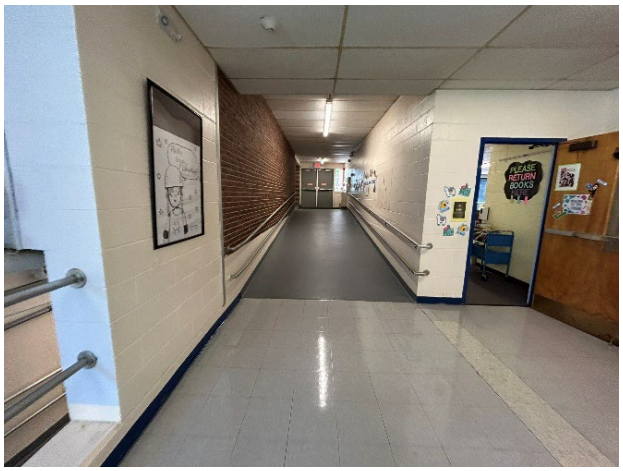




Stairs, Ramps, Lifts

There are serval ramps throughout the building. Both academic wings connect to the 1975 addition via ramps on opposite ends of the southern corridor and in the middle of those two ramps is a ramp down to the basement. All levels of the building are accessible via ramps. The only interior stairs in the building are for access to the stage. Accessible access at the stage is provided via a wheelchair lift. There is also a small spiral staircase from the janitors closet near the bathrooms in the northeast corner of the building. This spiral stair is not for public use only custodial staff. It leads directly to the electrical and boiler room below. The ramps and stairs appear to be ADA/MAAB compliant.







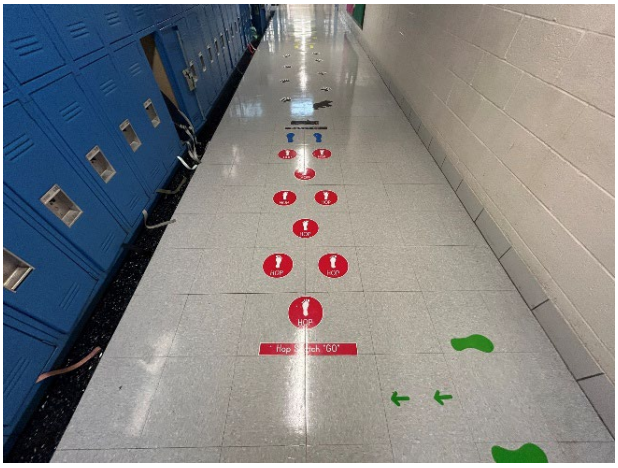






Floor Finishes

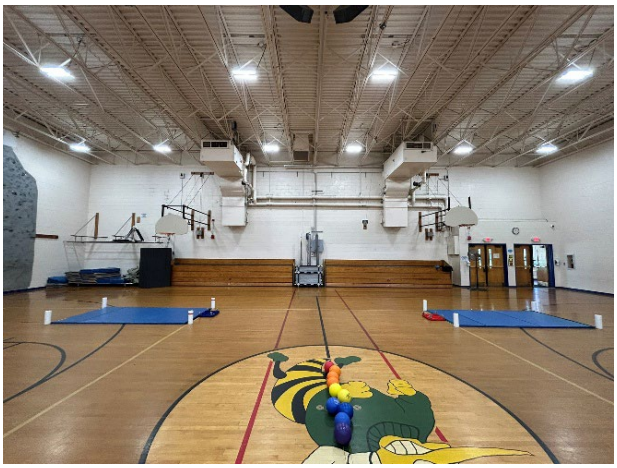
VCT flooring with rubber bases is typical throughout the classrooms. The corridors also have VCT flooring with glazed CMU starter course base. The media center is carpeted with rubber base. The cafetorium and gymnasium have hardwood floors. The gym has a metal vented base. The bathrooms have tiled floors and cove tile bases with half tiled walls. The flooring looks well maintained though it shows its age and wear and is at the end of its life cycle. Most if not all flooring would be recommended for removal and replacement in a renovation / alteration scheme.







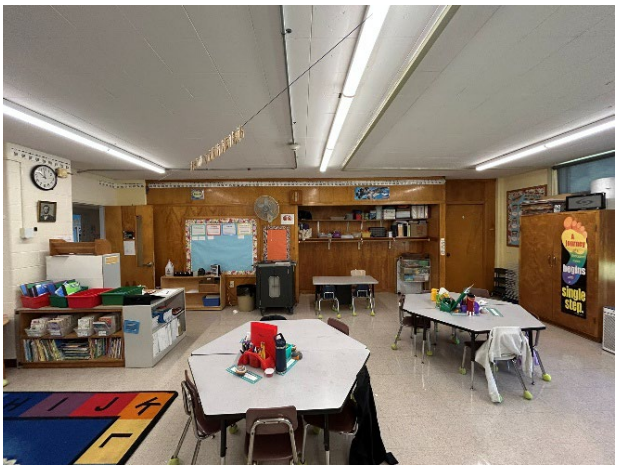




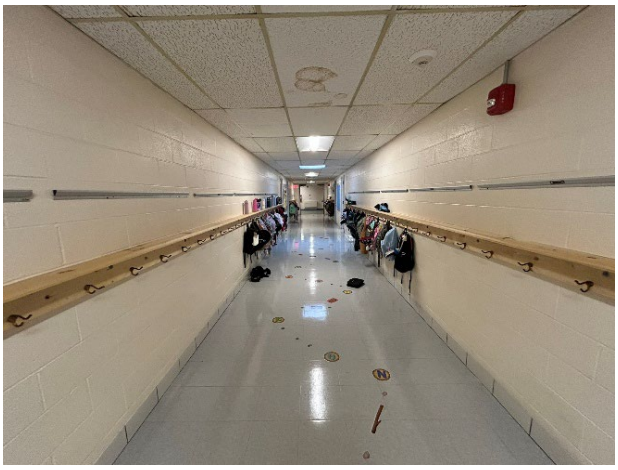


Ceiling Finishes:

The school corridors, media center, cafetorium, conference room, and main office have suspended 2'x4' acoustic ceiling tiles. The acoustic tiles are old, stained and sagging in many locations and should be considered for replacement. Most of the rest of the school classrooms have 1'x1' spline style acoustic tiles. These tiles are original to the building and would be removed and replaced if the building is to be renovated.

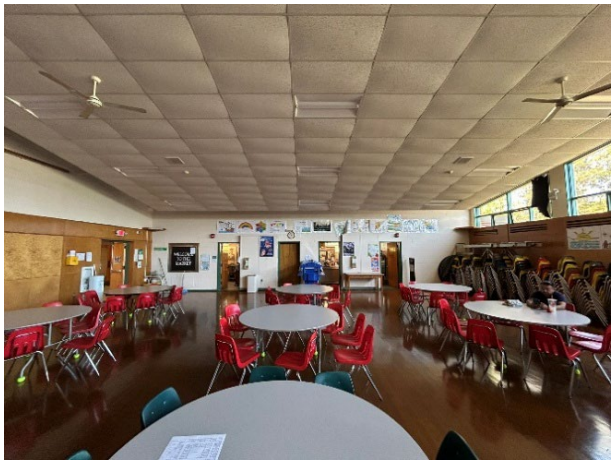












3.1.4 – EVALUATION OF EXISTING CONDITIONS – STRUCTURE

Prepared by RSE Associates, Inc.

EXECUTIVE SUMMARY

On September 24, 2025, RSE visited the existing Essex Elementary School to make observations of the building structure. No exploratory probes were performed, so all field observations were made on exposed structure. No structural drawings were available from the original building, but the structural drawings from the 1975 addition wing were available for reference.

EXISTING CONSTRUCTION

The existing one-story building was built in 1958, with an addition constructed in 1975. There is a partial basement and crawl space under a portion of the original building.

The original C-shaped building's roof and ground floor slab are constructed from reinforced cast in place concrete. There are precast concrete blocks set into the formwork to create ribs spanning to a shallow concrete beams along the exterior walls and the corridor walls. The concrete roof slab cantilevers to create an overhang along much of the building perimeter. In the partial basement, the ground floor slab is supported by 24" diameter concrete columns and concrete retaining walls. The roof is supported typically by 12" square concrete columns and 3 ½" diameter steel columns along one of the corridor walls. The Cafetorium roof is supported by steel trusses spanning to load-bearing CMU walls. The foundation system is unknown but assumed to be shallow concrete spread footings and a concrete slab on grade.

The 1975 addition's roof is constructed from open web steel trusses with galvanized metal roof deck. The trusses span to CMU bearing walls. The floor is a concrete slab on grade and there are reinforced concrete foundation walls on spread footings supported the CMU bearing walls. There is an expansion joint separating the addition from the original building.

While the 1975 addition was designed for wind and seismic loads using CMU shear walls for lateral resistance, the original building was designed under an earlier version of the building code that did not require lateral design. There are CMU partitions in the original building that provide lateral stiffness even though rebar may not be present.

STRUCTURAL RECOMMENDATIONS

The existing building appears to be well maintained and shows no major signs of structural distress. There were some minor cracks and spalls observed on the exterior that should be repaired. No other major repairs are required unless a proposed renovation or addition triggers structural upgrades per CMR 780 10th edition, which references the IEBC 2021. The following options can be considered.

1. **Level 1 Alterations – minor cosmetic changes such as repainting and changing floor finishes, new MEP equipment.**
    a. Structural elements will be maintained.
    b. Support for new equipment will be designed for current code-mandated loads.
2. **Level 2 Alterations – reconfiguration of walls, changes to any doors or windows.**
    a. Structural elements can remain:
        i. If existing gravity loads are not increased more than 5%, or capacity of structural elements carrying gravity loads is not reduced by more than 5%. Gravity elements are roof deck, CMU bearing walls, steel trusses, concrete slabs and beams, columns, and concrete footings.
        ii. If capacity of existing lateral elements is not reduced by more than 10%. Lateral elements can be assumed to be the CMU walls.
    b. Structural elements need to be designed for current IBC 2021 loads or reduced seismic loads:
        i. If the demand/capacity ratio listed above has been exceeded.
        ii. New structural elements
        iii. Voluntarily for the purposes of improving seismic performance.
3. **Level 3 Alterations – structural alteration area exceeds 30% of the total roof.**
    a. Substantial structural alteration requires existing gravity and lateral systems to be designed for current IBC 2021 loads and reduced seismic loads.
    b. Brace CMU walls to roof diaphragms.
4. **Addition – horizontal or vertical addition**
    a. For a horizontal addition with an expansion joint between new and existing, the new structure should be designed for current IBC 2021 loads.
    b. For a horizontal and vertical addition that adds more than 5% gravity load or 10% lateral load to the existing structure, the affected structure should be designed for current IBC 2021 loads.

In general, minor structural changes such as creating small openings for new rooftop equipment will not trigger major structural upgrades. Keeping in place the structural framing and lateral partitions and simply providing basic building maintenance such as periodic roofing replacement and brick repointing will extend the life of the building for many more years. Any major renovation resulting in

an upgrade to the lateral system will require positive connections between the roof and floor diaphragms and the CMU walls. Note that if the CMU walls do not extend up to the roof diaphragm, new bracing elements will need to be installed to create this connection. Very often the cost of the seismic upgrade results in the renovation option as cost prohibitive compared to the cost of new construction.

CONCLUSION

Using the existing structural drawings and observations made during the walk-thru, the condition of the existing structural system appears to be good and simply requires periodic maintenance.

PHOTOS

	Concrete columns supporting 1st floor in crawl space
	Underside of first floor slab shows precast concrete blocks between concrete ribs.

	Spalled concrete at edge of roof overhang
	Steel trusses and roof deck in 1975 gymnasium

3.1.4 – EVALUATION OF EXISTING CONDITIONS – HVAC

Prepared by GGD Consulting Engineers, Inc.

EXECUTIVE SUMMARY

Essex Elementary school was originally constructed in 1958 with an addition added circa 1975. The installed HVAC system is a steam heating system that primarily serves unit ventilators, air handling units, finned tube radiators, and unit heaters. The air handling units serve larger single zones such as the gymnasium and cafeteria. Vestibules and hallways are typically served by steam unit heaters. Bathrooms and some office areas are heated by finned tube radiators. Window, thru-wall, and portable air conditioners are installed in classrooms, office areas, and nurse's suite.

Although the school has done a good job of maintaining the equipment over the years, due to the age of the HVAC equipment and associated distribution systems, we recommend that an all-new HVAC system should be provided. Modern day HVAC systems will offer much higher operational efficiencies, will increase thermal comfort, and improve indoor air quality.

HEATING PLANT:

The boiler room houses two (2) gas-fired steam boilers, although only one appears to be operational. One boiler is a cast iron sectional steam boiler manufactured by Smith Boilers, model 28 HE-S-17, with a net IBR rating of 3384 MBH. The boiler is paired with a Power Flame burner, model WC3-G-25B with a maximum natural gas input of 5155 MBH. The boiler was installed in 2007 and is still operational. This boiler was provided to replace the original boiler when the building was constructed in 1958.

The second boiler is manufactured by H.B. Smith. This boiler was installed when the addition was completed in 1975. This boiler is no longer operational and is abandoned in place. No tag information could be located, so information on this boiler is limited. However it likely had a heat capacity similar to the 2007 boiler noted above.



Existing Operational Boiler



Existing Abandoned Boiler

The boilers are connected to a common stainless steel flue gas exhaust ductwork system which vents all flue gasses out a chimney. The boilers utilize room air for combustion air in lieu of a directly ventilated system which would typically be found on modern day boilers. Combustion air is brought into the space by a wall mounted intake louver. An exhaust fan and exhaust louver are also provided which is presumably provided to exhaust the mechanical space based on room temperature.

Steam condensate is piped back to the mechanical room and pumped back to the boilers by two (2) condensate return pumps, manufactured by Vent-Rite Valve Corp. model 57110. The pumps were replaced around 2005 and are still operational. Condensate is stored in a large main tank and overflow tank.



Condensate Return Pumps



Mechanical Room Makeup Air Duct

CONTROLS:

In 2015, the school updated their existing pneumatic controls to an all new direct digital controls (DDC) system, including a Building Management System (BMS). The new DDC controls system is manufactured by Johnson Controls. The air compressors, refrigerant dryer, and related accessories for the original pneumatic controls system still remain, abandoned in place. The original thermostats are also located throughout the building, which no longer function.



DDC Controls



New T'stat (left) and abandoned T'stat (right)

CLASSROOMS:

The classrooms are heated and ventilated by wall or ceiling mounted unit ventilators. Wall mounted unit ventilators are connected to exterior wall mounted louvers for fresh air intake. Rooms with ceiling mounted unit ventilators are ducted to roof hoods for fresh air intake. Plumbing vents were observed while on site to be well within 25 feet of roof intake hoods, which is a code violation.

Unit ventilators are equipped with steam coils, supply fan, and filter. Classrooms are also provided with exhaust typically by wall mounted exhaust grilles, tied to various roof mounted exhaust fans. The unit ventilators and exhaust fans appear to be well past their expected service life.



Horizontal Unit Ventilator



Vertical Unit Ventilator



Roof hood



Roof Exhaust Fan

There is no central air conditioning system for the classroom spaces. Instead, select spaces are provided with thru-wall air conditioners or portable air conditioners. In most cases though, only box fans are provided to help provide some level of thermal comfort during the warmer months.



Portable Air Conditioner

MEDIA CENTER:

The media center is heated and ventilated by unit ventilators. These unit ventilators appear to be more modern than the unit ventilators observed throughout the rest of the building. The unit ventilators are equipped with supply fans, filters, and steam coils for heating. Thru-wall window air conditioners are installed to provide cooling.



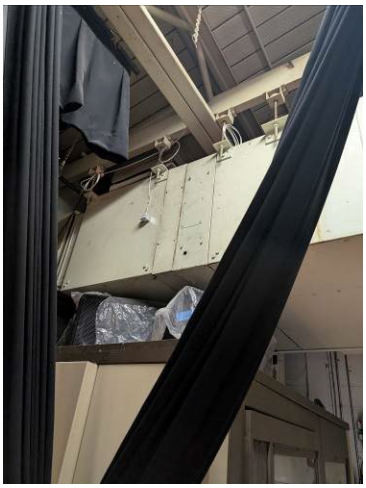
Media Center Unit Ventilator



Media Center Air Conditioner

CAFETORIUM:

The cafetorium is served by two (2) indoor air handling units located above the stage. Each air handling unit is equipped with a steam heating coil, supply fan, return fan, and filters. The air handling units provide heat and ventilation only; there is no cooling section. Supplemental heat is provided by finned tube radiators that are concealed in a furred-out wall along the perimeter.

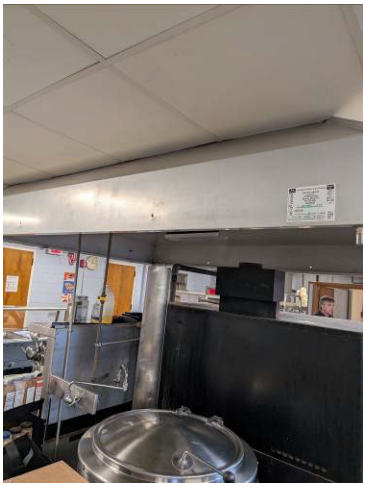


Cafeteria Air Handling Unit

KITCHEN:

The kitchen is heated and ventilated by a ceiling mounted unit ventilator. Fresh air is introduced to the unit ventilator through a roof intake hood. There is a large kitchen exhaust hood with associated kitchen exhaust fan located on the roof. Makeup air presumably comes from the adjacent cafetorium space, which would require the door to the kitchen to remain open since there are no transfer grilles between the kitchen and cafetorium.

The dishwasher is provided with a dedicated exhaust system, which is recommended. The dishwasher appears to be in fair condition.



Kitchen Exhaust Hood



Dishwasher Exhaust

GYMNASIUM:

The gymnasium is served by two (2) indoor mounted air handling units, which provide heating and ventilation air to the space. The air handling units are mounted high within the space, with supply air located up near the ceiling and return air located about midway up the wall, above the bleachers. The air handlers are manufactured by Herman Nelson. Research suggests that Herman Nelson may no longer be producing air handling units, which would make servicing these units difficult and costly. There is no supplemental heat in the gymnasium, such as finned tube. As a result, the gymnasium reportedly has issues maintaining the space heating temperature setpoint.

The adjacent locker rooms are served by a third indoor mounted air handling unit, located within a storage closet. Air is ducted to ceiling mounted supply and return grilles.



Gymnasium AHU



Locker Room AHU

ADMINISTRATION AREAS:

The administration area is provided with heat primarily by unit ventilators, or fined tube radiators. Window air conditions are provided for air conditioning in some spaces. Interior spaces are served by an air handling unit to provide heating, cooling, and ventilation.



Fintube & Window Air Conditioner

CORRIDORS AND ENTRY WAYS:

Corridors and entryways are provided with heat by steam unit heaters or fintube radiators. There was no direct ventilation observed in the corridor spaces. The unit heaters appear to be in fair condition, considering their age. However, they are likely the original unit heaters that were provided back in 1958, which would make them well beyond their recommended service life.



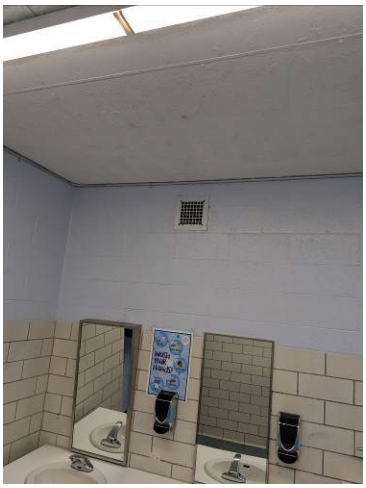
Entry Cabinet Unit Heater

TOILET ROOMS:

Toilet rooms with exterior exposure are typically provided with heat by finned tube radiators. The bathrooms are exhausted by various roof mounted exhaust fans ducted to exhaust grilles in each toilet room.



Toilet Room Fintube



Toilet Room Exhaust

RECOMMENDATIONS:

These recommendations have been based on our field visits and review of the available existing HVAC system drawings.

In general, the existing HVAC system has been well maintained over the years, though a majority of the building HVAC indoor air handling unit, terminal equipment and ductwork distribution systems are originally installed equipment that's approaching their life expectancy.

All new systems and equipment shall be installed in accordance with the building mechanical and energy conservation code in effect at the time of permitting of the proposed system replacements.

The classroom unit ventilators should be replaced with a more efficient system. The systems use a considerable amount of energy as they bring in raw ventilation air without energy recovery, which is then heated, only to be exhausted outdoors. We recommend providing dehumidified displacement air with a Variable Air Volume (VAV) terminal unit to all classrooms paired with radiant heating/cooling panels. The system allows for individual control in each room with CO2 demand control ventilation. Maintenance is minimized as it everything is performed at the air handling unit or rooftop unit.

Provide some level of air-conditioning for all regularly occupied spaces for increased health, productivity, comfort, and building longevity.

Provide new 100% Outdoor Air central ventilation system including energy recovery to provide tempered ventilation to administration, and corridor areas via a galvanized duct distribution system consisting of supply and exhaust ductwork. This could be single or multiple units depending on several factors including roof capacity and clearance for ductwork.

An induction unit system is recommended for space heating and cooling of the administration area. Each space would be provided with induction units sized for the code required ventilation rate and shall be equipped with heating and cooling coils. This will allow individual space temperature control. Hot and chilled water shall be provided by a heat recovery air source heat pump chiller plant, which shall be capable of producing hot and chilled water simultaneously.

Kitchen equipment should be upgraded. HVAC shall be added to support new equipment. A dedicated make-up air unit for the kitchen hood should be installed. A Melink control system is recommended to modulate exhaust and make-up air to the system for energy savings. In addition, an exhaust system shall be added for the new dishwasher.

Replace all existing building exhaust systems with new fans and duct distribution systems.

Replace all existing terminal heating units with new hot water heating units including direct digital control (DDC) valves for increased efficiency, controllability, and longevity.

3.1.4 – EVALUATION OF EXISTING CONDITIONS – ELECTRICAL

Prepared by GGD Consulting Engineers, Inc.

EXECUTIVE SUMMARY:

The existing school facility was constructed in 1958. In 1975 a renovation to the school was completed. Most of the electrical distribution systems are original to the building and although functioning, have far outlived their intended useful life. Upgrades such as an emergency generator and fire alarm system have been completed and are in fair condition. The facility's electrical power is provided by National Grid and is secondary metered, the utility company transformer is located within a building vault accessible from the building's exterior. Other incoming utilities include telephone, fiber, and cable TV.

The power distribution system has had some upgrades, but the majority is original and in poor condition. The interior lighting fixtures have been upgraded since the renovation in 1975 and at present are mostly LED sourced linear utility type strip lighting that are high glare and not ideal for classroom or office installations. All exterior lighting are new LED type fixtures, however products installed vary from door to door and are low quality, high glare fixtures for which the existing wiring was also reused.

(Images provided below are of incoming service pole and existing building generator)





POWER DISTRIBUTION SYSTEMS:

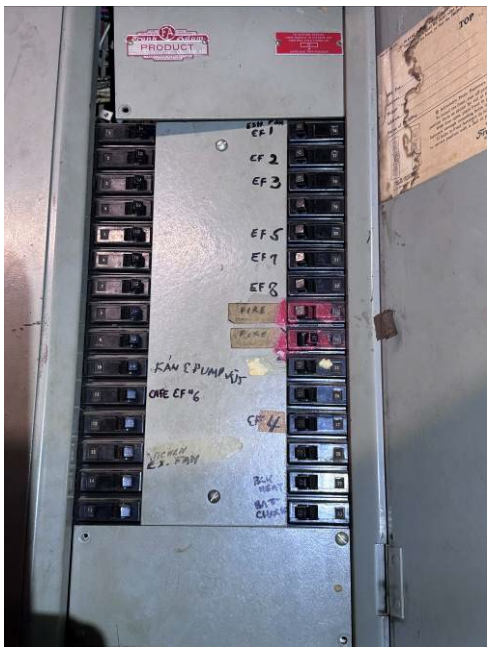
Incoming secondary service originates from pole 1629 fed from Story Street to the school entrance roadway and shares the same utility poles with telephone and cable TV. The site is secondary metered Meter #98 742 157 via a CT cabinet located in the mechanical room in the basement of the facility. The secondary voltage is rated at 60 amperes, 120/208-volt 3 phase, 4 wire provided by National Grid.

The existing electrical equipment is a mixture of vintage and newer panels and disconnect switches. The main service disconnect switch is rated for 600 amps at 120/208, 3 phase 4 wire. The switch is original vintage and reached the end of its useful life expectancy.

Panels located throughout the existing building range from poor to good condition.

Branch circuits and receptacles have been added over the years to accommodate school technology; however, there seems to be a lack of receptacles where some are needed. It was noted that kitchen receptacles and some receptacles are located within 6 ft. of a sink and not GFCI protected this is an electrical code violation.

(Images below depict aging and damaged electrical panels and incoming service primary meter)





INTERIOR LIGHTING:

Most interior lighting has been converted or replaced with LED fixture options. In general, all fixtures currently installed are lower quality utility surface mounted types commonly associated with high glare issues. It was also observed that continuous rows of these fixtures were installed in all

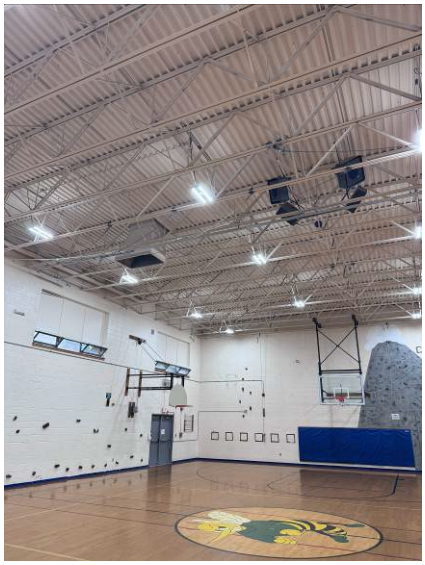
classrooms. The combination of high glare fixtures, quantity of fixtures present, and absence of dimmable lighting controls create spaces where symptoms associated with lighting fatigue may be commonplace. Wiring for most if not all of the newly installed LED fixtures utilized existing lighting circuitry.

Corridor and stairway lighting consists primarily of the same surface mounted LED wraparound fixtures described above. The exception to this was a small number of spaces where 2' x 4' recessed center basket LED troffer style fixtures were installed in lieu of the strip lighting.

Within the existing building's gymnasium, newer high bay industrial LED split lens lighting fixtures with clear high lensing are being utilized.
Lighting controls in most areas consist of a single (1) single pole line voltage switch controlling all fixtures within the room. In some smaller spaces, line voltage manual switching has been replaced with an in-wall occupancy sensor. These types of sensors commonly cause false off signals in areas used as the view of the sensor commonly becomes obstructed. No ceiling mounted occupancy/vacancy or daylight harvesting sensors were observed throughout the facility.

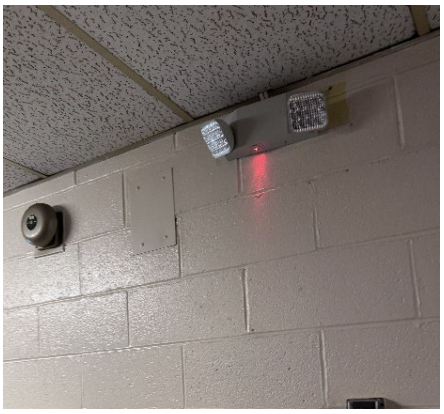
(Images below depict the lighting as described within all classrooms and the building's gymnasium)





EMERGENCY LIGHTING SYSTEM:

The school is supported by a Kohler manufactured generator. The generator is diesel fired and located at the buildings exterior within a weatherproof enclosure. The size could not be determined during the field visit. It is estimated at 125 kW. A single 250 ampere feeder serves on Kohler automatic transfer switch decision maker MPAC 1500 which is in excellent condition. Life safety egress lighting is handled via emergency battery units. There are several types and sizes located throughout the building ranging from original to newer LED models.


(Images above depict the various types of battery units seen throughout the building)

Gang toilet rooms throughout the building are not provided with any form of life safety lighting and while not always code required it is a widely accepted good engineering practice to provide all bathrooms within a building with life safety lighting.

No egress emergency lighting was observed at any exterior egress door.

Exit signs range from original to more up-dated types.

EXTERIOR LIGHTING SYSTEM:

The facility has exterior lighting in the parking lots and mounted off the building. The parking lot lighting is pole mounted with single and double heads. Both types are mounted on concrete pole bases. These luminaires have been recently upgraded to LED type.

Wall mounted building lighting is of various types, mostly newer LED type wall packs, but there are some dual head security types with motion sensors which are also LED type.

FIRE ALARM SYSTEM:

The fire alarm system for the facility consists of a Notifier NFS 303 addressable control panel with voice evacuation. The fire alarm control panel is the main vestibule. The panel was replaced recently. The system is in good condition and appears to be code compliant. There is an Ansul fire suppression system in the kitchen at the exhaust hood. No carbon monoxide detection was observed in the kitchen.

COMMUNICATION SYSTEMS:

Services:

Services include district fiber, coax cabling and POTS lines. The internet service provider is Comcast.

Telephone System:

The telephone system seems to be a VOIP system in alignment with the district standard.

RECOMMENDATIONS:

The existing electrical service is in poor condition and should be replaced.

New switchboard, secondary panelboards and feeders should be installed and segregated to serve specific loads such as power, lighting, and mechanical. Panelboards should be installed in dedicated electrical rooms.

Receptacles should be added to accommodate technology devices and A/V devices used in 21st century learning. The branch circuits should be wired to dedicated power panels with TVSS protection and 200% neutrals to protect sensitive electronics.

Lighting should be upgraded to high efficiency LED lighting to reduce the overall light power density and improve light levels. An automated lighting control system should be provided in the facility that communicates with occupancy sensors, daylight dimming sensors, and low voltage light switches. This will allow for an energy code compliant lighting control system that will further reduce energy usage. Also, lighting should be added to areas where only skylights and clearstory (classroom toilets) to provide additional lighting in times of darkness.

A new wireless clock system should be installed to replace the present system.

New tel/data closets designed to accommodate telecommunications equipment including grounding and air conditioning should be provided. CAT 6A cabling should be installed throughout. The locations of the data drops as well as number of drops needs to be revised to accommodate the furniture layout.

3.1.4 – EVALUATION OF EXISTING CONDITIONS – PLUMBING

Prepared by CA Crowley Engineering

EXECUTIVE SUMMARY:

The building is a roughly 53,036 sf single-story school building which was originally constructed in 1958, with a gymnasium, locker rooms, and media center added in 1975.

The existing school building is equipped with several plumbing systems including domestic hot and cold water; sanitary drain, waste, and vent; natural gas; and storm drainage.

EXISTING CONDITIONS:

Systems and Equipment

The building has one domestic water supply, supplied underground through what appears to be a four-inch (4") ductile iron service entering the boiler room high on the wall in the northeast corner. The four-inch (4") domestic water supply is equipped with a strainer, meter, and isolation valve. The water service piping is a mixture of ductile iron and copper, and appears to be in fair condition.



Water Service

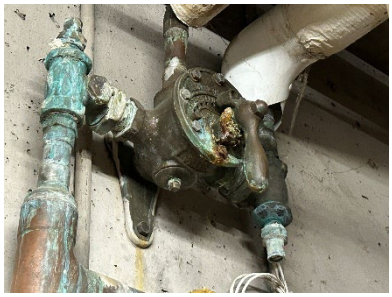
Only the exposed water piping scattered throughout the building could be observed and evaluated. The domestic water piping is hard drawn copper tube of various vintages with solder joint or pressed fittings, and appears to be in fair to good condition, with some evidence of previous leaks. The majority of piping throughout the buildings appears to be insulated. Domestic water piping withing the boiler room around the water heater and mixing valve is not insulated. Depending on vintage, the pipe insulation is poor or fair. Newer pipe insulation is in good condition.

The water heating system is located in the boiler room and includes a Weil-McLain model PFG-6-PIN

atmospheric hot water boiler and a Weil-McLain model Plus 100 70-gallon indirect water heater. The equipment appears to be about 20 years old. Combustion air is taken from the room, and the exhaust gas is vented through the existing masonry chimney. The domestic hot water is a single-temperature system with a thermostatic mixing valve. Hot water recirculation was not observed. The piping around the water heater and mixing valve is in fair to good condition. Piping connections at the mixing valve are leaking and corroding the piping.

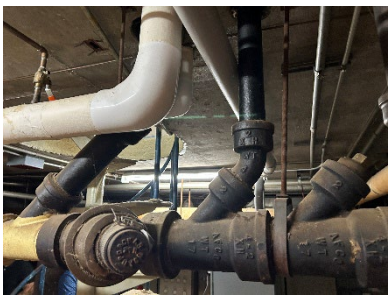


Water Heating System



Mixing Valve

What could be seen of the existing sanitary drain, waste and vent system appears to be a combination of drainage pattern copper and cast iron. The majority of the older piping is hub and spigot cast iron with either gasketed or leaded and caulked joints, with some no-hub cast iron pipe with rubber couplings and stainless-steel bands with shields, as well as threaded galvanized steel vent piping. Copper drainage piping is limited primarily to fixture connections. Piping was observable in a crawl space and pipe tunnel along the perimeter of the building. Sanitary drainage piping appeared to be in fair to good condition.



Cast Iron Sanitary Piping



Cast Iron Storm Drain Piping

Roof drains were scattered through the various roof areas. Roof drains have cast iron bodies with ductile iron domes, where present. Many roof drains were missing the domes and had makeshift strainers made out of wire mesh. Some roof drains appear to have been retrofitted as part of roof maintenance. Storm piping serving the drains is cast iron with hub and spigot joints with either gasketed or leaded and caulked joints, with some no-hub cast iron pipe with rubber couplings and stainless-steel bands with shields. The gymnasium has a sloped roof with scuppers which discharge

to the lower roof. The cafeteria has sloped roofs with gutters and downspouts which discharge to the lower roof.



Roof Drain



Roof Drain Missing Strainer

There are a couple of sumps in the basement. One is equipped with a pump discharging to a floor drain, the other appears to have had a pump, which discharged through the foundation wall to grade, but has since been disconnected. It is unclear currently what these sumps serve.

The building is equipped with a natural gas service located outside boiler room on the northeast side of the building. This natural gas service is equipped with a pressure regulator and meter and provides low pressure gas to the building. The gas serves domestic water heater, building heating equipment, and kitchen equipment. Gas piping is steel with welded, flanged, and threaded fittings, and appears to be in good condition.



Gas Service

Gas equipment in the boiler room includes the aforementioned domestic hot water heating boiler, as well as two low pressure steam boilers for building heating. Combustion air is provided through an exterior louver and single wall galvanized steel ductwork. The combustion air system is not of adequate size to serve all the equipment in the boiler room.

The boiler exhaust vent connector piping is either single wall galvanized sheet metal, or double wall Type B factory-built chimney, both of which are connected to an insulated exhaust vent assumed to be of galvanized steel. The vent extends and connects to a masonry chimney which rises and exits through the roof.



Combustion Air Duct



Boiler Vent Connector

The total combined load of all gas fired equipment in the building is unknown at this time.

The boiler make-up water is equipped with a reduced pressure backflow preventer.

Plumbing Fixtures

Restroom plumbing fixtures include wall hung and floor mounted toilets, wall hung and floor mounted urinals, and wall hung and drop-in countertop lavatories with a combination of manual flush valves, and manual or automatic faucets.



Lavatory



Toilet



Urinals

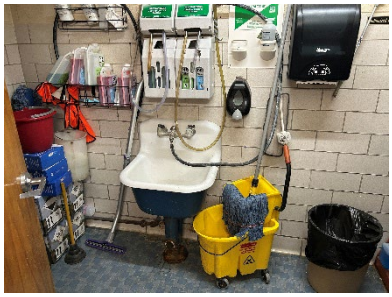


Lavatories

There are various other fixtures located throughout the building including drinking fountains and bottle fillers, service sinks, classroom and general use sinks, floor drains, and kitchen equipment.



Drinking Fountain



Custodial Sink

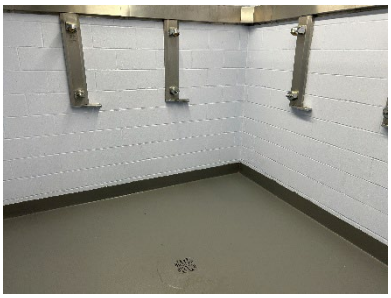
Various original plumbing fixtures, flush valves, and faucets have been replaced over the years.

A majority of the classroom sinks are equipped with bubblers, but cold water only, and many of the faucets and bubblers are inoperable.

Some drinking fountains have been replaced by freestanding refrigerated water dispensers

The locker rooms include tiled gang showers with metering shower valves and master mixing and shower supply control valves.

Wall hydrants are located along the exterior perimeter of the building.


Gang Shower


Classroom Sink & Bubbler

The kitchen is equipped with various cooking and ware washing equipment and appliances.

The triple pot scullery sink is equipped with an interior floor mounted grease interceptor with remote draw-off piping. The kitchen has been retrofitted with an exterior underground grease interceptor with cast iron manhole access covers.

The kitchen does not appear to be equipped with a fire extinguishing system nor an emergency gas shutoff valve.

The kitchen is equipped with a Takagi model T-KD20 direct vent gas-fired hot water booster. Water heater utilizes room air for combustion and is vented through the wall.


Interior Grease Interceptor


Triple Pot Sink


Prep Sink & Hot Water Booster


Gas-Fired Cooking Equipment

DEFICIENCIES:

There were various deficiencies noted. While many of the items may have been allowed by the codes in force at the time of construction, they do not meet the latest edition of the codes and would most likely need to be addressed during any major renovation.

These items include:

- Missing roof drain strainers.
- Some rooftop plumbing vents are too close to fresh air intakes.
- Lack of hot water recirculation.
- Lack of adequate combustion air.
- Toilets equipped with closed front seats and covers.
- Floor mounted urinals.
- Detergent dispensing systems are not equipped with backflow preventers.
- Plumbing fixtures range in condition but may not meet current codes for flow rates and/or accessibility.
- Various hose connections throughout the building are not equipped with vacuum breakers.
- Floor drains throughout the building do not appear to be equipped with automatic trap primers.
- Domestic water piping insulation thickness may not meet current energy code requirements.
- Central shower floor drains.
- Kitchen gas supply may not be properly interlocked with the kitchen hoods.
- Kitchen prep sink not piped indirectly through and air gap.

RECOMMENDATIONS:

All deficiencies noted above should be investigated, evaluated, and addressed.

Although some of the sanitary drainage system piping appears to be in good condition, the original piping is almost 68 years old and nearing the end of its useful life. There were multiple locations where repairs had been made or piping had been abandoned and repiped, indicating that the piping was no longer useful. Therefore, the piping should be replaced, or extensive investigation should be conducted prior to proposed reuse or modifications if the existing cast iron drainage piping system is intended to last for an extended period of time, as should be expected with a major renovation.

Although it appears to be in fair to good condition, we do not believe that the existing domestic water piping system in the building would last for an extended period of time, as should be expected with a major renovation, and would be prone to failure before the building reached its life expectancy.

Any major renovation should consider the replacement of the domestic water piping system in the building.

With the replacement of the water piping in the original building, the hot water piping system should be modified to provide the proper water temperature to the various fixtures, with the hot water serving the kitchen and janitorial sinks, and tempered water serving the remainder of the fixtures.

Hot water recirculation should be provided.

The water heating system and thermostatic mixing valve should be replaced. Consideration should be given to installing an additional water heater and storage tank for redundancy and maintenance/repair.

The water heater in the kitchen appears to be fairly new and in good condition and could remain in service.

The existing 2" underground service and natural gas piping may be able to remain and be modified as needed. However, an increase in gas consumption causing it to exceed the capacity of the existing service would require replacement of the existing 2" underground service and meter, as well as portions of the existing gas piping system.

The kitchen gas system should be equipped with an emergency gas shutoff system interlocked with the kitchen hood.

Due to the standing pilots, a carbon monoxide detector(s) and control panel should be installed.

In general, the newer plumbing fixtures are in good condition, functional, and could remain in service. However, many fixtures are dated, worn, and in poor condition and should be replaced. Most fixtures may fail to comply with current accessibility and water conservation standards. In addition, the existing water closets may not function properly with the newer water conserving flush valves. Given the assessed value of the existing building, the respective cost of any proposed building renovation or addition could require replacement of most of the existing fixtures.

Any work to the building should include an analysis of the current fixture count and plumbing code requirements and provide the correct type and quantity of plumbing fixtures, including separate restroom facilities for faculty and kitchen staff.

If not replaced, damaged or malfunctioning fixtures or equipment should be repaired.

3.1.4 – EVALUATION OF EXISTING CONDITIONS – FIRE PROTECTION

Prepared by CA Crowley Engineering

EXECUTIVE SUMMARY:

The building is roughly 53,036 (sf) school building which was originally constructed in 1958 and was not sprinklered at the time of construction.

A gymnasium, locker rooms, and media center were added in 1975, and were not sprinklered at the time of construction.

There have been no modifications, renovations, or additions which would have required retrofitting the building with an automatic fire suppression system since that time.

The existing kitchen hood is not equipped with an integral fire suppression system.

DEFICIENCIES:

The existing building does not meet current code requirements.

The current Massachusetts State Building Code requires all newly constructed buildings of Use Group E – Educational which are over 12,000 square feet in area to be equipped with an automatic sprinkler system. In addition, legitimate stages are required to be equipped with automatic standpipe systems.

Massachusetts General Laws, Part I, Title XX, Chapter 148, Section 26G, requires automatic sprinkler systems to be installed in all buildings, including additions, with a gross area totaling more than 7,500 square feet.

This law is only triggered if a new building is constructed, an addition is built onto an existing building, or major alterations or modifications are planned for an existing structure. Major alterations and modifications are further defined and discussed in the 2009 advisory memorandum issued by the Executive Office of Public Safety and Security's Department of Fire Services.

Hydrant flow test data was not available, so it is unknown at this time if the existing public water supply system is of adequate capacity to support a new fire sprinkler system.

NOTES:

If a fire pump is required, it would need to be diesel engine driven, or electric motor driven with an emergency generator for back-up. The fire pump needs to be located within a dedicated 2-hour fire rated room with exterior access.

Based on the building's footprint of approximately 44,650sf, the building would need one sprinkler system riser. The building appears to be of non-combustible construction, so sprinklers would not be required in the non-combustible interstitial spaces above suspended ceilings.

RECOMMENDATIONS:

In accordance with Chapter 34 of the current Massachusetts State Building Code, existing buildings in Use Group E are not required to be retrofitted with an automatic fire sprinkler system or brought into full compliance with the new codes in force unless they undergo major alterations or additions.

However, because of the proven property and life-saving benefits of these systems, this office would recommend retrofitting the original building in the near future regardless of renovation.

3.1.4 – EVALUATION OF EXISTING CONDITIONS – Foodservice Equipment

Prepared by Crabtree McGrath Associates, Inc.

EXECUTIVE SUMMARY:

The Essex Elementary School is an elementary school serving approximately 230 students in grades kindergarten through five. Crabtree-McGrath Associates, Inc. is a foodservice design consulting firm that visited the school in October of 2025. The existing conditions of the kitchen and servery were reviewed in detail to develop the following report. The foodservices assessment in this report will address major components within the current foodservice program. We will reference the National Sanitation Foundation (NSF), an independent governing body responsible for developing standards for foodservice equipment and facility design. It is imperative to note that all equipment in commercial kitchens must be constructed in accordance with NSF standards as mandated by the food codes. When mentioning the health code, we are citing the requirements outlined in the Federal Food Code, 2021 edition, published by the FDA, as well as the Merged Massachusetts Food Code 2018 edition.

SCHOOL LUNCH PROGRAM:

The school's cafeteria kitchen serves the standard school lunch program, providing a variety of food options along a single main serving line. This serving line is located within the kitchen space, allowing for typical visual and verbal communication between production and serving staff members. However, major infrastructure elements, including cooking equipment, exhaust systems, and serving lines, have not received significant updates since the original construction of the facility. Considering the current school population, the kitchen also faces challenges related to insufficient refrigeration, freezer, and dry storage space needed for efficient storage and food production.

The walls are a mix of durable glazed block and painted block which has held up well. The floor within the kitchen is an epoxy painted concrete floor which is worn and has cracks in some locations. The floor appears to have been recently painted and in fair condition but the cracks in the floor are an issue that needs to be corrected. The ceiling finishes in the main portion of the kitchen and is lay in smooth faced tile. The tiles are in fair condition but there are areas where they are stained or need to be replaced.



Image 1

The school kitchen faces limitations in its refrigerated and dry storage capacities. See images 1, 2, and 3. What was once a walk-in cooler and freezer had been converted to a dray storage room. As a result, the refrigerated and frozen storage is being done in a series of three door reach-in refrigerators. The units are new and in great condition, however they fall short of the storage capacity needed.

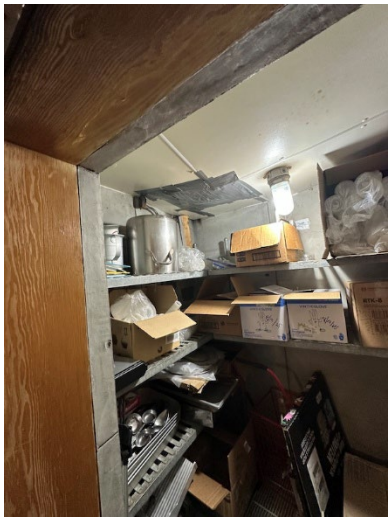


Image 2

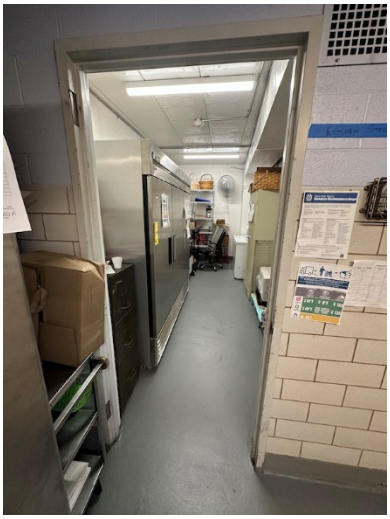


Image 3



Image 4

Dry goods storage capacity is inefficient and needs reorganization to increase dry goods storage density. Image 3.

While the kitchen features several stainless teel topped worktables, there's a limited amount of food preparation areas with sinks for effectively separating function of and washing food products before

the cooking process. Not all tables in the kitchen have stainless steel tops, which is not aligned with modern-day food code standards. Table legs are constructed from older galvanized steel. Galvanized steel tends to chip and rust over time, requiring unnecessary maintenance, such as regular painting of the table legs. Modern tables must be 100% stainless steel construction, offering the best in food contact surfaces and durability.

At the cook line, there are exposed utility lines mounted to and through the exhaust hood canopy. This situation creates a cleanliness issue. In newer construction, utilities are concealed as much as possible. See image 4 for an example of excessive exposed conduits and piping.

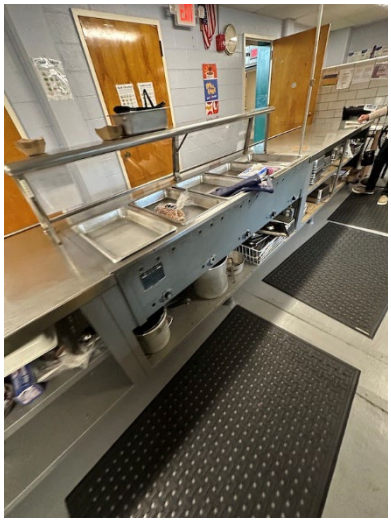


Image 2

Additionally, the exhaust hood in the kitchen space is outdated and should be upgraded to incorporate modern-day finishes and efficiency controls. The hood size is out of proportion to the equipment below it. Lastly, there is no fire suppression system or cooking surface fire protection for the open burner range. In the event of a fire there is no automatic emergency gas shutoff interlock which allows for the turning off the gas supply and fire department notification in the event of an emergency

The serving line (image 5) in this kitchen is outdated and will greatly benefit from equipment updates. The current setup offers no hot holding capability. The hot wells are old, outdated gas fired units. The units were malfunctioning with the leaking of gas, and the gas supply has been turned off.

There are no refrigerated holding options along the line to maintain cold food offerings at safe and appropriate serving temperatures. Additionally, there are no sneeze guards at the cold side of the counter, which is essential for compliance with current NSF (National Sanitation Foundation) regulations. The sneeze guard that is present in front of the hot wells is not code complaint. It lacks sufficient side protection and again the hot wells do not provide heat to keep food hot.

This facility has a conveyer style dish machine, but reusable trays are not being used. Additionally, the aging dishwasher is close to requiring replacement. Overall, the dishwash area is well equipped but underutilized.

RECOMMENDATIONS:

The modernization of the kitchen and serving equipment is warranted. There are two reach-in refrigerators that are in good working order and that can be reused. However, the utility infrastructure and finishes need modernization. The exhaust hood configuration and monitoring of

the gas appliances are a concern that must be addressed regardless of any outcome. Unfortunately, maintaining the current configuration does not allow for improvement in workflow and space utilization. A modern kitchen will require addition are to configure the space for maximum efficiency and optimal performance.

In any scenario where the existing food service space is kept intact, all noted health code deficiencies and violations must be corrected. Plumbing must be reworked with code compliant assemblies that both satisfy the Plumbing, Electrical, and Health codes.

3.1.4 – EVALUATION OF EXISTING CONDITIONS – AUDIO VISUAL

Prepared by Newcomb & Boyd

EXECUTIVE SUMMARY:

The evaluation outlines the current existing audio-visual (AV) infrastructure and equipment across key AV enabled spaces in the school. The evaluation identifies the location of equipment and assumed functionality and provides recommendations for the renovation project.

Cafeteria/Stage:

- Existing ceiling projector facing the cafeteria stage.
- Two pairs of stereo surface mounted speakers in front of the stage area.
- Existing lectern located directly in front of stage, on stage left side.
- Behind stage, an existing AV rack is located near accessibility lift. An analog audio mixing console is located on the surface of the AV rack and next to the AV rack is a loose PA speaker.

Conference Room:

- Existing 85” (approx.) interactive flat panel display with no apparent videoconferencing capabilities. Power and data are located beneath display at 18” AFF. Hard-wired connectivity at the table is not included in the system.

Media Center:

- Existing 85” (approx.) interactive flat panel display with no apparent videoconferencing capabilities. Power and data are located near display.

Classrooms:

- Existing 85” (approx.) interactive flat panel display with no apparent videoconferencing capabilities. Power and data are located beneath display at 18” AFF. A laptop is connected to the display over hard-wired connection, directly into the display’s input.

RECOMMENDATIONS:

N&B recommends improvements made to the Cafeteria AV system such as adding a ceiling distributed speaker system for voice lift and a wireless microphone system. N&B shall evaluate the possibility of re-using the stereo speakers in front of stage for program audio as well as the projector and projection screen. For typical conference rooms, classrooms and the Media Center, N&B would recommend following the standard of interactive displays and add videoconferencing to the conference rooms.

3.1.4 – EVALUATION OF EXISTING CONDITIONS – TECHNOLOGY EQUIPMENT

Prepared by Newcomb & Boyd

EXECUTIVE SUMMARY:

This information below is primarily focused on the technology equipment in the existing building, rather than the communications infrastructure (i.e. network cabling, etc.). Most of the technology equipment is either at the end if it's useful life, or will be by the anticipated opening of the new school.

Server & Network Room:

- The server room is located in the basement level, and is shared with the fire alarm, S2 security system, and the space is also used for IT storage and equipment setup. There is a single 4-post equipment rack containing network cabling, one network switch, several rack-mount servers, and other equipment primarily to support the building security systems.
- There is an additional IT room located in proximity to the Server Room where the majority of the network cabling for the building terminates to, as well as the network switches.
- The uplink between the Server Room switch and the IT Room switches is via a Cat-5 cable.
- There are UPS's serving the equipment, however it was noted that the batteries do not hold a charge and provide limited backup capacity.

Network Switches:

- The network switches are primarily from Extreme Networks. There is one HP/Aruba switch. The Extreme Networks switches were purchased about 4 years ago. At least one switch is PoE capable.
- Most of the network cabling is believed to be Category-5e, although there could be some Cat-6.

Telephone System:

- The existing NEC phone system is located in the IT Room (adjacent room to Server Room).
- The phone system headend resides at the high school, with Essex connected via cable modem.
- All telephone handsets are analog.
- NEC phone system is end of life.

Wireless Access Points:

- Existing cabling was used for new access points that were installed about two years ago.
- The access points are from Extreme Networks, and use a cloud-based controller.
- The wireless system was upgraded district-wide, including Essex.
- The existing wireless access points are typically mounted vertically on the walls, versus being mounted horizontally on the ceiling that may provide better signal coverage

Specialty Spaces:

- Computer Lab
  - The existing desktop computers are 5+ years old.
  - There were RAM and hard drive upgrades done, but the equipment has reached the end of its usable life..
- Conference Room
  - There is a single Promethian board mounted to the wall, off-center from the table. The conference table does not have any A/V inputs requiring users to connect directly to the board with a cable.
  - There does not appear to be capability for video conferencing, except for directly through a laptop or other connected device.
- Typical Classroom
  - Promethian interactive displays are located on the teaching wall with teacher laptops (Windows based) needing to be direct-connected to the display as there are no A/V inputs serving the display.
  - The boards are equipped with built-in Chromebox that is not consistently used.
  - The mounting heights of the displays appear to be appropriate for the student grade level being served.
  - The boards were installed new in September 2021, at the same time as the Memorial School.
- Principal's Suite
  - The reception area has a flat-screen display mounted high for viewing of video surveillance cameras feeds. The Principal's office does not have a display for viewing of video surveillance feeds
  - There is a wireless access point mounted in the ceiling grid.

Additional Information:

- The existing sound reinforcement system is a portable system, not an installed system as found at other schools where the LightSpeed Topcat solution is utilized.
- Looking towards the future, it was requested that the phone system, and paging & bell system be from a single manufacturer to facilitate better integration between the systems.

RECOMMENDATIONS:

A complete technology refresh is recommended for the school. Options to re-use existing equipment was explored, however much of the equipment is currently obsolete, or will be when the new school is constructed. As examples, the wireless access points will be at least six years old, and the network switches eight years old.

Technology improvements will include new network switches capable of providing sufficient data and power via network cabling to video surveillance cameras, wireless access points, telephones, and other powered network devices. UPS battery backup of the network equipment is recommended, with battery runtime sufficient to keep telephones and other critical network devices online for an extended period (i.e. 2-4 hours).

Wireless Access Point technology will continue to improve over the next several years necessitating new access points for the school. Heatmapping of the proposed building is recommended to identify the optimal placement of the access points.
A new telephone system with VoIP technology is recommended. Presumably, this upgrade would need to be implemented district-wide. Data cabling and switches to provide power to the handsets will be required.

In the classrooms, the existing Promethian boards will be due for replacement, with new interactive displays offering features that may not be available with current technology. Sounds reinforcement in the classrooms is also recommended.

Other equipment including desktop computers and monitors in the computer lab will need to be replaced. New devices would likely have a small physical footprint allowing for more space on the worksurface (i.e. the desktops could be mounted and secured below the tables).
Additional technology equipment that supports the educational program is recommended to be included in the new building.

3.1.4 – EVALUATION OF EXISTING CONDITIONS – CIVIL (SITE)

Prepared by Samiotes Consultants

EXECUTIVE SUMMARY:

The following are preliminary findings and research of the existing infrastructure at the existing Essex Elementary School located at 12 Story Street in Essex MA; in order to evaluate the site for either renovation, renovation & addition, or new construction at the existing Essex elementary site.

Information from the Town of Essex Wetlands By-laws has been included in the report, having jurisdictional resource areas that will require filing with the Conservation Commission should work occurs within those jurisdictional areas.

Executive Summary (Civil + Infrastructure)
The existing major utilities review was based on a visual site walk conducted by Samiotes on September 24, 2025.

All major utilities (water, sewer, drainage, gas, & power) are available in the vicinity of the existing Essex Elementary building allowing for the potential of an addition or a new building to have access for connections, assuming excess capacity is available.

Water Service

According to record documents received from the Town of Essex Department of Public Works dated June 1991 a water line exists in Story Street that feeds both the existing building and a hydrant located on Story Street, in front of the school property. (see figure X)

Refer to the plumbing facility assessment section for further in-depth analysis of the building's water and fire protection service and capacity.

Sanitary Sewage

According to record documents received from the town of Essex Department of Public Works dated June 1991, the existing school building has an 8" PVC exiting the north (front) face of the building and ties into the 8" municipal line within Story Street.

Gas Service

The existing elementary School building is assumed to be serviced with natural gas, as a gas meter

was observed on the eastern side of the school (see image 7). The record utility drawings, and/or town GIS do not show the gas line size or routing. A utility survey is in the process of being completed. Refer to the plumbing facility assessment section for further in-depth analysis of the building's gas service and capacity.

Stormwater Management

According to record documents received from the town of Essex Department of Public Works dated June 1991, there is a municipal drain line within Story Street.

Electric Service

The existing school's electrical service enters the site from the northeast via overhead electrical lines from Story Street. It appears the electrical service switches to underground service at the driveway of the side parking lot located on the east side of the property.

Refer to the electrical facility assessment section for further in-depth analysis of the building's electrical system.

Pavement

Based on the site walk performed by Samiotes Consultants, the on-site parking areas and access drives near the school-which are primarily bituminous asphalt pavement and are in fair to poor condition (see image 5). Pavement cracking is visible throughout most of the site and in need of remediation. Several curbs have also deteriorated and need replacement. There are numerous areas where the asphalt is exhibiting signs of gross failure (i.e. "alligator" cracks). There are numerous areas where crack filler has been used with several instances of asphalt patching around manholes that have been replaced or where subgrade/pavement has collapsed around them.

Alligator cracking indicates the failure of a pavement's subbase, indicating the potential need for a full depth replacement. It is recommended that representative pavement core samples be taken to confirm the pavement profiles prior to any project redevelopment/expansion. Depending on the core reports, it is likely the entire asphalt pavement area would need to be milled and overlayed at a minimum and/or potentially repaired with a full-depth replacement within the parking areas and the entire driveway.

Accessibility

The site does not meet ADA / MAAB compliance. The slopes of walkways appear too steep, and the poor quality of roads and walkways with physical barriers such as tree roots, cracks, and heaves. Sidewalks are also missing ADA compliant detectable warning strips. Any renovations to the parking

lot, or overall site, will require accessibility standards to be met. It is recommended that a Code Consultant and/or the Landscape Architect further review ADA / MAAB Compliance, and the extent of work needed to upgrade external pedestrian connectivity to the school to meet requirements.

ENVIRONMENTAL REGULATIONS:

Flood Plain

No flood plain exists on the site.

Wetland Ordinance

Zone I:

Definition: Zone I means the protective radius required around a public water supply well or wellfield. For public water system wells with approved yields of 100,000 gpd or greater, the protective radius is 400 feet. In no case shall the Zone I radius be less than 100 feet.

Zone II:

Definition: That area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation). It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries.

Some Wellhead Restrictions for site:

- stockpiling and disposal of snow or ice removed from highways and streets located outside of Zone II that contains sodium chloride, chemically treated abrasives or other chemicals used for snow and ice removal;
- petroleum, fuel oil and heating oil bulk stations and terminals
- storage of sodium chloride, chemically treated abrasives or other chemicals used for the removal of ice and snow on roads,
- the removal of soil, loam, sand, gravel or any other mineral substances within four feet of the historical high groundwater table elevation, unless the substances removed are redeposited within 45 days of removal on site to achieve a final grading greater than four feet above the historical high water mark, and except for excavations for the construction of building foundations or the installation of utility works, or wetland restoration work
- land uses that result in the rendering impervious of more than 15% or 2500 square feet of any lot or parcel, whichever is greater, unless a system for artificial recharge of precipitation is provided that will not result in the degradation of groundwater quality.

Inner/Outer Riparian (100' & 200' riverfront buffer):
The Riverfront Area is the area of land between a river's mean annual high-water line measured horizontally outward from the river and a parallel line located 200 feet away.

Where a proposed activity involves work within the Riverfront Area, the issuing authority shall presume that the area is significant to protect the private or public water supply; to protect the groundwater; to provide flood control; to prevent storm damage; to prevent pollution; to; to protect wildlife habitat; and to protect fisheries. The presumption is rebuttable and may be overcome by a clear showing that the Riverfront Area does not play a role in the protection of one or more of these interests.

Redevelopment Within Previously Developed Riverfront Areas; Restoration and Mitigation. The issuing authority may allow work to redevelop a previously developed Riverfront Area, provided the proposed work improves existing conditions. Redevelopment means replacement, rehabilitation or expansion of existing structures, improvement of existing roads, or reuse of degraded or previously developed areas. A previously developed Riverfront Area contains areas degraded prior to August 7, 1996 by impervious surfaces from existing structures or pavement, absence of topsoil, junkyards, or abandoned dumping grounds. Work to redevelop previously developed Riverfront Areas shall conform to the following criteria:

(a) At a minimum, proposed work shall result in an improvement over existing conditions of the capacity of the Riverfront Area to protect the interests identified in M.G.L. c. 131 § 40. When a lot is previously developed but no portion of the Riverfront Area is degraded, the requirements of 310 CMR 10.58(4) shall be met.
(b) Stormwater management is provided according to standards established by the Department.
(c) Within 200 foot Riverfront Areas, proposed work shall not be located closer to the river than existing conditions or 100 feet, whichever is less, or not closer than existing conditions within 25 foot Riverfront Areas,
(d) Proposed work, including expansion of existing structures, shall be located outside the Riverfront Area or toward the Riverfront Area boundary and away from the river,
(e) The area of proposed work shall not exceed the amount of degraded area, provided that the proposed work may alter up to 10% if the degraded area is less than 10% of the Riverfront Area,

Town of Essex Wetland By-Law

At this time, the Town of Essex does not have any non-zoning bylaws or ordinances giving the Conservation Commission further power to protect the wetlands beyond the MA DEP Wetlands Protection Act.

Figures & Images



Figure 1: Essex Elementary Conservation Jurisdictional Areas



Image 1: Essex ES, no tactile strips



Image 2: Essex ES sidewalks exceeding ADA slopes (to be under 5% running)



Image 3: Essex ES ADA Parking stall exceeding ADA slopes (to be under 2% in all directions)



Image 4: Essex ES handicap ramp exceeding ADA slopes (to be under 8.3% running)



Image 5: Essex ES pavement failing “alligator cracks”



Image 6: Essex ES electrical feed



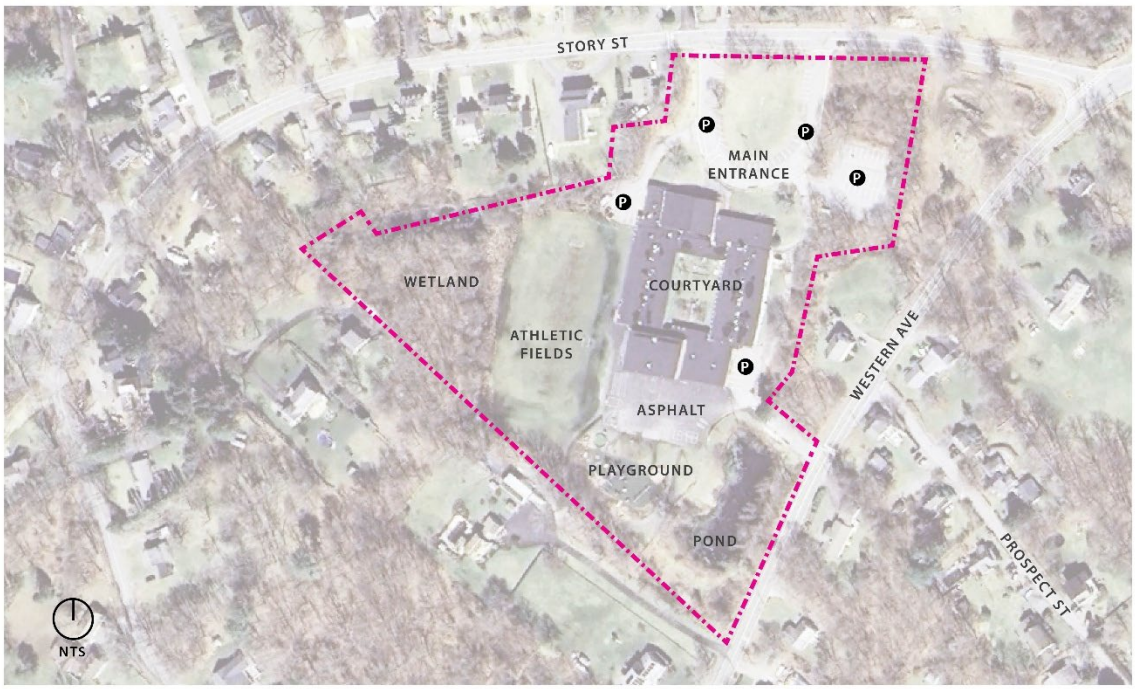
Image 7: Essex ES Gas meter

3.1.4 – EVALUATION OF EXISTING CONDITIONS – LANDSCAPE

Prepared by Studio 2112

EXECUTIVE SUMMARY:

Studio 2112 visited Essex Elementary School on September 24, 2025, to conduct an existing conditions assessment. Information in this report was gathered from observing the current conditions on site and aerial site photography. Essex Elementary School is located in the town of Essex, MA, and bordered by residential neighborhoods and a logging property to the north. Wetlands make up the western end of the property, and a pond lies on the southeast corner of the site. For additional information on the adjacent wetlands/pond refer to the civil engineering section. The school building is in the central portion of the site and has parking north and east of the building. Student activity areas include a playground, asphalt hardscape, and soccer field west and south of the school, as well as an interior courtyard.



Site Access and Pedestrian Circulation:

The site has two vehicular access roads – the main access off Story St which is a one-way parent drop-off loop, and a secondary one-way bus drive from Western Ave that terminates at the drop-off loop. Parking is distributed in several locations around the building: the parent drop-off loop, at the

northwest and southeast corners of the school, and at the lot east of the main entrance. See civil engineer evaluations for further vehicular traffic conditions.

Pedestrian access to the site is via Story St and the sidewalk that abuts the drop-off loop. There is no pedestrian walkway or sidewalk between the main entrance and the outdoor program areas at the back. An asphalt walkway runs along the west edge of the building from the northwest corner parking lot, allowing pedestrian access to the outdoor program areas, however, there is no pedestrian sidewalk along its access drive from the drop loop/ main entrance. Most circulation paths/curbing on site are asphalt, in overall fair to poor condition. There are numerous areas (including the edge of road conditions) where the asphalt is cracking, splitting, and crumbling.

Student access to outdoor play areas appears to be primarily via two doors located on the southwest corner of the building, one with ramp access and the other with stairs. Circulation from play spaces to the pond is closed off by a wood and wire mesh fence boundary. A crushed stone path circles the playground, sloping up behind it. Natural stone stairs connect this path to the playground down below. The building's inner courtyard is grass with no paved pedestrian paths.

Exposed ledge was noted in spots throughout the site and inside the courtyard. The area just west of the main entrance and a section of the pond bank were noticeably raised with ledge.



Entrance to site from Story St with parking



Main entrance and asphalt sidewalk



Asphalt curb and sidewalk in poor



Vehicular loop road exit



Western Ave vehicular entrance



Northwest parking lot drive with no sidewalk



Northwest parking lot connection to field



Crushed stone pathway with natural stone

Accessibility:

Most of the outdoor spaces on site are not fully accessible and do not meet ADA requirements. Existing asphalt walkways are cracking, with vegetation often growing between the cracks, making the surfaces inaccessible and difficult for individuals with mobility issues. The site is relatively flat

with significant topographical changes primarily on the north edge of the site. Most of the site's pedestrian asphalt walkways are sloped accessibly; however, the sidewalk at the northeast end of the drop off loop appears to be over 5% slope (verification required with survey) and has significant with severely deteriorated curb ramp at Story St, making it inaccessible. Painted crosswalks and curb ramps are located on site; however, they are missing detectable warning strips. The main entrance and secondary entrance at the building's northern face are both ADA accessible but have a large joint condition where the concrete pad meets the asphalt. Most doors on site are not accessible and have either stairs with code-compliant railings or sit on raised concrete pads. A recessed door on the eastern side of the building has non-compliant wooden rails in very poor condition.

There are two accessible doors with ramps and railings at the northwest and southwest corners of the building that allow access to the outdoor programmed spaces behind the school. The crushed stone pathway surrounding the playground has not been maintained to meet ADA accessibility requirements. The playground itself has poured rubber surfacing which meets ADA and MAAB accessibility requirements.

The gathering space adjacent to the pond, and inner courtyard are not accessible as they have no ADA accessible surfacing or paths. Within the playground, there are several ADA accessible play structures, including the universal carousel, play huts, sensory panels, and musical ensembles.



Cracking at asphalt surface at main entrance



Large joint at main entrance



Steep slope at pedestrian sidewalk



Missing and cracking asphalt at curb ramp



ADA parking spots at front parking lot



ADA entry ramp at southwest door



ADA entry ramp at northwest parking lot



Non-accessible overgrown crushed stone



Accessible play equipment and migrating



Non-compliant wood railings

Site Amenities:

Site amenities on the Essex elementary school site include a pond overlook space, asphalt play area, playground, athletic fields, and an inner courtyard. There are various site furnishings scattered throughout the property, such as benches and picnic tables.

The playground has been installed within the last few years and is a robinia wood playground by Kompan. Structures are in good condition and include a large wooden combined play structure with climbing elements, bridges, ropes, and two slides, a wood-themed ropes course, universal carousel, percussion music panel, dress up cottage, 2 play huts, and a 5-swing set (4 normal, 1 net). An adjacent wood gaga ball pit is also part of the playground. Mulch was observed migrating onto the rubber surfacing due to the lack of edge restraint.

The hardscape asphalt area connects the building to the playground has two half-court basketball courts with hoops in good condition and several painted games, including hopscotch, 4 square, wall bullseye, and class lineup lines, all showing signs of fading. The asphalt pavement is particularly in poor condition, with large cracking and plant growth, as well as deteriorating edge conditions.

The fenced-off pond area features numerous wooden logs arranged in manner that designates an outdoor classroom, as well as a metal bench along the fence in poor condition. Site furnishings in these areas include 3 wood picnic tables, a buddy bench, waste receptacles housed in wooden lockers, and a Rotary Club Peace Pole.

The athletic field has 4 actively used soccer goals, 2 larger in poor condition, and 2 smaller in good condition. 2 Additional goals presumed to be in disuse were observed in the fields surrounding

wetland vegetation. Line painting indicated only one soccer pitch located at the center of the field.

Additional site furnishings observed include metal benches, metal picnic tables, a memorial wood bench with plaque, donation bins (2 clothing, 1 book), concrete-framed storage shed, 2 full bike racks, and roughly 50-foot flagpole with no paved access path or lighting fixtures Across from the main entrance on the grass island.

The inner courtyard has a variety of seating and planting amenities. There are 4 larger wood picnic tables and 2 smaller, rounded ones, all in fair condition. A concrete bench sits next to a memorial plaque. Planting amenities include: 10 large planters (9 wooden and 1 plastic) in conditions ranging from fair to poor, a glass and metal-framed greenhouse in poor condition and overgrown. Scattered about are various rain barrels, planting trays, and rolling compost bins. The courtyard also has a plastic storage shed in fair condition and a wooden doghouse in good condition. There are no formal walkways or paved surfaces within the courtyard.



Benches at main entrance



Bench at front of building



Picnic tables at front of building



Donation boxes



Rotary Club Peace Pole



Pond area bench and logs



Picnic table, buddy bench and Gaga Pit at playground



Waste receptacles at playground



Main playground structure



Swings and play hut



Wood themed ropes course



Theatre and musical sensory play structures



Basketball half court



Fading line painting on blacktop



Wall with painted games and cracked asphalt



Bent picnic table



Large soccer goal in poor condition



Soccer goal in adjacent planting



Bike racks at northwest parking lot



Flagpole at drop-off loop island



Courtyard picnic tables and shed at



Stone memorial plaque and bench at



Doghouse at courtyard with overgrown trellis behind it



Greenhouse and water bins at courtyard

Tree Cover and Vegetation:

The main entrance to Essex Elementary School is flanked by two planting beds full of perennials and a few small specimen trees. Beds are not well maintained with many creeping into the adjacent lawn area, however, most plants (Amsonia, Hydrangea, Lilacs) seem to be healthy and in good condition. Mature Norway Maples dot the entry landscape around the drop-off loop and bus drive, as well as four prominent ones adjacent to Story Street. A few of these at the Story Street edge are in very poor condition, with damaged structures, missing limbs and invasives at their base. All Norway Maples visible on site had indications of Tar Spot, or Rhytisma acerinum. Other notable trees to the front of the building include a large mature deciduous tree in good condition west of the main entrance, and a mature yew tree in good condition against the northwestern corner of the building.

There is sod throughout the site in fair to good condition, with browning at edge conditions near roadways and playground, as well as at the entrance to the interior courtyard from heavy pedestrian use.

The interior courtyard is actively used as an afterschool gardening club. In the center of the courtyard is a greenhouse flanked by six garden beds in various states of use and disrepair full of overgrown plantings. On either side of the greenhouse are two mature Kousa Dogwoods. The entire area is covered in sod in poor to good condition. On the western edge of the courtyard are three large mature shrubs, a young deciduous tree with poor form and an old arbor covered in mature grapevines. On the eastern edge of the courtyard is a recently planted young 'Golden Falls' Weeping Redbud tree in good condition, and small perennial garden bed.

In the southeastern corner of the property is a pond with thick woodland edging that appears to be a healthy ecosystem. Near the pond, on the playground edge are two younger maple trees in good condition. The southern edge of playground is contained by a healthy woodland edge with large

mature trees and shrubs that continue around to the western edge of the property. To the west of the playground is a large grass soccer field ranging from fair to poor condition with some areas that are dry and eroding. The wetland adjacent to the soccer field is densely planted with a mix of natives (Aronia, Solidago) and invasives (Purple Loosestrife).



Perennials at building facade



Mature deciduous tree at front of building



Norway maple at front of building



Norway maples along Story St



Yew tree against building



Shrubs at courtyard



Shrub and grape vines at courtyard



Dogwood trees and planters around



Planting at pond edge



Maple trees by playground



Wetland edge west of field



Woodland edge at field

Wayfinding and Signage:

A school sign with “Essex Elementary School” monument sign with a plaque describing the district sits out in front of the building. Entry and exit signs are located at the loop drive to guide circulation. See civil engineer evaluations for additional information on vehicular signage. By the pond enclosure entrance is a sign honoring the Girl Scouts pond restoration project. The playground has a sign indicating that it was designed for ages 5-12. ADA accessible signage is posted around the building at all doors that apply.



ADA signage at main entrance



Essex Elementary School sign



Girl Scouts sign at pond



Playground sign

Fencing and Site Security:

The only security fencing around the school relates to vehicular traffic or to restrict access to the pond. The south end of the school yard is bound by a woodland edge that closely borders a nearby residential lot with an open pathway between the two, and the western border of the site is bound by a thickly vegetated wetland. The Western Ave entry has a vehicular gate and a secondary 4ft chain link fence gate to restrict traffic to the backside of the school. Branching from that is a 4-foot wood

and wire mesh fence that closes off the pond area from the playground and blacktop areas. A line of boulders is used on the other side of the school to prevent vehicular travel from the northwest corner parking lot into the field.

At the northeast corner of the building, a 4ft chain link fence is built onto a retaining wall that abuts the building's generator and holds up a secondary entrance path. The generator has no protective bollards or barriers around it. Inside the courtyard, a wood picket fence, in poor condition, runs partially through the space denoting the seating and gardening areas. A stone feature wall also runs along the sidewalk of Story St in between the entrance and exit of the drop off loop.



Chain link fence at retaining wall



Vehicular gate at southeast parking lot



Western Ave vehicular gate



Fencing at pond



Courtyard fence



Rustic stone wall



Boulders blocking vehicular access to field



Southern edge open to adjacent property

Site Service:

Service and utilities on the school site are located on the northeast and northwest corners of the school. On the west side are two dumpsters and a trailer. On the east there is a Kohler generator, loading zone, and gas utility located behind a tree.



Dumpsters



Generator



Gas utility behind tree



Utility meters near front of building

3.1.4 – EVALUATION OF EXISTING CONDITIONS – PHASE 1 (ESA)

Prepared by Mabbett & Associates, INC.

EXECUTIVE SUMMARY:

The Phase I Environmental Site Assessment (ESA) Report presents the results of non-intrusive environmental due diligence activities performed by Mabbett & Associates, Inc. (Mabbett) on behalf of JCJ Architecture (JCJ) to support the Manchester Essex Regional School District decision making regarding capital investments at Essex Elementary School. The subject property for this Phase I ESA is Essex Elementary School addressed 12 Story Street, which encompasses approximately 9.75 acres of land in Essex, Massachusetts.

Essex Elementary School was originally constructed in 1958, with a gymnasium addition around 1975. The subject property is currently developed with an approximately 53,036 square foot elementary school that has a centrally located courtyard, sub-grade boiler room, classrooms, a kitchen, and cafeteria.

The subject property was undeveloped land in 1888. By 1893, one structure was present on the northern boundary of the subject property by Story Street. Between 1915 and 1919, a roadway bisected the northern portion of the site and had as many as 4 structures built on it. This roadway was gone by 1938. The subject property appeared to have been historically used as agricultural land. The buildings on the subject property were razed sometime between 1952 and the construction of the new elementary school was completed in 1958. The manmade pond in the southern corner of the subject property had also been built at this time. A gymnasium was added to the subject property around 1975.

The area surrounding the subject property consisted of residential use lands.

The Phase I ESA included a site reconnaissance on September 24, 2025, a review of available records, interviews with knowledgeable parties, and a database search. The findings are summarized in the following sections:

<u>Recognized Environmental Conditions (RECs):</u>

During the site reconnaissance, a red colored petroleum staining was observed on the concrete floor of the boiler room, which was located sub-grade in the northeastern portion of the Essex Elementary School. Additionally, a slight petroleum sheen was observed within a pit filled with groundwater in the boiler room. According to Manchester Essex Schools Maintenance Supervisor, after periods of

heavy precipitation, groundwater can seep through the concrete floor and enter the boiler room. Parts of the boiler room floor were observed to be visibly wet during the site reconnaissance. The oily sheen may have originated from a heating oil UST or AST previously associated with the boiler room; however, Mabbett was unable to confirm its size, contents, or historical location at the subject property. The indications observed of an oil release within the boiler room and the potential for that release to have impacted groundwater represents a REC.

Historical Recognized Environmental Conditions (HRECs):

No HRECs were identified on or affecting the subject property

Controlled Recognized Environmental Conditions (CRECs):

No CRECs were identified on or affecting the subject property.

Data Gaps:

According to a municipal record, the Conservation Commission was requested to determine the applicability of the Wetlands Protection Act for the removal of underground heating oil storage tanks at 12 Story Street in March 2002. Mabbett was unable to obtain documentation confirming the removal of a underground storage tank (UST) at the subject property nor environmental conditions associated with the removal of an UST. No records were available for review pertaining to its size, location, or contents. A vent pipe, but no fill pipe, was observed exiting the northeastern wall of the Essex Elementary School near the current generator. Suspected UST piping was observed entering through the wall of the boiler room; however, the source and purpose of this piping could not be confirmed . The lack of information and documentation pertaining to this UST record represents a data gap.

Business Environmental Risks (BERs):

Regulated Building Materials: According to the 2023 Asbestos Hazard Emergency Response Act (AHERA) Inspection Report, documented asbestos containing material (ACM) are present throughout the elementary school. Considering the age of the existing school building, lead-based paint (LBP) was presumably used during original construction and subsequent upkeep through 1978, and such coatings are anticipated to be present on a significant portion of interior and exterior surfaces.. The documented presence of ACM and presumed presence of LBP represents a business environmental risk (BER) due to the added cost of abatement during future demolition or renovation of the building.

Fill Soils: The U.S Department of Agriculture (USDA) Web Soil Survey identified the soils located beneath the elementary school and southeast of the elementary school as Urban land (i.e., urban

fill). The potential for the quality of fill materials to result in elevated environmental premiums for off-site management during future redevelopment activities is considered a BER.

Refer to Appendix Section 3.1.8.14 for the full Phase I ESA report for Essex Elementary School.

Recommendations:

To assess the REC, BER and UST data gap identified in the Phase I ESA, Mabbett recommends performing a Phase II Environmental Site Investigation (ESI) to support the decision making of the site selection process and quantify potential environmental premiums that would be incurred during redevelopment of this property.

Mabbett recommends performing a ground penetrating radar (GPR) survey on the subject property to determine the location, size, and extent of the UST that was indicated to be present in municipal records from 2002. The historical UST would likely be or have been located by the northeastern corner of the school near the subgrade boiler room. The GPR survey will use radar pulses to detect objects or disturbances in the subsurface soils, highlighting anomalies which can indicate the presence of a tank or underground utility lines.

Upon determination of the former UST location, if not still present, soil borings should be advanced within the tank grave to determine if a release of fuel oil the environment has occurred. Soils should be screened, documented, and sampled by a geologist and submitted for laboratory analysis of, at a minimum, extractable petroleum hydrocarbons (EPH), and volatile petroleum hydrocarbons (VPH). If groundwater is encountered during the advancement of soil borings, it may be warranted to install and sample groundwater monitoring wells to assess whether contamination is present in groundwater.

If the UST is still present, it should be closed and removed in accordance with state (310 CMR 80.00) and local guidelines. Any contents located within the tank should be pumped out and transported off the subject property under the appropriate documentation. Upon removal of the UST, sidewall and bottom soil samples should be collected from the tank grave to confirm that no soil contamination is present. If contamination is present, over excavation of contaminated soils or other remedial actions may be warranted in accordance with the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000).

Shallow soil borings should be advanced within the boiler room and completed as groundwater monitoring wells to determine whether the subsurface beneath this area has been impacted by historical heating operations of the property. Groundwater is anticipated to be less than 5 feet below ground surface within the subgrade boiler room. Soils should be screened, documented, and sampled by a geologist and submitted for laboratory analysis. Soil and groundwater samples, at a

minimum, should be analyzed for EPH, VPH, and volatile organic compounds (VOCs).

If urban fill soils are encountered during the Phase II soil boring program, Mabbett may recommend collecting composite pre-characterization soil samples to support the quantification of off-site soil management costs during construction. These soil samples would be analyzed for common landfill (Comm-97-001) and beneficial use (Comm-15-01) required parameters.

Mabbett will document the results investigation in a Phase II ESI Report, which will identify any regulatory reporting obligations associated with releases of oil and/or hazardous materials, and provide recommendations for soil management and potential remediation strategies to support safe and compliant redevelopment.

SITE DEVELOPMENT REQUIREMENTS

SECTION 3.1.5

3.1.5 – SITE DEVELOPMENT REQUIREMENTS

- Overview
- 12 Story Street, Essex, MA (Essex ES)
  - Site Scope
  - Regulatory
  - Utilities
  - Site Analysis
  - Buildable Area
  - Opportunities
  - Limitations
  - Conclusion
- 43 Lincoln Street, Manchester-By-The-Sea, MA (Manchester Memorial ES)
  - Site Scope
  - Regulatory
  - Utilities
  - Site Analysis
  - Buildable Area
  - Opportunities
  - Limitations
  - Conclusion

3.1.5 – SITE DEVELOPMENT REQUIREMENTS

OVERVIEW

The Site Development Requirements for the PDP Submission to MSBA are intended to help in the Site Selection process. This section describes a variety of options that were explored with the Building Committee, the Designer, and the OPM. Three potential sites were discussed and through several iterations of discussions and data gathering efforts, the list was narrowed to the two now being submitted with the PDP.

Consideration of possible site was constrained by the fact that this School District is a Regional District that does not own any property in either Manchester-by-the Sea or in Essex. Presently, the District leases its Middle High School and Manchester Memorial Elementary School sites from the Town of Manchester-by-the-Sea and its Essex Elementary School from the Town of Essex. A copy of the District's lease agreement is included within the Appendix section 3.1.8.9.

Because the District does not have the financial resources to purchase land directly, only properties that the Town of Essex was willing to propose for use by the Regional District could be considered. These included properties presently being leased by the District, including Essex Elementary School and Manchester Memorial Elementary School sites. Another property that was considered was the Apple Street site in the town of Essex.

A limited number of properties were studied through this project as many other sites were previously investigated in the original site investigation effort for the recently completed Manchester Memorial Elementary School in 2022 and the Manchester Essex Middle-High School project of 2009. As no new sites except for the Apple Street site surfaced between that time and now, sites that had been eliminated in the previous study were not revisited during this study as the conditions on those sites did not change and therefore the outcome from the previous studies were still valid.

Due to several factors, upon closer review the Apple Street site was deemed to be unfavorable and was removed from consideration by the School Building Committee.

- No sewer structures were observed within Apple Street. A sewer E1 pump station was observed along Landing Road. It is assumed this services the Essex Transfer Station, and the houses also located on Landing Road. It is unknown at this time whether the existing pump station has excess capacity
- Both Apple Street & Landing Road do not have sidewalks.
- Bridges at both streets would need to be reconstructed to accommodate sidewalks or parallel bridges for the sidewalks
- Per FEMA map 25009C0431H dated 7/8/2025 there is a portion of the 100-year flood plain located at the northwest corner of the site near Landing Road. Area appears to be wooded
- Possible to trip MEPA thresholds depending on design.

The opportunities and limitations of the two viable sites are outlined in the section below.

12 STORY STREET, ESSEX, MA



12 Story Steet Existing Site Plan

SITE SCOPE

The Statement of Interest identified the property located at 12 Story Street in Essex, MA as the focus of this project. This is the site of the current Essex Elementary School, a public Elementary School serving the Town of Essex and part of the Manchester Essex Regional School District. The Campus is bordered by residential homes on all sides and a tree and landscaping company to the northeast.

The overall lot area is approximately 9.75 acres. The existing building is in the approximate center of the site. Parking is located on the eastern and northern portions of the site. There is a large playing field to the west of the school building and a blacktop and playground on the southern end of the building.

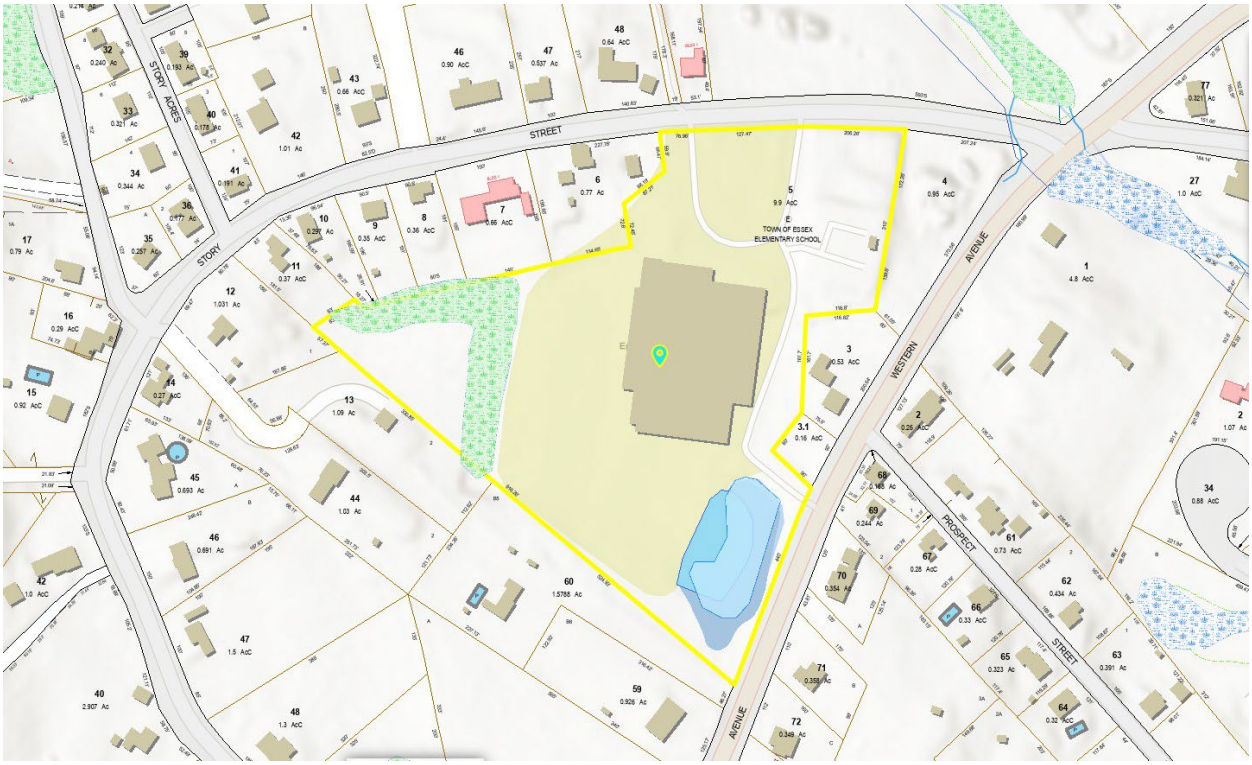
REGULATORY

The site is in a General Use Zoning District (GUD), per the Town of Essex Bylaws dated September 9, 2025. The district is characterized by single-family and two-family dwellings, including dwellings with home occupations, and small-scale multi-family dwellings, with considerable protected and/or private open spaces and wetlands. The district also includes areas of commercial and agricultural

use, occasional institutional, civic, and light industrial uses, and minor utility facilities. Education is a permitted use in General Use Zoning District (GUD) but there are no specific regulations for educational facilities in the bylaws.

- Minimum Lot Area: 30,000 sf
- Minimum Frontage: None
- Minimum Lot Depth: None
- Front Yard Setback: 50 feet
- Side Yard Setback: 30 feet
- Rear Yard Setback: None
- Maximum Height: 35 feet
- Maximum Stories: 2 1/2
- Maximum Building Coverage: None
- Maximum Floor Area Ratio (FAR): None
- Minimum Open Space: None

The current building is in conformance with General Use Zoning District (GUD) and is an existing conforming permitted use as an educational facility. Special permits are not required for a public school. A site plan review process will be required.



Conservation Commission

Based on a review of the current survey, as well as cross referencing other online resources such as MassMapper, there is a wetland in the west corner of the site with a boundary approximately 200' west of the existing elementary school building, and a pond in the southeast corner of the site with a boundary approximately 70' south of the existing school. There is also a stream with associated wetlands northeast of the site, approximately 200' northeast of the site across Story Street and passing under Western Avenue to the east. The associated wetland resource buffers on the site include Bordering Vegetated Wetlands (BVW) and Banks.

All wetland resource areas are protected by the Massachusetts DEP Wetlands Protection Act Regulations. At this time, the Town of Essex does not have any non-zoning bylaws or ordinances giving the Conservation Commission further power to protect the wetlands beyond the MassDEP Wetlands Protection Act.

For any proposed redevelopment work that impacts the existing wetland resource, it is likely that a Notice of Intent (NOI) will need to be filed with the Conservation Commission to perform activities that are within or that affect the resource buffers. The permit application shall include such information and plans as are deemed necessary by the Commission to describe proposed activities and their effects on the Resource Areas protected by the Wetland Protection Act.

Planning Board

Any new construction or proposed redevelopment activity will require Site Plan Approval from the Essex Planning Board, according to the Town of Essex Bylaws. Section 6-10.7.2.1 states:

6-10.7.2.1: Projects Continuing Established Use of any Building, Structure and/or Site: As part of the required permitting process for new construction, remodeling or reconstruction, or relocation of any building, the Planning Board shall complete a Site Plan Review for the following types of projects, except as provided in 6-10.7.4:

A. Any building(s) with an aggregate ground floor footprint of equal to or greater than 2500 square feet, including additions and/or alterations,
B. Any building to be used for commercial, industrial, office, residential development, municipal, utility and/or recreational purposes,
C. Single family and Two-family dwellings with an aggregate ground floor footprint of 4000 square feet or more, including additions and/or alterations,
D. Projects covered under Special Permit categories in Section 6-4.3 are required to have a Site Plan Review completed, in addition to any other requirements under 6-4.3. e. Projects where more than 3 parking spots are created or added.

The proposed design will need to adhere to Planning Board Rules and Regulations, as well as the Zoning Bylaw. The application will need to go through a public hearing process, which will require appearance in front of the Planning Board at scheduled/advertised meetings. The extent of the new construction option selected will dictate the specific requirements for the Site Plan permit application package.

FEMA Floodplain:

Per MassMapper and the FEMA Flood Map Online Service Center, there are no FEMA floodplains within the vicinity of the site.

MA DEP Groundwater Discharge Permit:

No groundwater Discharge Permit is anticipated.

Town of Essex Board of Health

It is not anticipated that any filings will be necessary with the Board of Health. It is assumed that the existing sanitary service connects to municipal mains and will be maintained and/or updated as necessary. No septic system is anticipated for any of the proposed options. Thus, no Board of Health reviews are anticipated.

EPA NPDES Construction General Permit (CGP) and Stormwater Pollution Prevention Plan (SWPPP)

A NPDES Construction General Permit (CGP) from the New England EPA (i.e. eNOI) and a SWPPP will need to be obtained/developed by the contractor prior to the start of construction for any land disturbance that exceeds one (1) acre. It is anticipated this will be required for the project. Approval for the submitted eNOI can be obtained within fourteen (14) days of approval.

Building Permit

Any new construction or proposed renovation will likely require a building permit. All building, electrical, plumbing, gas, and fire department permits can be applied for online through the Inspectional Services Town Portal.

NHESP Priority Habitats of Rare Species and Rare Wildlife

The project site is not located within Priority Habitat or Estimated Habitat of Rare Wetlands Wildlife as determined by reference to data provided by the Mass. Division of Fisheries and Wildlife – Natural Heritage and Endangered Species Program (NHESP) available on Mass mapper.

MEPA (301 CMR 11.00)

The Massachusetts Environmental Policy Act (MEPA) and the corresponding 301 CMR 11.00 code was created to provide the MassDEP the opportunity for public review of the potential environmental impacts from projects that meet or exceed the thresholds outlined therein.
Depending on the size and scope of any new development, MEPA permitting may be required for the site. The thresholds for an Environmental Notification Form (ENF), or an Environmental Impact Report (EIR) for more significant land development impacts, include (but are not limited to) the following:

1. Direct alteration of 25 or more acres of land.
2. Creation of five or more acres of impervious area.
3. Alteration requiring a variance in accordance with the Wetlands Protection Act.
4. New withdrawal or Expansion in withdrawal of: 2,500,000 or more gallons per day (gpd) from a surface water source.

A full review of thresholds shall be completed once a design option is chosen, and the project moves into Schematic Design. Additionally, if a Project requires MEPA review in accordance with 301 CMR 11.01(2) and one or more Environmental Justice Populations are located within the Designated Geographic Area around the Project (within one mile of the project), measures shall be undertaken to provide public involvement opportunities for Environmental Justice Populations.

UTILITIES

It is anticipated that all utilities will be reviewed by the DPW and Water & Wastewater departments as part of the Site Plan review process and Conservation Commission NOI submission. In particular, the DPW will provide additional comments with regards to the sanitary systems, water systems, and stormwater design as necessary according to the standard Planning Board review process. All other utilities will need to be coordinated with the corresponding utility provider prior to the permitting effort.

Town of Essex Stormwater Management Regulation

Any major proposed redevelopment or renovation of the site will require compliance with the Town of Essex Stormwater Management Regulation. These regulations apply to any project that meets or exceeds the following triggers:

1. A Land Disturbance Permit is required for disturbance of equal to or greater than one (1) acre of land, or for the disturbance of any amount of land where the proposed use is a land use of higher potential pollutant loads pursuant to the Massachusetts Stormwater Management Standards.
2. The Stormwater Authority may require a permit for a project of any size which has caused or can reasonably be expected to cause or contribute to a violation of State Water Quality Standards or as deemed necessary by the Stormwater Authority.
3. Disturbance of Land, New Development, or Redevelopment that is subject to jurisdiction under the Massachusetts Wetlands Protection Act and demonstrates compliance with the

Massachusetts Stormwater Management Standards and the Essex Stormwater Management Bylaw and Regulations as reflected in an Order of Conditions issued by the Conservation Commission will not require a separate Land Disturbance Permit. The entire project and construction activities and all Stormwater Management must be fully within the jurisdiction of the Conservation Commission.

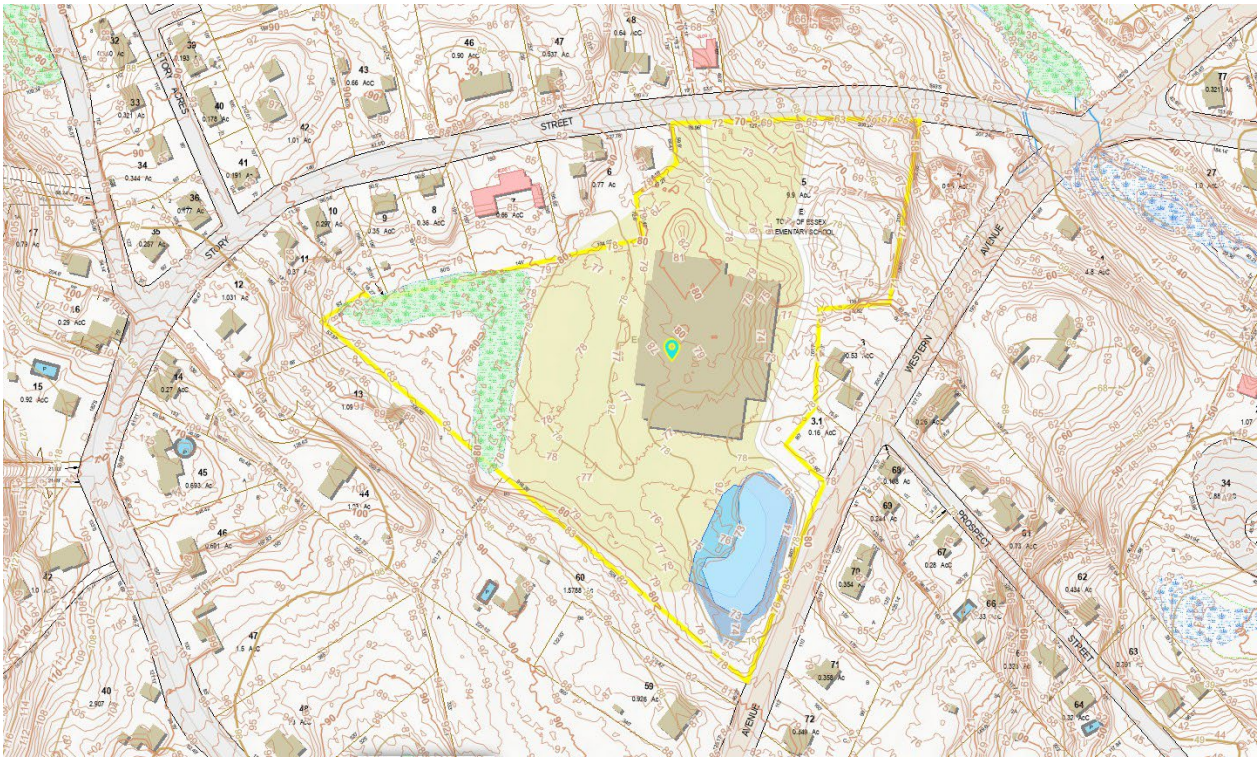
4. A project that has been reviewed and definitively approved by the Planning Board under the Massachusetts Subdivision Control Law or the Special Permit or the Site Plan Review provisions of the Essex Zoning Bylaws, may be deemed as acceptable under the Stormwater Management Bylaw only if the entire project and construction activities, including all land disturbance, adhere fully and meet the requirements as specified in the Stormwater Management Bylaw and these regulations adopted under the Bylaw. The Planning Board's issued Definitive Subdivision Permit, Final Approved Plans, and/or applicable Special Permit or Site Plan Review and associated permit conditions must require compliance with the Stormwater Management Bylaw and these associated Regulations. A separate Land Disturbance Permit will not be required. A copy of the final approved plans and approved permit will be shared with the Stormwater Authority.

Given the above requirements, a stormwater permit will likely be required for any of the proposed renovation or redevelopment options. The code compliance option is also likely to require a stormwater permit, pending a determination from the Planning Board. The official Stormwater Authority is the Town of Essex DPW, but the stormwater permit application can be submitted in conjunction with the Conservation Commission NOI and the Planning Board Site Plan Application. The DPW will provide comments on the stormwater design, as well as the other relevant site and utility components as part of the Planning Board Review Process.

SITE ANALYSIS

TOPOGRAPHY

Topography is a significant criterion in identifying candidates for a building site. The existing site features insignificant elevation change across the majority of the site resulting in a relatively flat and buildable site. The only significate elevation change is on the east side of the site where the current building utilizes this elevation change to allow for a walk out basement level. Most of the site lays in elevations 81 feet to 78 feet from west to east with the significate slope drop mostly at the northeastern corner of the site down to 58 feet. The existing playing fields, located on the west side of the site are at the flattest area of the site, though adjacent to wetlands they provide a highly favorable future building site. Some exposed ledge is visible on the northern side site adjacent to the existing cafeteria as well as visible ledge in the unexcavated portions of the existing school basement.



Site Topography

SITE ACCESS AND CIRCULATION

General and emergency vehicular access is provided off Story Street and Western Ave. From Story Street, there is access to a one-way vehicular loop that approaches the front of the school building. There are parking spaces located on the interior of the loop and access to two parking lots. One parking lot is situated directly west of the front of the school building, while the other is northeast from the building. There is another entrance from Western Ave which is signed to be for authorized vehicles only, and leads to some additional parking spots before connecting to the main loop. This road is a one way street, and vehicles are meant to exit through the end of the loop onto Story Street. There is also a bituminous play area on the southern side of the building that is blocked by a vehicular gate, but could be accessed by an emergency vehicle if necessary.

Buses enter from Western Avenue. The loop around the asphalt play area at the south end of the school dropping of students in the middle. The either exit back out onto Western Avenue or follow the access road on the east side of the school till it merges with the parent drop off loop at the northeast corner of the school and then exit onto Story Street on the eastern side of the front entry loop.

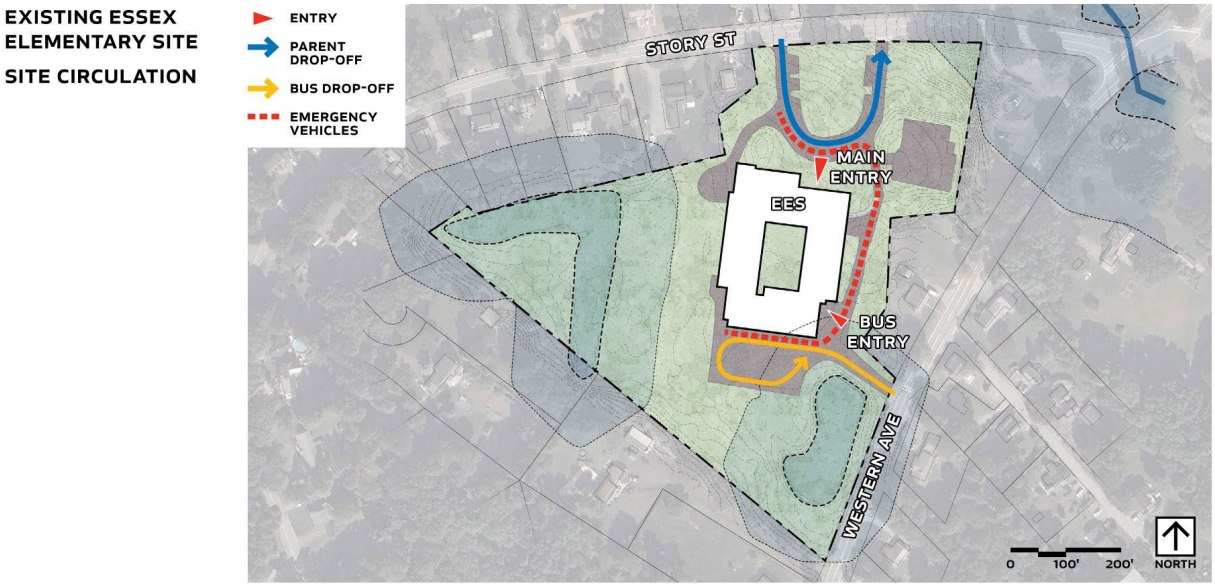
Pedestrian access is provided from both Story Street and Western Ave. Story Street features a sidewalk on the same side of the street that the building is on, and the sidewalk continues along the entirety of the loop road and provides pedestrian access to the front entrances to the building. Crosswalks are available at any intersections along this path, but there is no signage indicating the crosswalks. There is also a sidewalk on the side of Western Ave which the school is accessible from, but there are no sidewalks on the drive leading to the school from Western Ave. A sidewalk runs along the entire length of the western wall of the school, adjacent to the field. This sidewalk provides access from the front of the school to the bituminous play area in the back of the school. The paved play area serves as a means for pedestrians to access to both the playground and the rear entrance into the school.

Site Access and Circulation

- Comply with accessibility requirements of the Massachusetts Architectural Access Board (MAAB) and Americans with Disabilities Act (ADA) Design Standards See “Accessibility Requirements” section for more detail. Generally, provide grading that minimizes need for wheelchair ramps and steep walkways and that maximizes multifunctional, pedestrian-oriented space.
- Arrange walkways and barriers to facilitate pedestrian flow to controlled and secure access points.
- Arrange walkways and barriers to connect and enhance existing pedestrian circulation patterns on the site.
- Provide for safe and efficient drop-off and pick-up by having a separate bus drop-off and parental drop-off area and a clearly discernible main entrance.
- Incorporate a fire lane & emergency access route around the perimeter of the building.
- Provide adequately sized service areas and loading areas with adequate separation from play areas and pedestrian circulation.

Parking and Paving

- Full depth replacement asphalt paving is recommended, with a mill and overlay at minimum.
- New configurations should, wherever possible, be provided in areas of the site already impervious/paved.
- Provide MAAB/ADA compliant handicapped parking spaces and access aisles.
- Provide appropriately sized and configured service and loading areas.



Existing Site Circulation

PARKING

There are approximately 88 parking spaces at the existing elementary school. There are 4 parking locations present on the premises. The interior side of the loop features a row of 35 parking spaces. A small parking area on the west side of the school contains another 6 parking spaces. A larger parking area on the northeastern side of the property has an additional 36 parking spaces, as well as a designated area for a bus to park. Adjacent to the building on the southeast side, another 11 parking spaces are present. The bituminous play area to the south of the school building appears that it may have been designed to be a parking lot, but does not seem to be currently used for this purpose. No parking spaces in any of these areas have wheel stops or curbs in front of them.

The school is served by 2 buses that enter from Western Avenue and queue at the south end of the school. There is enough room onsite and limited buses that service the school that the queue of buses should not extend into either street and obstruct traffic during drop-off.

Service access is available through the loop road off Story Street as Well as the secondary entrance off Western Ave.

There are no sidewalks on the access road from Western Ave. It appears that the intention is for pedestrians to only be able to access the school via the loop extending from Story Street.

Paving and curbing will be specified during the design process. Asphalt paving of vehicular driveways and parking is typical. Walkway paving may include different materials such as asphalt, concrete and unit pavers based on location and use.

Existing curbing is present along all existing sidewalks. The majority of the loop features asphalt berms, which are in poor condition. The sidewalk in front of the building at the bus drop off area is granite that has been painted yellow. The access road on the east side of the building lacks sidewalks as well as curbing. New curbing will include vertical granite at walkways and high impact areas and possibly Cape Cod asphalt berm at low impact areas along landscaping.

STRUCTURES AND FENCES

The site currently supports one elementary school building only. There is one small greenhouse and portable shed within the building courtyard. The school site is generally not fenced. Play spaces, including the playground and play field, border directly on adjacent planting and properties.

A chain link fence and vehicular gate separate parking and vehicular circulation on the east from the playground. In addition, a 4'high chain link fence functions as a guard adjacent the loading dock retaining wall. The pond is separated from the play area by a 4-5' high rustic wooden fence backed with metal mesh in poor condition; The northern entry point near the pond is gated but not fenced.

The rest of the school is unfenced, using natural barriers to contain space. There is a spatial break between the play fields and southern service parking area created with 10 large boulders.

Proposed design should include perimeter fencing adjacent outdoor play spaces (including outdoor classroom, playground, and play fields), review and possible replacement of existing fencing, storage for maintenance equipment, and courtyard storage for portable outdoor play equipment, and teaching tools.

ACCESSIBILITY

Access to doorways around the building are not ADA compliant. One entrance at the front of the school has a steep slope approaching it, and there is a rear entrance that is only accessible from a flight of stairs. Ramps leading to other entrances have slopes that are steeper than ADA code permits.

Pedestrian curb ramps along the loop road do not have detectable warning surfaces and are showing signs of degradation. Accessible parking along the drop-off loop is limited, with only two (2) accessible parking spaces available. The grades in these spaces are not ADA compliant, with cross slopes of up to 3.4%. Accessible parking signs are not present at either parking space, and they are only indicated by the striping on the asphalt. Portions of paved walkways exceed 1H:20V without handrails or landings.

Currently, grades in several locations are not compliant with ADA standards. Due to surface cracking and subsurface settling, the bituminous play area behind the building has grades of up to 7.7% and the walkway to the west of the building has cross slopes over 3%. Ramps to the building have slopes of greater than 10%, making current accessibility into the school difficult and noncompliant with code.



Image 1: Curb ramp in poor condition with no detectable warning surface. Slopes and cracks likely exceed ADA regulations.



Image 2: Rear entrance (at southeast) that is not currently ADA accessible.



Image 3: Cross slope of 3.4% on existing accessible parking space exceeds the max slope of 2%.



Image 4: No signs at accessible parking spaces



Image 5: Slope of 10.9% on ramp exceeds ADA regulations of 8.33%.

EMERGENCY VEHICLE ACCESS

Emergency vehicles may access the site from Story Street or from Western Ave. It may be difficult for emergency vehicles to properly traverse the site because all roads are one lane, so any vehicles obstructing the path may impede the movement of emergency vehicles. A full review of the existing emergency access challenges or issues with the Fire Chief and other relevant Town officials is recommended to determine what access updates may be needed.

SAFETY AND SECURITY REQUIREMENTS

Safety and security at the school campus are paramount. The Story Street site currently features building-mounted exterior surveillance cameras, and planned upgrades will expand perimeter coverage using high-resolution, low-light, and infrared fixed and multi-lens cameras. Integrated video analytics, such as motion detection, will help establish a virtual perimeter and enhance monitoring of driveways, parking areas, playgrounds, and outdoor classrooms. To maximize coverage while maintaining visual harmony, cameras will be discreetly mounted on the school façade, soffits, and light poles. All exterior cameras will utilize Power over Ethernet (PoE), specified for environmental durability and surge suppression, and supported by UPS and emergency power. PoE provides multiple advantages, including centralized low-voltage power management, the ability to activate or deactivate devices based on schedules or events, and reduced material usage by eliminating separate power cabling, contributing to improved efficiency and sustainability.

Parking areas, parent drop-off and pick-up loops, and bus circulation zones will be clearly designated, with separate paths for buses and cars to support safe and orderly student transport. After the start of the school day, only the main front entry will remain open, accessible through a secure visitor entry sequence. Thoughtful site planning, including proper lighting, unobstructed sightlines, secure fencing, well-placed bollards, and intuitive wayfinding, helps create a safe and well-managed school environment. Effective lighting enhances visibility for surveillance, discourages unsafe behavior, and supports the safe movement of vehicles and pedestrians. Clear sightlines enable staff and first responders to quickly assess conditions, while fencing around playgrounds and activity areas establishes secure boundaries, reduces opportunities for unauthorized access, and ensures students remain within supervised zones. Gates, bollards, and other fixed barriers further restrict vehicle access near pedestrian walkways, accessible routes, and building entrances, creating controlled circulation patterns during school hours.

Transition zones and delineated pedestrian pathways reinforce separation between people and vehicles, reducing conflicts and improving safety. Traffic-calming measures, such as narrowed lanes, raised crosswalks, textured pavement, and strategic signage, help maintain safe driving speeds and increase driver awareness in high-pedestrian-activity areas. Complementing these physical measures, intuitive wayfinding, supported by clear signage and identifiable entry points guides individuals to their destinations while discouraging access to restricted areas. Effective wayfinding also assists emergency responders and helps staff quickly identify unusual or unsafe movements. When integrated into the overall security strategy, coordinated lighting, clear sightlines, fencing, bollards, pedestrian-vehicle separation, traffic-calming features, and wayfinding collectively

strengthen situational awareness, streamline daily operations, and improve the school's readiness to prevent, detect, and respond to potential security concerns.

Access from Story Street will be maintained and enhanced to accommodate the largest emergency vehicles. Site and landscape design are critical in providing a safe educational environment and ensuring occupants can evacuate safely during emergencies. Key strategies include defining transition zones between vehicular and pedestrian areas with barriers that stop vehicles while maintaining unobstructed pedestrian egress. Clear sightlines at eye level and from security cameras, combined with appropriate site lighting, provide staff and first responders with the visibility and reaction time necessary to recognize and respond to potential hazards.



Image ##: Manual swing gate at the rear of the site

ATHLETIC FIELDS AND OUTDOOR EDUCATIONAL SPACES

The site has one grassed multi-purpose field area (approximately 350' x 175') with several soccer nets present. The site also has one paved play area (approximately 175' x 100'), including 2 basketball hoops and striping for four-square games. A playground is located on the southern side of the site behind the paved play area including a swing set, a gaga ball pit, and several play structures for climbing. The site has no sports lighting or irrigation.

The site also includes an internal courtyard used for gardening and outdoor learning that has no accessible surfacing or paths.

Impact to the playground and field depends on the scheme. All schemes should provide the following:

- Playground with poured-in-place rubber surfacing

- Natural turf athletic field (not regulation size)
- Hardscape paved play area with basketball hoops and line painting games
- Outdoor classroom with accessible paving
- Space for gardening programed with accessible paths and raised beds
- Site furnishings, including tables and chairs, accessible seating, bins, benches, and bike racks.



Image 6: Grassed athletic field



Image 7: Playground and basketball hoop



Image 8: Paved play area behind building

CODE REQUIREMENTS

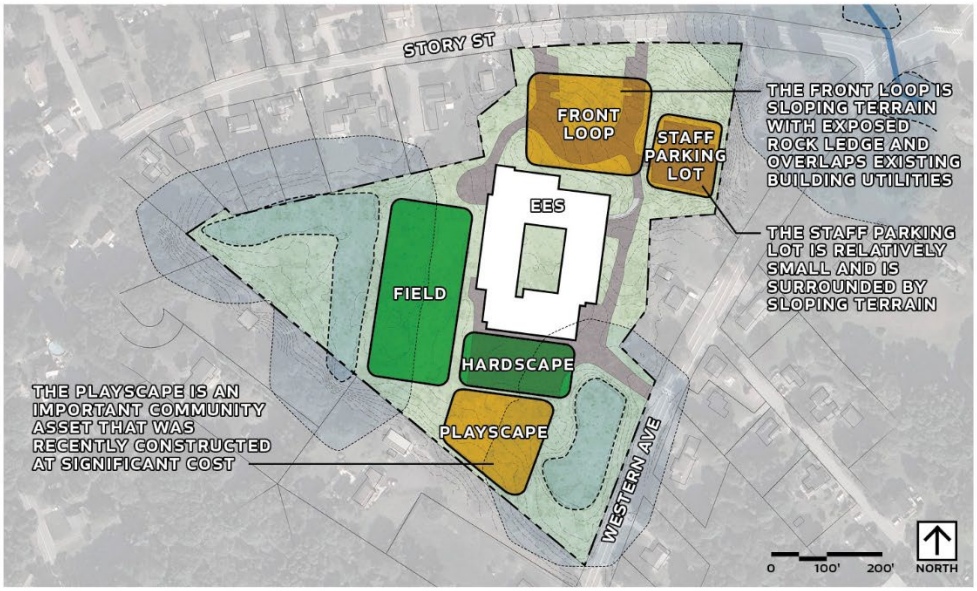
The preferred building solution and site design will fully meet current accessibility regulations and building code requirements. This includes compliant accessible parking, pedestrian routes, curbs ramps, stairs, and ramps with associated handrails as well as compliant guard railings along pedestrian routes located above walks greater than 30-inches high.

BUILDABLE AREA

After careful consideration of the attributes, opportunities, and limitations of this 9.75± acre site, the focus has narrowed to approximately 6.0± acres of land outside of the existing building footprint for further study in the Preferred Schematic Report factoring open space and zoning setback. Any addition to the existing building would likely take place in the open areas west or south of the existing building.

EXISTING ESSEX ELEMENTARY SITE

BUILDABLE AREA



Buildable Area

OPPORTUNITIES

The existing school, as sited, preserved the flatter portion of the western side of the site for outdoor recreational fields and activities. This placed the existing school at the center of the site separating the building from the surrounding residential homes. A single level courtyard style building was an effective use of building massing and orientation. The building is set back from the main road, allowing for parking and circulation with visibility to the main entrance. Renovation options of the existing school would explore the potential to restore this original design intent and focus on way to restore and better utilize the interior courtyard. Siting of any new additions would also seek to harvest as much of the sun's energy as possible, reducing energy use, operational costs and increasing comfort for students and staff. The design team employs advanced modeling and diagnostic tools to analyze optimum solar orientation on the site. This iterative method informs the building design throughout the process and will enable the team to make informed decisions early.

New building options will ideally be located on the site to allow continuous operation of the existing school facility throughout the construction schedule. As such, they will likely be sited on the south and western portion of the site in the location of the existing field and blacktop play surface. Other new building options will explore a phased approach to construction which will allow the new building to be situated in a similar footprint to the existing facility phased in a manor to allow continuous operation of the existing school facility. The use of portables or off-site facilities will be explored, though the preference would be to phase the new building to allow for swing space to move the students around during construction within the confines of the new and partially demolished portions of the existing school. Multiple options studied can be reviewed section 3.1.6 Preliminary Evaluation of Alternatives. These new options will also benefit from the same energy modeling software and workflow, ensuring the highest performance school building possible within the project constraints.

The design team will develop the siting, massing and placement of glazing and openings to maximize the solar benefit and limit the negative effects of glare and unwanted solar heat gain in cooling seasons.

LIMITATIONS

This site's limitations include the following issues. The lack of access to the rear of the site. There will be a need to relocate playing field and playground in several of the new building options causing the lack of use of these assets during construction. This is visible ledge around the site as well as the presence of a small pond and some wetlands to the west. There are also possible impacts to the neighboring properties if new construction is located close to property setbacks. There are also challenges associated with phase construction and maintaining operations of portions of the existing school throughout construction.

CONCLUSION

After careful consideration of the attributes, opportunities and limitations of this site, the School Building Committee decided it was favorable to advance the 12 Story Street site for further study in the Preferred Schematic Report.

43 LINCOLN STREET, MANCHESTER-BY-THE-SEA, MA



43 Lincoln Steet Existing Site Plan

SITE SCOPE

The existing Manchester Memorial Elementary School, located at 43 Lincoln Street, Manchester-By-The-Sea, MA is a public Elementary School serving the Town of Manchester-By-The-Sea. It was recently constructed on the site of the former elementary school and completed in 2022. The Campus is bordered by residential homes to the south and west, the Essex Country Club to the northeast and Manchester Essex Regional Middle Highschool to the north.
The overall lot area is 11± acres. The existing building is centrally located on the site with most of the parking to the north and east of the building. Any new construction would likely take place on the eastern side of the building in the location of the current faculty parking lot, requiring the removal or relocation of the town-owned tennis courts to facilitate new parking and student drop-off.

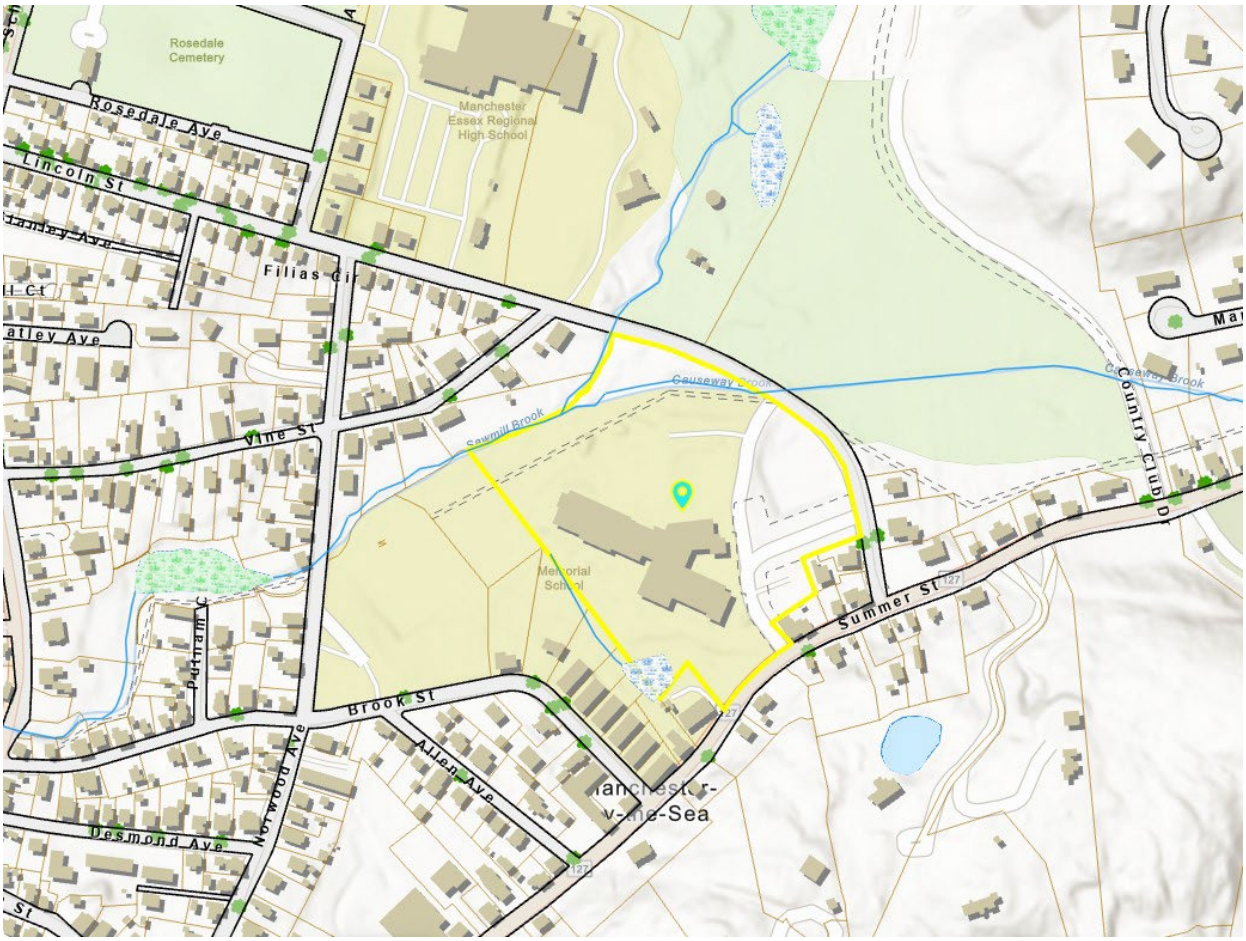
REGULATORY

Memorial Elementary School is located at 43 Lincoln Street in Manchester-by-the-Sea, MA. The property is presently under the control of the Manchester-Essex Regional School District via a lease with the Town of Manchester-by-the-Sea, MA. A copy of the lease agreement is included in the Appendix. The Memorial Site is presently zoned G – General District. In this zone, educational

facilities are allowed by use, and the current school building is an approved entity. The zoning setbacks and limitations are as follows:

- Minimum Frontage – 60 feet
- Minimum Lot Width – 50 feet
- Front Yard Setback – 5 feet
- Side Yard Setback – 10 feet
- Rear Yard Setback – 10 feet
- Maximum Building Coverage – 40%
- Maximum Lot Coverage – 70%
- Maximum Floors – 2-1/2
- Maximum Height – 35 feet
- Minimum Lot Area – 6000 square feet

The current building is in conformance with G - General District and is an existing conforming permitted use as an educational facility. Special permits are not required for a public school. A site plan review process will be required.



Conservation Commission

See the delineation report by Rimmer Environmental and previously issued ORAD (Mass DEP # 039-0782) that has now expired, but delineated Perennial stream, inner/outer riparian, inland bank, bordering vegetated wetlands, wetland buffers, and Zone I & II. For any proposed redevelopment work that impacts the existing wetland resource, a Notice of Intent (NOI) will need to be filed with the Conservation Commission to perform activities that are within or that affect the resource buffers. The permit application shall include such information and plans as are deemed necessary by the Commission to describe proposed activities and their effects on the Resource Areas protected by the Wetland Protection Act.

Flood plain elevation per town bylaws on site is 18.25. the western portion of the site is dedicated to flood plain restoration area. The existing tennis courts and rain garden are below elevation 18.25. It is highly likely that the by-law flood plain extends to this area but would need to be confirmed with the Manchester Conservation Commission.

Planning Board (assume 3-4 months):

We are anticipating submitting to Planning Board for Site Plan Approval when the project would be in DD. It is assumed that there will be up to 3 hearings/ meetings. Planning Board Site Plan Approval application will be concurrent with the conservation submission. The submission will require plans to be prepared to the level of 90% Design Development at a minimum. Hearings are held twice a month on the 2nd and 4th Mondays.

As part of the Planning Board submission, other consultants will need to submit plans for the site plan review application. The required plans to be submitted showing landscaping and lighting/electric site plans and details are to be provided by the Landscape Architect and the Electrical Engineer.

MA DEP Groundwater Discharge Permit:

No groundwater Discharge Permit is anticipated.

Board of Health

It is not anticipated that any filings will be necessary with the Board of Health. It is assumed that the existing sanitary service connects to municipal mains and will be maintained and/or updated as necessary. No septic system is anticipated. Thus, no Board of Health reviews are anticipated.

NPDES SWPPP

A NPDES Construction General Permit (CGP) from the New England EPA (i.e. eNOI) and a SWPPP will need to be obtained/developed by the contractor prior to the start of construction for any land disturbance that exceeds one (1) acre. It is anticipated this will be required for the project. Approval for the submitted eNOI can be obtained within fourteen (14) days of approval.

Building Permit

Any new construction or proposed renovation will likely require a building permit. All building, electrical, plumbing, gas, and fire department permits can be applied online through the Inspectional Services Town Portal.

NHESP Priority Habitats of Rare Species and Rare Wildlife

The project site is not located within Priority Habitat or Estimated Habitat of Rare Wetlands Wildlife as determined by reference to data provided by the Mass. Division of Fisheries and Wildlife – Natural Heritage and Endangered Species Program (NHESP) available on MassMapper.

MEPA

The Massachusetts Environmental Policy Act (MEPA) and the corresponding 301 CMR 11.00 code was created to provide the MassDEP the opportunity for public review of the potential environmental impacts from projects that meet or exceed the thresholds outlined therein.
Depending on the size and scope of any new development, MEPA permitting may be required for the site. The thresholds for an Environmental Notification Form (ENF), or an Environmental Impact Report (EIR) for more significant land development impacts, include (but are not limited to) the following:

1. Direct alteration of 25 or more acres of land.
2. Creation of five or more acres of impervious area.
3. Alteration requiring a variance in accordance with the Wetlands Protection Act.
4. New withdrawal or Expansion in withdrawal of: 2,500,000 or more gallons per day (gpd) from a surface water source.

A full review of thresholds shall be completed once the project is approved. Additionally, if a Project requires MEPA review in accordance with 301 CMR 11.01(2) and one or more Environmental Justice Populations are located within the Designated Geographic Area around the Project (within one mile of the project), measures shall be undertaken to provide public involvement opportunities for Environmental Justice Populations.

UTILITIES

Water:

The domestic water supply for the new school extends from the same 6-inch water line for one service and through a new tap in Summer Street for the western service. One 6-inch line extends along each side of the new building. The service on the west side of the building serves domestic and fire protection needs of the building and serves a hydrant located at the northwest corner of the new building. The service on the east side of the building supplies a hydrant is located near the building entrance.

It is assumed the addition would be fed internally and no new external water line would be required. Refer to the plumbing facility assessment section for further in-depth analysis of the building's domestic and fire protection service and capacity

Sewer:

The new building is served by three 6-inch sanitary sewer services. Two services are located on the north side of the building for sanitary sewer conveyance, with one sanitary sewer connection on the south side. There is also a 4-inch service for kitchen waste, with an exterior grease trap provided on the south side of the building prior to connection to the sanitary service.

It is assumed that the addition would have an internal connection and tie into the existing sewer line. Refer to the plumbing facility assessment section for further in-depth analysis of the internal building's sewer capacity.

Gas:

Gas service extends along the south side of the school from a new connection in Summer Street to the gas connection at the new building. Refer to the plumbing facility narrative section for further in-depth analysis of the building's gas service and capacity.

Stormwater Management:

The Elementary School site's stormwater runoff is treated by a stormwater management system. The runoff from the vehicular impervious areas on the north side of the site is collected via deep sump catch basins and manholes, directed through a stormwater quality unit for water quality treatment, and ultimately enter a subsurface infiltration basin, with overflow stormwater volume discharging to the west side of the site towards Causeway Brook.

Hardscapes on the east side of the property and a portion of the building roof is collected by a series of area drains, directed to an LID rain garden feature for water quality treatment prior to

infiltration to groundwater with overflow structures provided per the Massachusetts Stormwater Handbook requirements out letting to the south of the property.

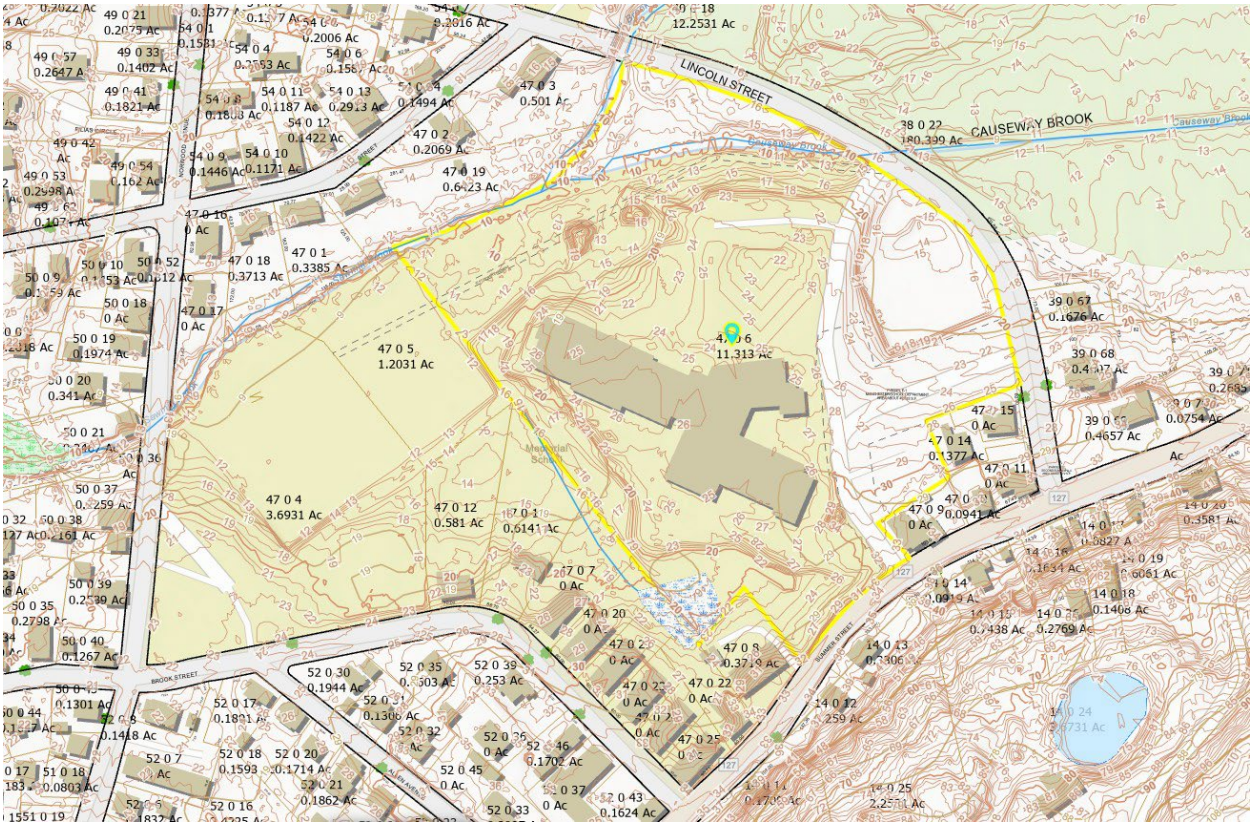
The south and west sides of the property include a series of catch basins and area drains conveying stormwater to stormwater quality units prior to discharge to the west and south sides of the property respectively.

A stormwater management system would need to be constructed within the footprint of the new parking lot for the additional impervious area, and the building addition.

SITE ANALYSIS

TOPOGRAPHY

The existing site features significant elevation change along the western and southern end of the site. These elevation changes were part of the previous MSBA project to construct the Manchester Memorial Elementary School in 2022 for the purpose of both flood water management and to create a relatively flat portion of the site for the purpose of constructing the new school. The existing faculty parking located on the eastern side of the site is the only available area for the purpose of constructing an addition on the site that would not result in major redesigning of both the flood water storage and underground water retention systems. The site is surrounded by wetland and water riparian areas further limiting the available buildable area.



Site Topography

SITE ACCESS AND CIRCULATION

There is an emergency vehicle access road around three quarters of the building perimeter. A portion of the access road southwest of the building is gated and for emergency vehicle access only.

There is a separate parent drop off loop that enters to the north from Lincoln Street, loops around the parking lot at the north side of the school and drops students off at the main entrance. Then loops back out a second eastern exit back onto Lincoln Street. The roadways in this loop are all one way to keep traffic flowing in the same direction. Along this loop there is a secondary drop-off location at the northeast corner of the building for Pre-K student drop-off

There is a secondary bus drop off loop that enters from Lincoln Street at the eastern entrance and loops along the eastern edge of the school. This loop is also one way and exits at the southeast end of the school onto Summer Street.

There are pedestrian sidewalks and access on all sides of the school. Include multiple locations for bike parking. There is also a pedestrian bridge to the north of the site the connects over Lincoln Street for pedestrian or bike access to the middle high school which is located to the north of the existing school also on Lincoln Street.

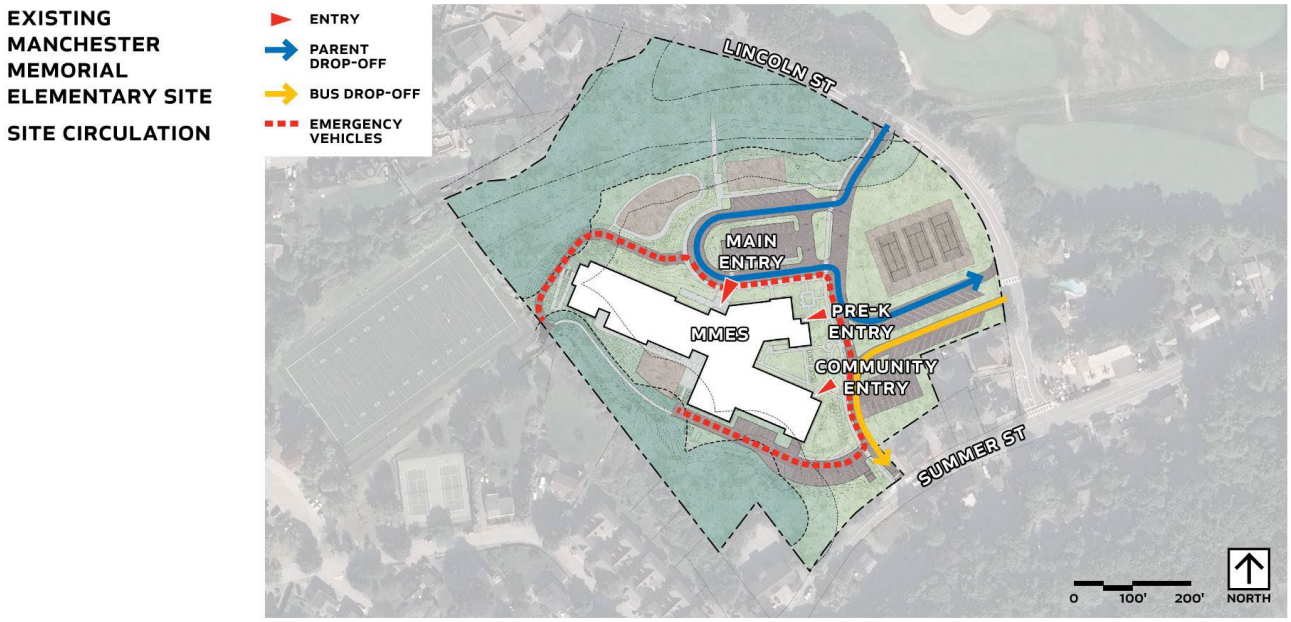
Site Access and Circulation

- Comply with accessibility requirements of the Massachusetts Architectural Access Board (MAAB) and Americans with Disabilities Act (ADA) Design Standards See “Accessibility Requirements” section for more detail. Generally, provide grading that minimizes need for wheelchair ramps and steep walkways and that maximizes multifunctional, pedestrian-oriented space.
- Arrange walkways and barriers to facilitate pedestrian flow to controlled and secure access points.
- Arrange walkways and barriers to connect and enhance existing pedestrian circulation patterns on the site.
- Incorporate a fire lane & emergency access route around a majority of the perimeter of the building.
- Provide adequately sized service areas and loading areas with adequate separation from play areas and pedestrian circulation.

Parking and Paving

- Per Manchester -by-the-sea Zoning Bylaw
    - Off-street parking spaces shall be designed with minimum dimensions of 9 feet by 18 feet. In parking areas of more than six (6) spaces, one third of the spaces may be compact car spaces, with minimum dimensions of 8 feet by 16 feet

- No parking area shall be located in the front yard or within (5') feet of any property line.
- Parking Area Plantings. Landscape treatment around the perimeter and interior of the parking lot is required and shall be used to break up large expanses of pavement and manage excess heat (heat island effect) and stormwater. Parking areas containing (5) or more parking spaces shall have at least one (1) tree per every five (5) parking spaces, such trees to be located either within the lot or within ten (10') feet of it. Such trees shall be at least two (2") inches trunk diameter, with not less than forty (40) square feet of unpaved soil per tree, in landscape islands with no dimension less than four (4') feet in width. For any parking area having twenty (20) or more spaces, at least five (5%) percent of the interior area shall include landscaping, including trees in landscape islands of at least the dimensions of one parking space with no more than 10 contiguous parking spaces between each island. Trees shall be so located as to provide visual relief and sun and wind interruption within the parking area, shade for pedestrian circulation routes, and to assure safe patterns of internal circulation. Trees shall be protected by curbs, bollards, or other barriers sufficient to prevent damage



Existing Site Circulation

PARKING

The main entrance is from Lincoln Street, at the north end of the site, which provides one-way access for school buses and parent drop-off vehicles entering the site. There is also a bituminous drop-off loop for cars that includes a bay of angled parking for 10 cars on the north side. A parking lot inside the loop with 23 spaces, including 2 handicapped accessible spaces and 1 handicapped van accessible space.

Bus drop-off occurs along the main drive directly in front of the school. The parking lot is separated from the drive by grass and planting bed islands, with precast concrete curb. A second grass island with granite curb provides separation from the main drive and the parking lot's entrance and exit. The one-way, 22' wide loop allows room for passing queuing cars and widens to 28' at the curve to accommodate turning vehicles. After making drop-offs, cars exit the loop back onto the school's main drive, which provides one-way traffic to exits at Lincoln Street to the East or Summer Street to the south.

A second bituminous drive is located south of the new school building, and is also accessed by the main drive. This area provides service and dumpster access, as well as an additional parking bays at the building for 8 spaces and across the drive to the south for 14 spaces.

The drive extends west to the school's rear plaza area, adjacent to which electrical utilities are located. A pedestrian walkway connects to the rear drive extension, consisting of 3 handicapped-accessible ramps and a bituminous walkway, which in turn connects with the bituminous emergency access drive and access to the off-site athletic field.

The 12' wide emergency access drive continues from the existing drive at the athletic field, and continues through the site around the rear of the building and terminates at the drop-off loop, enabling emergency vehicle access to all parts of the building exterior. This emergency access drive is closed to vehicular traffic except during emergencies and will primarily function as a pedestrian walkway. No changes were previously made to the existing entrance and exit at Lincoln Street east of the site.

The total new car park previously added by the MMES project was 55 spaces, including 3 handicapped accessible spaces.

STRUCTURES AND FENCES

The site currently supports one elementary school building only. The new fencing at Manchester Memorial ES is extensive. There are three playgrounds: one to the north, near the main parking lot, another to the southern edge of the building and a small one to the east. The southern playground in the rear is fenced in with black 4' high chain link fence. The pre-k eastern playground has 3' high black chain link fence surrounding it. The main playground to the north has a 4' high black chain link fence separating it from the wetlands to the north but is not fully enclosed. To the north of the main parking lot area are two basketball half courts with 10' high chain-link fencing fully enclosing them. The vehicular bridge leading from the northern part of the site to the middle school is lined with 4' high wooden white fencing / railing with white metal mesh.

Along the southern edge of the building a 4' high black chain link fence is affixed atop a retaining wall, separating the school from the path below.

Fencing is new and does not need replacement. Proposed design should review and include storage of outdoor play equipment or teaching tools at the pre-k area.

ACCESSIBILITY

The site was previously designed to meet ADA/MAAB regulations

A new bituminous walk with granite curb beginning at the Lincoln Street crosswalk was constructed to provide a connection to the pedestrian network within the site. The sidewalk splits and users can either follow along the main drive, crossing the drop-off loop entrance and exits at designated crosswalks, or continue around the loop where the basketball court and upper grades playground are located. The sidewalk connects to the pedestrian bridge at the north of the site, and the previously newly widened 8'6" sidewalk around the drop-off area. At the main entry plaza and drop-off area, a widened plaza and covered waiting area includes 11 bike racks and 4 benches. A separate 4' wide concrete sidewalk connects the drop-off sidewalk with a single exterior door at one of the pre-k classrooms. Outside the pre-k classrooms is a gathering area which houses a relocated sculpture from the old school, as well as benches and plantings.

South of this area along the main drive, sidewalk connections are made to double doors at the pre-k wing, as well as from the existing parking lot cross walks to the pre-k playground and plaza area. This sidewalk was previously laid out so that it incorporates the preservation of a large existing shade tree which users pass under on the way to the playground.

The designated pre-k playground is enclosed by a 4' height black vinyl clad chain link fence. Also in this space there is a sandbox play area and a seating area with a handicapped-accessible café table.

Outside of the fenced area, between the playground and the driveway are raised planting beds for gardening, a circular concrete outdoor classroom with bench seating, and 8 bike racks.

South of the school, pedestrian access is provided from existing sidewalks that meet the newly constructed concrete sidewalk with pre-cast concrete curb, which crosses the service entry at a designated crosswalk. In the rear of the school and adjacent to the cafeteria, south-facing concrete plaza features café tables and trash receptacles, a playground for kindergarten to Grade 1, and gardening space. These areas can be accessed directly from the building, or by one of the walkways connecting parking areas to the rear plaza area. The bituminous access drive doubles as a wide walkway linking adjacent off-site athletic fields with the school campus. At the west end of the school, a concrete staircase and handicapped accessible ramp provides building access, and 6 bike racks at the base that offer safe and secure bicycle storage. All sidewalk areas are lit by pedestrian area lights for safety and security, which are placed at regular intervals across the site.

EMERGENCY VEHICLE ACCESS

The 12’ wide emergency access drive continues from the existing drive at the athletic field and continues through the site around the rear of the building and terminates at the drop-off loop, enabling emergency vehicle access to all parts of the building exterior. This emergency access drive is closed to vehicular traffic except during emergencies and will primarily function as a pedestrian walkway.

SAFETY AND SECURITY REQUIREMENTS

Safety and security at the school campus are paramount. The Lincoln Street site currently includes both building-mounted and pole-mounted exterior surveillance cameras, and planned enhancements will expand perimeter coverage through the deployment of high-resolution, low-light, and infrared fixed and multi-lens cameras. Integrated video analytics, such as motion detection, will help establish a virtual perimeter and monitor activity throughout the site, including driveways, parking areas, playgrounds, and outdoor classrooms. To optimize coverage while maintaining aesthetics, cameras will be strategically mounted on the school façade, soffits, and light poles. All exterior cameras will use Power over Ethernet (PoE), specified for environmental suitability and surge suppression. PoE power supplies will be supported by uninterruptible power systems (UPS) and emergency power to ensure operational continuity. This low-voltage power architecture provides centralized management, enables scheduled or event-based activation, and reduces material usage by eliminating separate power runs, contributing to energy efficiency and sustainability.

Parking areas, parent drop-off and pick-up loops, and bus circulation zones will be clearly defined, with separated vehicle paths to support safe and orderly transport. After the start of the school day, only the main front entry will remain open, accessible through a secure visitor entry sequence. Thoughtful site planning, including appropriate lighting, clear sightlines, secure fencing, well-placed bollards, and intuitive wayfinding, creates a safe and well-managed school environment. Effective lighting enhances visibility for surveillance, discourages unsafe behavior, and promotes safe

pedestrian and vehicular movement. Unobstructed sightlines allow staff and first responders to quickly observe activity, while fencing around playgrounds and activity areas establishes clear boundaries, minimizes unauthorized access, and ensures students remain within supervised zones. Gates, bollards, and other fixed barriers further restrict vehicle access near walkways, accessible routes, and building approaches, creating controlled circulation patterns throughout the school day.

Transition zones and delineated pedestrian pathways reinforce separation between pedestrians and vehicles, reducing conflicts and improving safety. Traffic-calming features, such as narrowed lanes, raised crosswalks, textured pavement, and strategic signage, encourage safe vehicular speeds and increase driver awareness in areas with high pedestrian activity. Complementing these measures, intuitive wayfinding supported by clear signage and defined entry points guides individuals efficiently through the site while discouraging access to restricted areas. Effective wayfinding also assists emergency responders and helps staff more quickly identify unusual or unsafe movement. When integrated into an overall security strategy, coordinated lighting, sightlines, fencing, bollards, pedestrian-vehicle separation, traffic-calming elements, and wayfinding collectively strengthen situational awareness, support daily operations, and enhance the school's ability to prevent, detect, and respond to potential security concerns.

Access from Lincoln Street will be maintained and improved to accommodate the largest emergency vehicles. Site and landscape design play a critical role in creating a safe educational environment and ensuring occupants can evacuate efficiently during emergencies. Key strategies include establishing clearly defined transition zones between vehicular and pedestrian areas, using barriers that stop vehicles without impeding pedestrian egress. Clear sightlines at eye level and from security cameras, paired with adequate site lighting, provide staff and first responders the visibility and response time needed to identify and react to potential hazards.

ATHLETIC FIELDS AND OUTDOOR EDUCATIONAL SPACES

The site has 3 tennis courts and 2 basketball half courts with line painting games. A football field is located adjacent to the school site. There are three playgrounds: one to the north, near the main parking lot, has a large climbing structure, rope play features, triple hoop and other freestanding play features. A second playground in the southern edge of the building has a nautical theme with a ship play structure and other play equipment. The third is the pre-k playground to the east.

The site has no sports lighting or irrigation.

Flexible outdoor learning spaces with seat walls and paving are located on the east side of the school.

Proposed designs should maintain as much of the exterior programming as possible, provide outdoor learning spaces and replace any play spaces affected.

CODE REQUIREMENTS

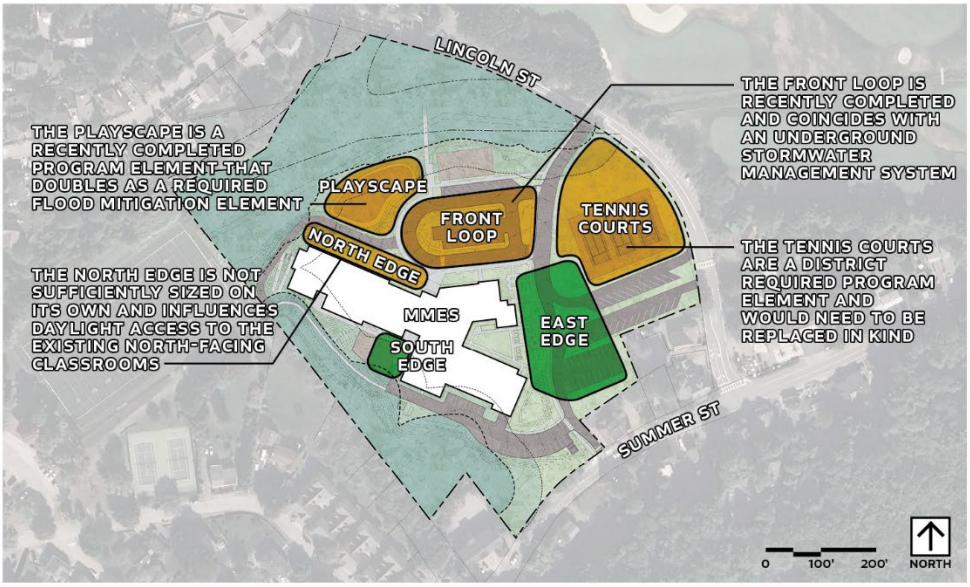
The preferred building solution and site design will fully meet current accessibility regulations and building code requirements. This includes compliant accessible parking, pedestrian routes, curbs ramps, stairs, and ramps with associated handrails as well as compliant guard railings along pedestrian routes located above walks greater than 30-inches high.

BUILDABLE AREA

After careful consideration of the attributes, opportunities, and limitations of this 11.5± acre site, the focus has narrowed to approximately 4.0± acres of land outside of the existing building footprint for further study in the Preferred Schematic Report factoring open space and zoning setback. Any addition to the existing building would likely take place in the open areas north and west of the existing building.

EXISTING MANCHESTER MEMORIAL ELEMENTARY SITE

BUILDABLE AREA



Buildable Area

OPPORTUNITIES

The existing school was recently constructed in 2021 and therefore no new building options are being considered for this site. Only Renovation and addition options would be considered, those options can be reviewed in section 3.1.6 Preliminary Evaluation of Alternatives. Due to all the regulatory restrictions on the site and the fact the building was recently constructed there is limited space for siting the proposed expansion addition at the 43 Lincoln Street site. The only viable location for an addition is to the eastern side of the school in the location of the current rain garden and faculty parking. Siting the addition here will likely result in the town needing to relocate or remove the 3 tennis courts located on the east of the site to accommodate expanded parking, water retention and reconfiguration of both the parent and bus drop-off circulation loops. Increased student and faculty at this location will have negative effects on the traffic congestion in the surrounding area especially at arrival and dismissal.

The design team employs advanced modeling and diagnostic tools to analyze optimum solar orientation on the site. This iterative method informs the building design throughout the process and will enable the team to make informed decisions early. The design team will develop the siting, massing and placement of glazing and openings to maximize the solar benefit and limit the negative effects of glare and unwanted solar heat gain in cooling seasons.

LIMITATIONS

This site's limitations include the following issues. There is limited access to the rear of the site currently, which will potentially only be made worse with an addition. Increased enrollment will require larger capacity parking, resulting in the loss of the town's tennis courts which are used by the high school's tennis team to be able to compete in state competitions. Portions of the building that were recently completed under a previous MSBA project that would need renovations or alterations would not be eligible for reimbursement. The Manchester Essex Regional School district would need to vote to change their bylaws to relocate students from Essex to a facility in the Town of Manchester-By-The-Sea. There are also challenges associated with phase construction and maintaining operations of portions of the existing school throughout construction.

Due to the existing tennis courts and rain garden being within the floodplain, if the area is to be converted to parking, compensatory flood plain area will need to be provided elsewhere on site. This may require removing previously built programmatic space.

CONCLUSION

After careful consideration of the attributes, opportunities and limitations of this site, the School Building Committee has reservations about the 43 Lincoln Street site. The SBC will be discussing further at the start of the Preferred Schematic Report stage.

PRELIMINARY EVALUATION OF ALTERNATIVES

SECTION 3.1.6

3.1.6 – PRELIMINARY EVALUATION OF ALTERNATIVES

- Introduction
- Code Upgrade Option
  - Option A0.1 – 12 Story Street, Essex, MA, Grades K-3 + PreK
  - Option A0.2 – 12 Story Street, Essex, MA, Grades K-5 + PreK
- Renovation and Addition Options
  - Option A1.1 – 12 Story Street, Essex, MA, Grades K-3 + PreK
  - Option A1.2 – 12 Story Street, Essex, MA, Grades K-5 + PreK
  - Option B1.1 – 43 Lincoln Street, Manchester-by-the-Sea, MA, Grades K-5 + PreK
- New Construction Options
  - Option A2.1 – 12 Story Street, Essex, MA, Grades K-3 + PreK
  - Option A2.2 – 12 Story Street, Essex, MA, Grades K-5 + PreK

3.1.6 – PRELIMINARY EVALUATION OF ALTERNATIVES

SCHOOL ASSINGMENT PRACTICES

There are currently two (2) Elementary Schools in the District: Essex Elementary and Manchester Memorial Elementary. Manchester Memorial Elementary School was recently rebuilt and reopened in 2021.

The current design options being considered include several combined enrollment and grade reconfiguration scenarios. If one of the combined enrollment or grade reconfiguration options is selected, the District will relocate students as necessary. The relocation of students or the use of modular swing spaces is not anticipated during construction for any of the design options except for option A0.2 which would require a 4-classroom modular or offsite swing space. See all the potential design options included in the PDP submission to the MSBA.

TUITION AGREEMENTS

The Manchester Essex Regional School District participates in Massachusetts's School Choice. Massachusetts General Laws Chapter 76, Section 12B was enacted in 1991 to allow parents to send their children to public schools in communities other than the one in which they reside. The Manchester Essex Regional School District currently participates in accepting out-of-district students from all communities outside the Manchester Essex region in Grades K through 12.

RENTAL OR ACQUISION OF EXISTING BUILDINGS

There are not facilities of sufficient size available within the Towns of Manchester or Essex to accommodate the entire range of student enrollments being studied (165-515).

ALTERNATE SITES

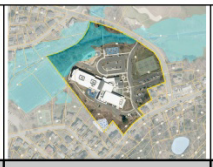
The initial development of the project began with an exploration of available sites within the town of Essex. The design team was provided with a list of 112 town of Essex owned Parcels. Of those 112 sites 16 met the minimum required size of 9.75 acres and only 7 of the 16 had street access and utilities. Six out of the 7 viable sites were already currently in use by other town functions such as town hall and the town library. The only viable alternate site to the existing school site was found to be 30 Apple Street, Essex, Ma. While 30 Apple Street site met the needs of the project, through the data collection process, it was determined that required infrastructure upgrades in surrounding streets, imposed significate financial and scheduling barriers to this being a viable option. The School Building Committee voted to remove this site from contention and no further exploration into the 30 Apple Street site was carried out.

At the request of the Building Committee, one potential site in Essex and one site in Manchester-by-the-Sea were considered as part of this Preliminary Design Program for further study. Through a series of discussions that included an evaluation of compiled data, 12 Story Street, Essex, MA (Essex Elementary School) and 43 Lincoln Street, Manchester-by-the-Sea, MA (Manchester Memorial Elementary School) emerged as the preferred sites to explore renovation, addition and new construction options as part of the Preferred Schematic Report.

Both sites are currently owned by their respective towns, the Town of Essex and the Town of Manchester-by-the-Sea. Each school has a 20-year lease agreement last extended on August 16, 2021. Each lease contains a provision for extension of the term and thereof for renewal term not in excess of twenty (20) years, renewable at any time during the term at the option of the School Committee. A copy of the Executed Leases are included in Appendix 3.1.8.9 of this report.

Alternative Site Criteria

Legend	
	Not Preferable
	Neutral
	Advantageous


ESSEX ELEMENTARY SCHOOL PROJECT SITE ALTERNATIVES		SITE A CURRENT ESSEX ES	SITE B CURRENT MMES	SITE C APPLE STREET
		12 STORY ST	43 LINCOLN ST	30 APPLE ST
General	Location	ESSEX	MANCHESTER	ESSEX
	Size	9.75 ACRES	11.313 ACRES	11.50 ACRES
Site Development	Town Owned			
	Adequate Buildable Area - (Current Site 9.75 Acres)			
	Utilities Access			
	Subsurface Conditions – Geotechnical (Bearing Capacity, Organics, Ledge)			
	Environmental Contaminants			
	Regulatory - Wetlands, Rivers and Streams, Flood Zones			
	Future Development Options and Flexibility			
	Reimbursement potential from MSBA (Offsite, Budget cap)			
	Construction Complexity – Access, Laydown, Phasing			
Site Access	Infrastructure - Bridges, Road Surface			
	Walkability - Distances, Sidewalks			
	Safety - Road Width, Sight Lines			
	Busing			
Community	Compatible with Regional Agreement			
	Access to other Community Resources			
	Minimize Impact on Neighbors			
Education	Meets needs of Educational Program			
	Construction Impact on Existing School Activities			
Schedule	No significant schedule risks - "Shovel Ready"			

EVALUATION OF DESIGN ALTERNATES

Upon completion of the Educational Program, the Initial Space Summary, evaluating the Existing Conditions, exploring alternative sites held by the town of Essex, and defining the Site Development Requirements that led to the identification the two alternate sites to be considered, the Building Committee considered seven (7) conceptual design options on the two sites to explore as part of the Preliminary Design Program.

In collaboration with the MSBA, the District developed three design enrollments/grade configurations that would be studied in the Preliminary Design Program. Each design option, whether a code upgrade, renovation/addition or new construction, meets the projected enrollment capacities to best serve the District and enable an informed decision when selecting the Preferred Option development in the Preferred Schematic Report phase.

The Building Committee approved these options for development on the Essex and Manchester-by-the-Sea sites. The options include:

- Code Upgrade Option
  - Option A0.1 – 12 Story Street, Essex, MA, Grades K-3 + PreK
  - Option A0.2 – 12 Story Street, Essex, MA, Grades K-5 + PreK
- Renovation and Addition Options
  - Option A1.1 – 12 Story Street, Essex, MA, Grades K-3 + PreK
  - Option A1.2 – 12 Story Street, Essex, MA, Grades K-5 + PreK
  - Option B1.1 – 43 Lincoln Street, Manchester-by-the-Sea, MA, Grades K-5 + PreK
- New Construction Options
  - Option A2.1 – 12 Story Street, Essex, MA, Grades K-3 + PreK
  - Option A2.2 – 12 Story Street, Essex, MA, Grades K-5 + PreK

The test-fit options demonstrate, at a conceptual level, how a potential design could be placed on the site to identify site challenges and opportunities while addressing the defined site development requirements.

In addition, a Comparative Probable Cost Analysis was developed to provide a relative probable cost for each option to assist the School Building Committee to determine which options may be further considered and studied. The Comparative Probably Cost Analysis values are not to be considered project budget values. These values are subject to change as options are further developed.

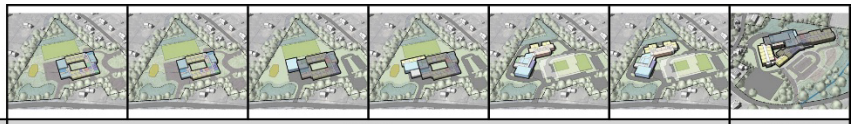
The probable cost for each option was derived using the MSBA Space Summary template to generate projected Gross Building Areas accounting for renovated area and new construction. Using general descriptions to define the anticipated scope of work for the site and building, an independent estimator provided historic square foot cost data for each scope to generate an estimate of probable construction cost for each option. The probable construction costs were used to general total project costs based on historic cost percentages of the construction cost. The total project costs

were derived from industry standards for project “soft cost”, including cost data from other recent MSBA projects. These soft costs include, but are not limited to, FF&E, Technology, OPM and Architect Fee’s, utilities, Moving Costs and Owner Contingency.

A Design Alternatives Evaluation Matrix and the summary of the Design Alternatives for the Essex and Manchester-by-the-Sea Sites has been created and will be used by the School Building Committee to evaluate which options will be further explored during the Preferred Schematic Report (PSR).

Evaluation of Design Alternatives

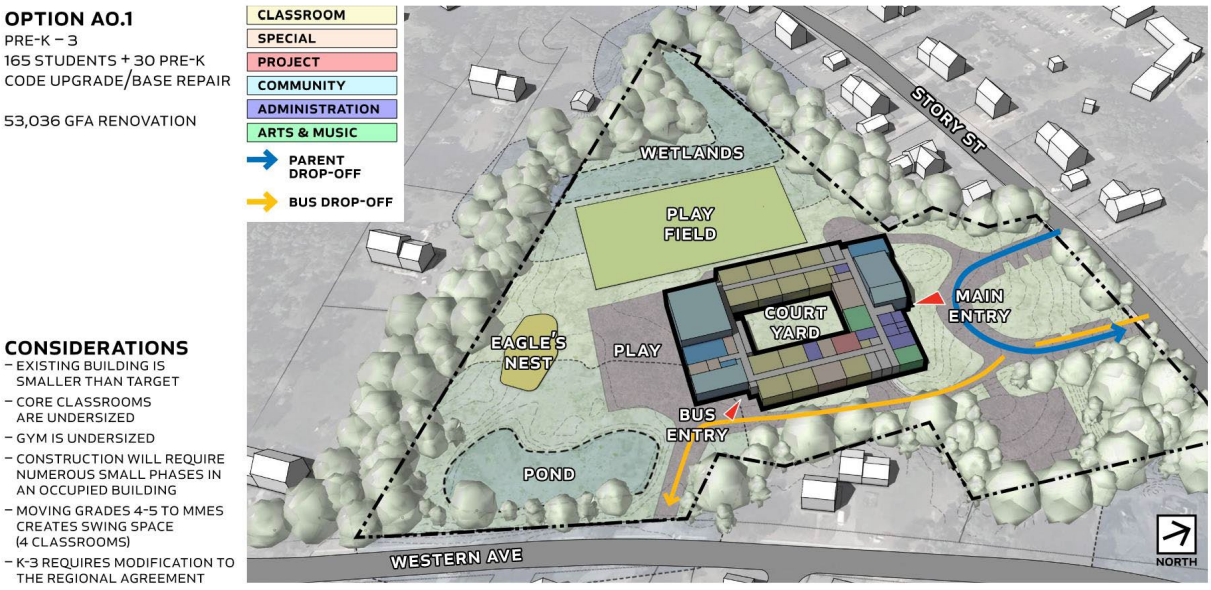
Legend	
0	Highly Undesirable
1	Undesirable
2	Neutral
3	Desirable
4	Highly Desirable



ESSEX ELEMENTARY SCHOOL PROJECT EVALUATION OF DESIGN ALTERNATIVES		SITE A CURRENT ESSEX ES						SITE B CURRENT MMES
		A0.1	A0.2	A1.1	A1.2	A2.1	A2.2	B1.1
		Code Upgrade/ Base Repair	Code Upgrade/ Base Repair	Addition/ Renovation	Addition/ Renovation	New Construction	New Construction	Addition/ Renovation
General	Enrollment (+ PRE-K)	165 + 30	250 + 30	165 + 30	250 + 30	165 + 30	250 + 30	515 + 60
	Grade Configuration	PRE-K - 3	PRE-K - 5	PRE-K - 3	PRE-K - 5	PRE-K - 3	PRE-K - 5	PRE-K - 5
	Renovated Area	53,036 GFA	53,036 GFA	53,036 GFA	53,036 GFA	0	0	77,102 GFA
	New Area	0	0	7,741 GFA	20,637 GFA	60,777 GFA	73,673 GFA	41,899 GFA
	Total Area	53,036 GFA	53,036 GFA	60,777 GFA	73,673 GFA	60,777 GFA	73,673 GFA	119,001 GFA
	Construction Phases	TBD	TBD	TBD	TBD	2	2	TBD
Education	Meets Needs of Educational Program at EES	0	0	0	4	0	4	2
	Meets Needs of Educational Program at MMES	0	4	0	4	0	4	2
	Equity across the District	0	0	0	4	0	4	0
	Future Growth and Expansion	2	2	2	2	4	4	0
	Flexible and Adaptable Spaces	0	0	4	4	4	4	0
	Construction Impact on Existing School Activities	0	0	0	0	2	2	0
Community	Compatible with Regional Agreement	0	4	0	4	0	4	0
	Heart of Essex Community / Sense of Place	4	4	4	4	4	4	0
	Walkability for Essex Student Population	1	4	1	4	1	4	0
	Neighborhood Traffic Impact	1	4	1	4	1	4	0
	Community Use Opportunities	1	4	1	4	1	4	0
	Disruption to Manchester	1	4	1	4	1	4	0
Site	Regulatory - Wetlands, Rivers & Streams, Flood Zones	4	4	4	4	1	1	0
	Bus and Parent Drops - Safety & Efficiency	2	2	2	2	4	4	0
	Parking Capacity	2	2	2	2	4	4	0
	Play and Athletics Fields (inc. MMES Tennis Courts)	2	2	2	2	4	4	0
	Meets Sustainability Goals - Bike Paths, Rain Garden	4	4	4	4	4	4	0
Building	Existing Facility Deficiencies Addressed	2	2	4	4	4	4	4
	Entries Visible / Unobstructed Sight Lines	0	0	0	0	4	4	2
	Additional work at MMES (separate project by District)	0	2	0	2	0	2	N/A
Cost and Schedule	Maximize MSBA Grant Reimbursement	4	4	4	4	4	4	0
	Phasing Minimizes Construction Duration	0	0	0	0	4	4	1
	Modular Classroom Swing Space not Required	4	0	4	4	4	4	4
	Construction Access and Staging	2	2	2	2	2	2	0
	Reduce Operational Costs - Sustainability Driven	0	0	4	4	4	4	2
	Reduce Operational Costs - Utilities, Maintenance	1	2	1	2	1	2	2
	Reduce Operational Costs - Staff, Transport	1	2	1	2	1	2	2
	Total Project Cost	$45M-50M	$45M-50M	$75M-80M	$90M-95M	$80M-85M	$90M-95M	$70M-80M

An analysis of the Seven (7) options developed during the PDP phase are provided on the following pages of this report. Each option accommodates the preferred design program for the various enrollments. The summaries highlight how each option accommodates the space summary area in addition to opportunities (pros), limitations (cons) and other qualities discussed by the School Building Committee.

OPTION A0.1 - CODE UPGRADE/BASE REPAIR



By definition, a Code Upgrade option includes repair of systems and scope required for purposes of code compliance excluding modifications of existing spaces or their function to meet the Educational Plan, set forth by the School Building Committee.

Option A0.1 investigates the requirements to complete an accessibility and code upgrade for the existing Essex Elementary School. Many of the inherent building conditions prevent the effective delivery of the District's educational vision defined in the Educational Program. This option will bring the facility into full accessibility and code compliance. The replacement of all exterior doors and windows, roofing, interior finishes and building systems as well as improving the energy performance of the existing building envelope will be studied. Refer to the existing conditions report section 3.1.4 for more information regarding existing conditions.

Due to a reduction in total enrollment in this option, there is assumed to be four vacant classrooms available to move students around the facility to accommodate a continuous construction schedule. To minimize the construction impact on school and District operations, construction phasing for common areas of the building would need to be planned to occur during school vacations and/or after-hours and weekend periods. Such an approach would extend the construction duration and increase the cost of the scope of work due to the inefficient delivery.

PROS

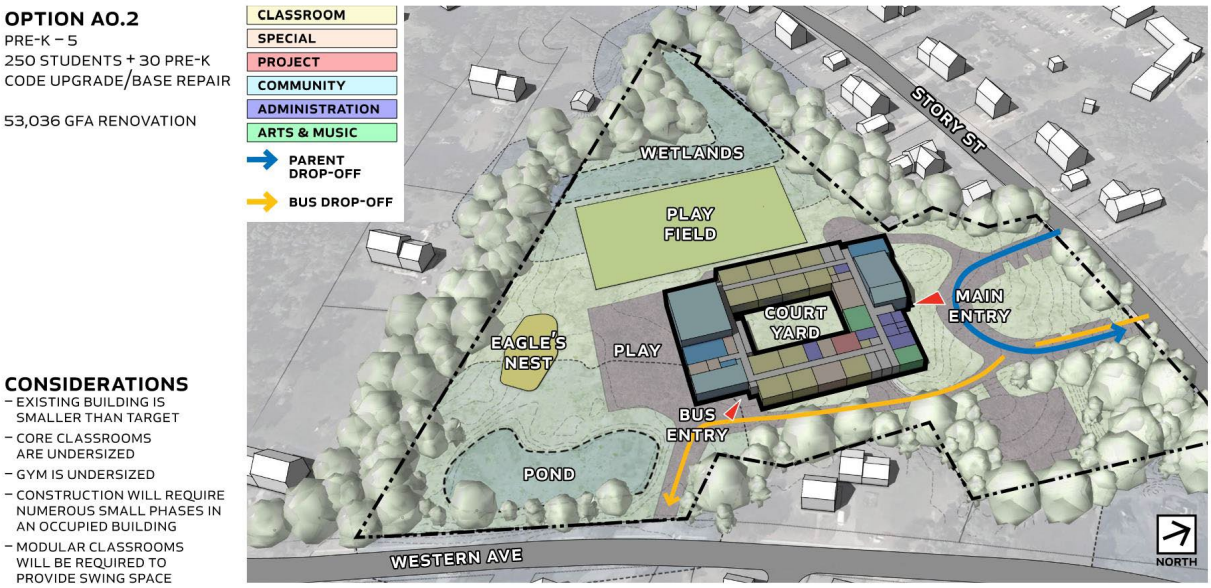
- Retains entire existing facility.
- No impact on the playground or play field

CONS

- Renovated building will not meet the Educational Program.
- Difficult site circulation/accessibility.
- No opportunity to create Learning Neighborhoods.
- No opportunity to improve administrative offices.
- Extended construction schedule to accommodate phasing.
- Does not meet current district regional agreement

As required by the MSBA process and after careful consideration of the opportunities, limitations and other qualities, the Building Committee will vote on advancing this option for further study at the start of the Preferred Schematic Report.

OPTION A0.2 - CODE UPGRADE/BASE REPAIR



By definition, a Code Upgrade option includes repair of systems and scope required for purposes of code compliance excluding modifications of existing spaces or their function to meet the Educational Plan, set forth by the School Building Committee.

Option A0.1 investigates the requirements to complete an accessibility and code upgrade for the existing Essex Elementary School. Many of the inherent building conditions prevent the effective delivery of the District's educational vision defined in the Educational Program. This option will bring the facility into full accessibility and code compliance. The replacement of all exterior doors and windows, roofing, interior finishes and building systems as well as improving the energy performance of the existing building envelope will be studied. Refer to the existing conditions report section 3.1.4 for more information regarding existing conditions.

This option would not have available swing space and therefore if would require a 4-classroom modular. To minimize the construction impact on school and District operations, construction phasing for common areas of the building would need to be planned to occur during school vacations and/or after-hours and weekend periods. Such an approach would extend the construction duration and increase the cost of the scope of work due to the inefficient delivery.

PROS

- No impact to bus operations.
- Retains entire existing facility.
- No impact on the playground or play field.
- Does not require changes to the regional agreement.

CONS

- Renovated building will not meet the Educational Program.
- Building is not capable of absorbing additional enrollment increases.
- Difficult site circulation/accessibility.
- No opportunity to create Learning Neighborhoods.
- No opportunity to improve administrative offices.
- Extended construction schedule to accommodate phasing.
- No swing space – requires modulars to complete construction.

As required by the MSBA process and after careful consideration of the opportunities, limitations and other qualities, the Building Committee will vote on advancing this option for further study at the start of the Preferred Schematic Report.

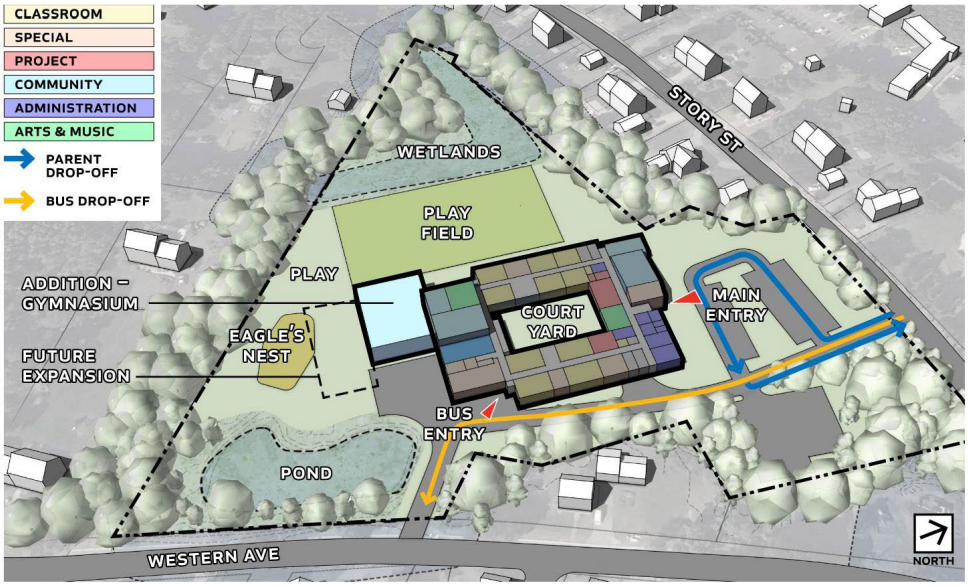
OPTION A1.1 – ADDITION AND RENOVATION

OPTION A1.1
PRE-K – 3
165 STUDENTS + 30 PRE-K
ADDITION/RENOVATION

53,036 GFA RENOVATION
7,741 GFA ADDITION

TOTAL: 60,777 GFA

CLASSROOM
SPECIAL
PROJECT
COMMUNITY
ADMINISTRATION
ARTS & MUSIC
PARENT DROP-OFF
BUS DROP-OFF



CONSIDERATIONS
- FULL-SIZE GYM COULD BE ACCOMMODATED IN AN ADDITION
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- MOVING GRADES 4-5 TO MMES CREATES SWING SPACE (4 CLASSROOMS)
- K-3 REQUIRES MODIFICATION TO THE REGIONAL AGREEMENT

Option A1.1 includes the full renovation of the original circa 1958 multi-level courtyard style building and the 1975 media center and gymnasium addition, 53,036 gsf total existing footprint with an addition of 7,741 gsf for a total facility of 60,777 GSF. The proposed addition would be a new gymnasium allowing for the existing gymnasium to be repurposed into other community building functions.

Existing interior spaces will be modified to create conditions like the proposed Learning Neighborhoods. This will be accomplished by creating break-out spaces in the existing building.

To minimize the impact on existing school operations renovation and addition are proposed as a multi-phased construction project. The reduction in enrollment in this option should provide enough swing space for the student population to eliminate the need for modulars or off-site lease agreements.

The first phase will include construction of the addition of the gymnasium. Phase two will allow the existing gym to be renovated into the new cafeteria and kitchen. Phase three will allow the existing cafeteria to be renovated into the new media center. Phases three, four, and five will allow for the renovations of the academic wings and the administrative areas. Their exact order and schedule of these phases will be detailed and investigated further if this option is chosen to proceed. The existing building elements that remain during the phased construction will be occupied and students and faculty will move into new construction as it is completed. The final phase will include site circulation, playgrounds and restoration of the landscaped areas.

PROS

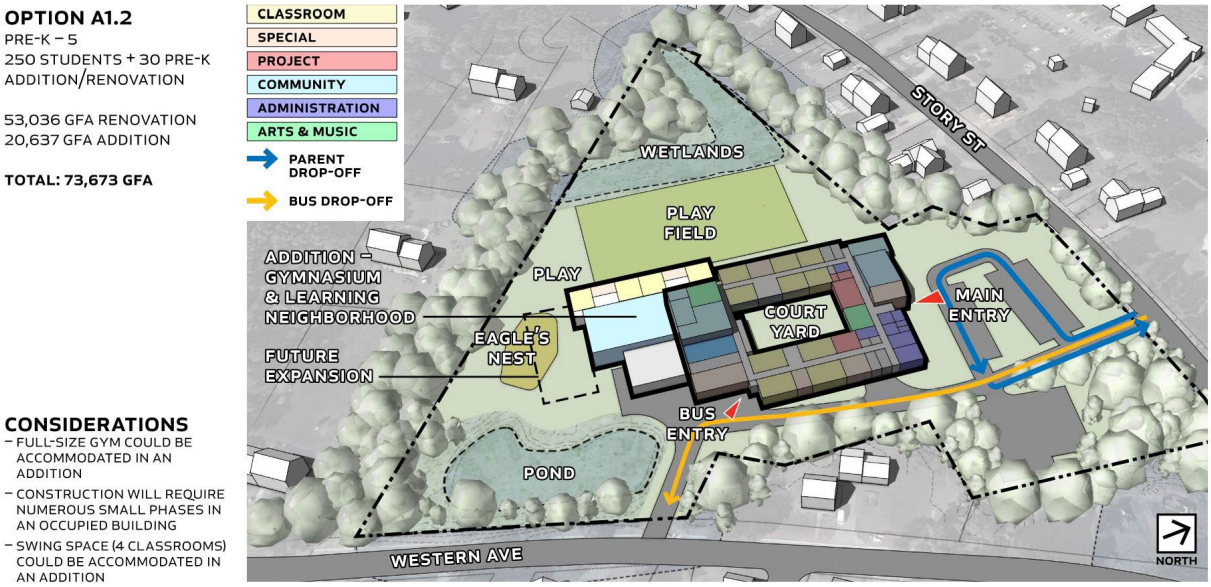
- Provide appropriately sized program areas.
- Creation of Learning Neighborhoods.
- Maintains and renovates a majority of the existing footprint.

CONS

- Extended phasing.
- Community spaces are not all in one location in building footprint.
- Renovated classrooms are not as easily configured for Learning Neighborhoods.
- No new image of the school from the street
- Does not meet current district regional agreement.
- Firewalls needed to compartmentalize school

As required by the MSBA process and after careful consideration of the opportunities, limitations and other qualities, the Building Committee will vote on advancing this option for further study at the start of the Preferred Schematic Report.

OPTION A1.2 – ADDITION AND RENOVATION



Option A1.2 includes the full renovation of the original circa 1958 multi-level courtyard style building and the 1975 media center and gymnasium addition, 53,036 gsf total existing footprint with an addition of 20,637 gsf for a total facility of 73,673 GSF. The proposed addition would be a new classroom learning neighborhood and a new gymnasium with stage allowing for the existing gymnasium to be repurposed into other community building functions.

Existing interior spaces will be modified to create conditions like the proposed Learning Neighborhoods. This will be accomplished by creating break-out spaces in the existing building.

To minimize the impact on existing school operations, renovation and addition are proposed as a multi-phased construction project. Constructing the additions in phase one of this option should provide enough swing space for the student population to eliminate the need for modulars or off-site lease agreements.

The first phase will include construction of the addition of the gymnasium and new academic wing. Phase two will allow the existing gym to be renovated into the new cafeteria and kitchen. Phase three will allow the existing cafeteria to be renovated into the new media center. Phases three, four, and five will allow for the renovations of the academic wings and the administrative areas. Their exact order and schedule of these phases will be detailed and investigated further if this option is chosen to proceed. The existing building elements that remain during the phased construction will be occupied and students and faculty will move into new construction as it is completed. The final phase will include site circulation, playgrounds and restoration of the landscaped areas.

PROS

- Provide appropriately sized program areas.
- Creation of Learning Neighborhoods.
- Maintains and renovates a majority of the existing footprint.
- Does not require changes to the regional agreement.

CONS

- Extended phasing.
- Community spaces are not all in one location in building footprint.
- Renovated classrooms are not as easily configured for Learning Neighborhoods.
- No new image of the school from the street
- Firewalls needed to compartmentalize school

As required by the MSBA process and after careful consideration of the opportunities, limitations and other qualities, the Building Committee will vote on advancing this option for further study at the start of the Preferred Schematic Report.

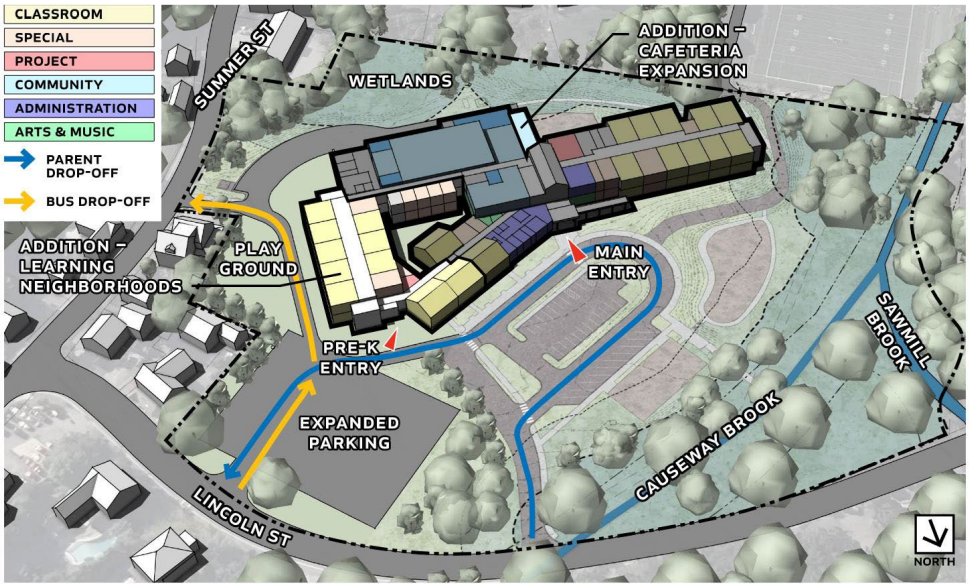
OPTION B1.1 – ADDITION AND RENOVATION

OPTION B1.1
PRE-K –5
515 STUDENTS + 60 PRE-K
ADDITION/RENOVATION

77,102 GFA EXISTING/RENO
41,899 GFA NEW

TOTAL: 119,001 GFA

CONSIDERATIONS
- SITE AMENITIES WILL BE LIMITED SUCH AS PLAY SPACE AND PARKING CAPACITY
- REMOVAL OF TENNIS COURTS LIKELY
- NO FUTURE EXPANSION POTENTIAL
- BUILDING CODE AREA LIMITATIONS REQUIRES FIRE WALLS SEPARATING ADDITIONS
- COMMUNITY ENTRY AND NEAR-BY PARKING COMPROMISED BY ADDITION LOCATION
- NUMEROUS ISSUES ASSOCIATED WITH ELIMINATING A SCHOOL IN ESSEX (TRAVEL, BUSING, AFTERSCHOOL PROGRAMS, REGIONAL AGREEMENT, ETC.)



Option B1.1 includes the limited renovation of the recently completed (2021) multi-level school. Approximately 5,000 gsf of renovation of the existing school will be needed to connect to the 41,899 gsf additions. The total school will be 119,001 gsf when completed. Within an enlarged enrollment scenario, the cafeteria and support spaces are substandard and need to be modified to support the Education Plan developed by the School Building Committee at the posted enrollment for this option at 515 students. This enrollment will serve students from prekindergarten to grade five from the Essex and Manchester-by-the-Sea school communities.

The proposed two-level addition of approximately 41,899 sf will provide new space for the Core Academics, Cafeteria expansion, Special Education, Administration and Early Education programs required to support the goals of the Educational Program. Existing interior spaces will have limited modifications to accommodate the connections to the new additions.

To minimize the impact on existing school operations and to eliminate the need to create swing space, the current Essex elementary school would remain online until the completion of the addition and renovation to the Manchester Memorial Elementary School. The additions will be constructed in a phases approach to minimize impact on the Manchester Memorial current student population. Construction schedule will need to accommodate the cafeteria additions to occur during the summer months to avoid loss of the kitchen and cafeteria during the standard school year.

PROS

- Consolidates the entire districts elementary school population into one facility.

CONS

- Renovation to a new school – loss of MSBA reimbursement.
- Redundant Mechanical and Electrical systems to meet Massachusetts all electric and stretch energy code requirements.
- Extensive firewall construction to compartmentalize school.
- Complex site conditions and regulatory requirements.
- Loss of town owned tennis courts affecting high school sports team
- Does not meet current district regional agreement.
- Limited site area for proposed addition -loss of original design intent of all wings of the school rotating off the central hub of the school.
- Loss of existing playgrounds and site features.

OTHER

- Town of Essex would still need to renovate or demolition the existing school at the 12-story street site.

As required by the MSBA process and after careful consideration of the opportunities, limitations and other qualities, the Building Committee will vote on advancing this option for further study at the start of the Preferred Schematic Report.

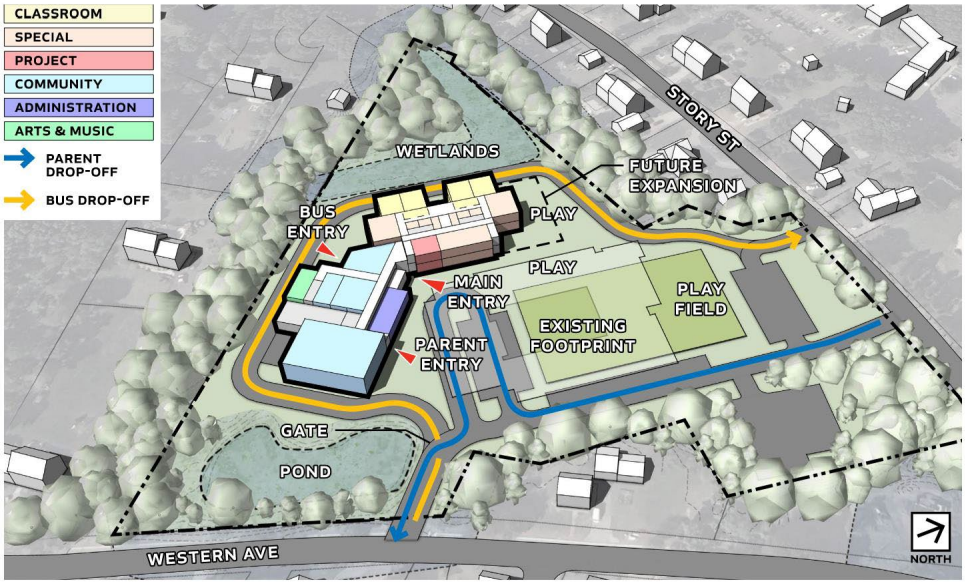
OPTION A2.1 – NEW CONSTRUCTION

OPTION A2.1
PRE-K – 3
165 STUDENTS + 30 PRE-K
NEW

60,777 GFA NEW

TOTAL: 60,777 GFA

CLASSROOM
SPECIAL
PROJECT
COMMUNITY
ADMINISTRATION
ARTS & MUSIC
PARENT DROP-OFF
BUS DROP-OFF



CONSIDERATIONS
- SITE LAYOUT PROVIDES FULL PERIMETER ACCESS AND IMPROVED SIGHT LINES
- DESIRED ROOM SIZES AND ADJACENCIES CAN BE OPTIMIZED
- ACCESS TO COMMUNITY SPACES EASILY CONTROLLED
- TWO-STORY BUILDING REDUCES FOOTPRINT TO MAXIMIZE SITE POTENTIAL
- K-3 REQUIRES MODIFICATION TO THE REGIONAL AGREEMENT

Option A2.1 is a two-level building of approximately 60,777 gsf of all-new construction on the south-east portion of the site on the location of the existing playing fields and playground. As all-new construction, this option will provide the necessary program space to support the Education Plan developed by the School Building Committee at the posted enrollment for this option at 165 students plus 30 PreK students. This enrollment will serve students from pre-kindergarten to grade three from the Essex school community.

To minimize the impact on existing school operations and to eliminate the need to create swing space, the new building is proposed as a single-phased construction project. Once the new construction is complete, the students and staff will move into the new space. The second phase of the project will incorporate demolition of the existing building and construction of the new playing fields and site infrastructure.

PROS

- Shortest construction phasing schedule.
- Provide appropriately sized program areas.
- Creation of Learning Neighborhoods.
- New image of the school from the street.
- Places the new building on the flattest portion of the site.
- Less excavation/soils removal at building site.
- Two-story option maximizes available site.
- All-new parking, bus and parent drop-off loop.
- New playing fields can be optimized for orientation and regulation sizes.

CONS

- Does not meet current district regional agreement.
- Demolition of the existing playground

As required by the MSBA process and after careful consideration of the opportunities, limitations and other qualities, the Building Committee will vote on advancing this option for further study at the start of the Preferred Schematic Report.

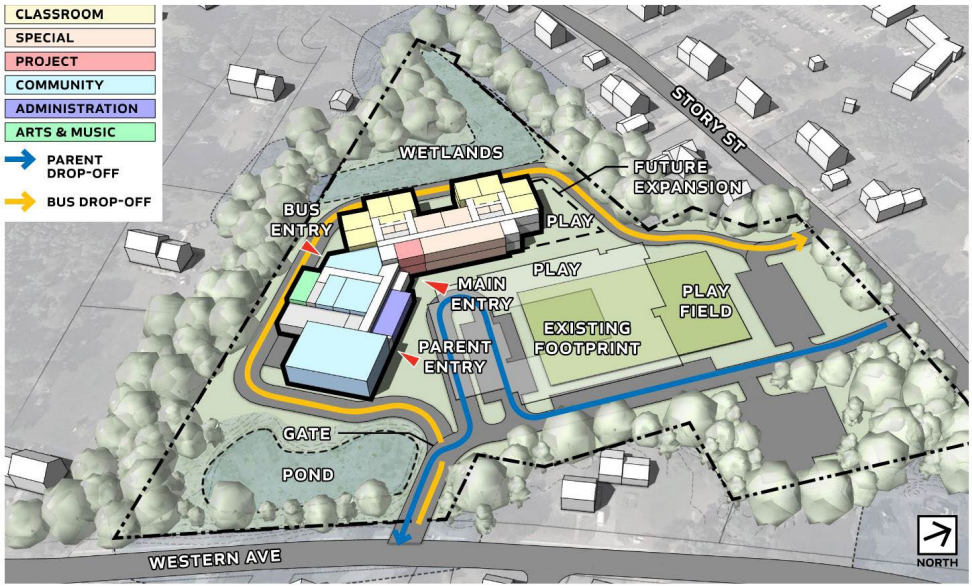
.

OPTION A2.2 – NEW CONSTRUCTION

OPTION A2.2
PRE-K – 5
250 STUDENTS + 30 PRE-K
NEW

73,673 GFA NEW

TOTAL: 73,673 GFA



CONSIDERATIONS
- SITE LAYOUT PROVIDES FULL PERIMETER ACCESS AND IMPROVED SIGHT LINES
- DESIRED ROOM SIZES AND ADJACENCIES CAN BE OPTIMIZED
- ACCESS TO COMMUNITY SPACES EASILY CONTROLLED
- TWO-STORY BUILDING REDUCES FOOTPRINT TO MAXIMIZE SITE POTENTIAL

Option A2.2 is a two-level building of approximately 73,673 gsf of all-new construction on the south-east portion of the site on the location of the existing playing fields and playground. As all-new construction, this option will provide the necessary program space to support the Education Plan developed by the School Building Committee at the posted enrollment for this option at 250 students plus 30 PreK students. This enrollment will serve students from pre-kindergarten to grade five from the Essex school community.

To minimize the impact on existing school operations and to eliminate the need to create swing space, the new building is proposed as a single-phased construction project. Once the new construction is complete, the students and staff will move into the new space. The second phase of the project will incorporate demolition of the existing building and construction of the new playing fields and site infrastructure.

PROS

- Shortest construction phasing schedule.
- Provide appropriately sized program areas.
- Creation of Learning Neighborhoods.
- New image of the school from the street.
- Places the new building on the flattest portion of the site.
- Less excavation/soils removal at building site.
- Two-story option maximizes available site.
- All-new parking, bus and parent drop-off loop.
- New playing fields can be optimized for orientation and regulation sizes.
- Does not require changes to the reginal agreement.

CONS

- Demolition of the existing playground

As required by the MSBA process and after careful consideration of the opportunities, limitations and other qualities, the Building Committee will vote on advancing this option for further study at the start of the Preferred Schematic Report.

LOCAL ACTIONS AND APPROVALS

SECTION 3.1.7

3.1.7 – LOCAL ACTIONS AND APPROVALS

- Meeting Summary
  - School Building Committee Meetings
  - Community Meetings

MEETINGS SUMMARY

Public Meetings held since MSBA's Board of Directors invited the Manchester Essex Regional School District to conduct a Feasibility Study on December 13, 2024.

School Building Committee Meetings (SBC)

- SBC – Meeting No.1: April 29, 2025
- SBC – Meeting No.2: June 24, 2025
- SBC – Meeting No.3: July 22, 2025
- SBC – Meeting No.4: August 26, 2025
- SBC – Meeting No.5: September 15, 2025
- SBC – Meeting No.6: September 30, 2025
- SBC – Meeting No.7: October 14, 2025
- SBC – Meeting No.8: October 28, 2025
- SBC – Meeting No.9: November 6, 2025
- SBC – Meeting No.10: November 25, 2025
- SBC – Meeting No.11: December 15, 2025
- SBC – Meeting No.12: January 6, 2026

Community Meetings

- Community Meeting No.1: October 8, 2025
- Community Meeting No.2: November 20, 2025
- Community Meeting No.3: December 9, 2025

The complete Local Action and Approvals document is included in Appendix 3.1.8.10 of this report.

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT
Office of the Superintendent
P.O. Box 1407
Manchester-by-the-Sea, MA 01944

Tel. (978) 526-4919
Fax: (978) 526-7585
beaudoinp@mersd.org

PAMELA BEAUDOIN
SUPERINTENDENT OF SCHOOLS

January 14, 2026

Mr. Michael McGurl
Director of Capital Planning
Massachusetts School Building Authority
10 Post Office Square, Suite S400
Boston, Massachusetts 02109

Dear Mr. McGurl:

The Manchester Essex Regional *School District* School Building Committee ("SBC") has completed its review of the Feasibility Study *Preliminary Design Program* for the Essex Elementary school project (the "Project"), and on January 6, 2025, the SBC voted to approve and authorize the Owner's Project Manager to submit the Feasibility Study related materials to the MSBA for its consideration. A certified copy of the SBC meeting minutes, which includes the specific language of the vote and the number of votes in favor, opposed, and abstained, are attached.

Since the MSBA's Board of Directors invited the District to conduct a Feasibility Study on December 13, 2024, the SBC has held 12 meetings regarding the proposed project, in compliance with the state Open Meeting Law. These meetings include:

- **May 29, 2025** – Designer RFS Review/Approval, Town Owned Land, Goal Setting, Working Groups, Website
- **June 24, 2025** – Designer Selection Process, Memorial Expansion Potential, Website, Goal Setting, Working Groups
- **July 22, 2025** – Designer RFS Submission
- **August 26, 2025** – Designer Introduction, Project Schedule Review, Visioning Plan, Working Groups
- **September 15, 2025** – Work Plan, Visioning Plan, Existing Conditions, Site Evaluation, Communication Working Group Report Out
- **September 30, 2025** – Visioning Plan, Site Selection Criteria, Sustainability Goals
- **October 14, 2025** – Community Meeting Report Out, Ed Program and Space Summary Review, Site Logistics WG Report Out
- **October 28, 2025** – Eliminate Site Option, Space Summary & Ed Program, Schedule Update
- **November 6, 2025** – Space Summary & Ed Program Acceptance, Preliminary Evaluation of Alternatives Review, Schedule Update
- **November 25, 2025** – Community Meeting No. 2 Feedback, Sustainability WG Update, Work Plan Review, Further Evaluate Alternatives, Schedule Update
- **December 15, 2025** – Final review of alternatives with preliminary costs.
- **January 6, 2026** – Vote to Approve PDP

The Manchester Essex Regional School District does not discriminate in its programs, activities or employment practices based on race, color, age, national origin, religion, gender, sexual orientation or disability.

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT
Office of the Superintendent
P.O. Box 1407
Manchester-by-the-Sea, MA 01944

Tel. (978) 526-4919
Fax: (978) 526-7585
beaudoinp@mersd.org

PAMELA BEAUDOIN
SUPERINTENDENT OF SCHOOLS

Notices for these meetings were posted and made available for public review on-line on the District's website: Calendar (www.mersd.org). Notices were also made available on our project website: Essex Elementary School Building Project | Essex Elementary School | 12 Story Street, Essex, MA, USA www.mersdessexelementaryproject.com

In addition to the SBC meetings listed above, the District held 3 public meetings, which were posted in compliance with the state Open Meeting Law, at which the Project was discussed. These meetings include:

- **October 8, 2025**, @ 6:00 PM – Community Meeting No. 1
- **November 20, 2025**, @ 6:00 PM – Community Meeting No. 2
- **December 9, 2025,** @ 6:00 PM – Community Meeting No. 3

The presentation materials for each meeting, meeting minutes, and summary materials related to the Project are available locally for public review at www.mersdessexelementaryproject.com **> Project Documents**

To the best of my knowledge and belief, each of the meetings listed above complied with the requirements of the Open Meeting Law, M.G.L. c. 30A, §§ 18-25 and 940 CMR 29 *et seq.*

If you have any questions or require any additional information, please contact (*insert name, title, and contact information*).

By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.

By:

Title: Chief Executive Officer

Date: 12/10/25

By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.

By:

Title: Superintendent of Schools

Date: 12/10/25

By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.

By:

Title: Chair of the School Committee

Date: 12/10/2025

The Manchester Essex Regional School District does not discriminate in its programs, activities or employment practices based on race, color, age, national origin, religion, gender, sexual orientation or disability.

APPENDIX

SECTION 3.1.8

STATEMENT OF INTEREST

SECTION 3.1.8.1

Massachusetts School Building Authority

Next Steps to Finalize Submission of your FY 2023 Statement of Interest

Thank you for submitting an FY 2023 Statement of Interest (SOI) to the MSBA electronically. **Please note, the District's submission is not yet complete if the District selected statutory priority 1 or priority 3**. If either of these priorities were selected, the District is required to mail the required supporting documentation to the MSBA, which is described below.

ADDITIONAL DOCUMENTATION FOR SOI STATUTORY PRIORITIES #1 AND #3: If a District selects Statutory priority #1 and/or priority #3, the District is required to submit additional documentation with its SOI.

- If a District selects statutory priority #1, Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of the school children, where no alternative exists, the MSBA requires a hard copy of the engineering or other report detailing the nature and severity of the problem and a written professional opinion of how imminent the system failure is likely to manifest itself. The District also must submit photographs of the problematic building area or system to the MSBA.
- If a District selects statutory priority #3, Prevention of a loss of accreditation, the SOI will not be considered complete unless and until a summary of the accreditation report focused on the deficiency as stated in this SOI is provided.

ADDITIONAL INFORMATION: In addition to the information required above, the District may also provide any reports, pictures, or other information they feel will give the MSBA a better understanding of the issues identified at a facility.

If you have any questions about the SOI process please contact the MSBA at 617-720-4466 or SOI@massschoolbuildings.org.

Massachusetts School Building Authority

School District Manchester Essex Regional

District Contact TEL:

Name of School Essex Elementary

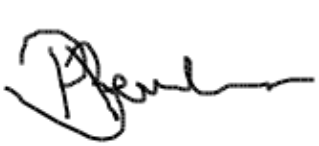
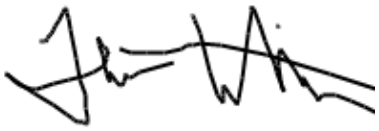
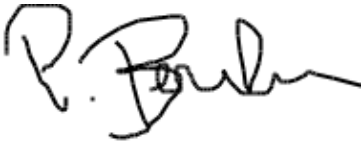
Submission Date 4/13/2023

SOI CERTIFICATION

To be eligible to submit a Statement of Interest (SOI), a district must certify the following:

- [x] The district hereby acknowledges and agrees that this SOI is NOT an application for funding and that submission of this SOI in no way commits the MSBA to accept an application, approve an application, provide a grant or any other type of funding, or places any other obligation on the MSBA.
- [x] The district hereby acknowledges that no district shall have any entitlement to funds from the MSBA, pursuant to M.G.L. c. 70B or the provisions of 963 CMR 2.00.
- [x] The district hereby acknowledges that the provisions of 963 CMR 2.00 shall apply to the district and all projects for which the district is seeking and/or receiving funds for any portion of a municipally-owned or regionally-owned school facility from the MSBA pursuant to M.G.L. c. 70B.
- [x] The district hereby acknowledges that this SOI is for one existing municipally-owned or regionally-owned public school facility in the district that is currently used or will be used to educate public PreK-12 students and that the facility for which the SOI is being submitted does not serve a solely early childhood or Pre-K student population.
- [x] Prior to the submission of the SOI, the district will schedule and hold a meeting at which the School Committee will vote, using the specific language contained in the "Vote" tab, to authorize the submission of this SOI. This is required for cities, towns, and regional school districts.
- [x] Prior to the submission of the SOI, the district will schedule and hold a meeting at which the City Council/Board of Aldermen or Board of Selectmen/equivalent governing body will vote, using the specific language contained in the "Vote" tab, to authorize the submission of this SOI. This is not required for regional school districts.
- [x] The district hereby acknowledges that current vote documentation is required for all SOI submissions. The district will use the MSBA's vote template and the required votes will specifically reference the school name and the priorities for which the SOI is being submitted.
- [x] The district hereby acknowledges that it must upload all required vote documentation on the “Vote” tab, in the format required by the MSBA. All votes must be certified or signed and on city, town or district letterhead.
- [x] The district hereby acknowledges that this SOI submission will not be complete until the MSBA has received all required supporting documentation for statutory priority 1 and statutory priority 3. If statutory priority 1 is selected, your SOI will not be considered complete unless and until you provide the required engineering (or other) report, a professional opinion regarding the problem, and photographs of the problematic area or system. If statutory priority 3 is selected, your SOI will not be considered complete unless and until you provide a summary of the accreditation report focused on the deficiency as stated in this SOI. The documentation noted above must be post-marked and submitted to the MSBA by the Core Program SOI filing period closure date.

LOCAL CHIEF EXECUTIVE OFFICER/DISTRICT SUPERINTENDENT/SCHOOL COMMITTEE CHAIR (E.g., Mayor, Town Manager, Board of Selectmen)

Chief Executive Officer *	**School Committee Chair**	**Superintendent of Schools**
Pamela Beaudoin	Theresa Whitman	Pamela Beaudoin
Superintendent		
		
(signature)	(signature)	(signature)
Date	Date	Date
4/13/2023 1:46:12 PM	4/13/2023 3:29:42 PM	4/13/2023 1:56:24 PM

* Local chief executive officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated to the chief executive office under the provisions of a local charter. Please note, in districts where the Superintendent is also the Local Chief Executive Officer, it is required for the same person to sign the Statement of Interest Certifications twice.

Massachusetts School Building Authority

School District Manchester Essex Regional

District Contact TEL:

Name of School Essex Elementary

Submission Date 4/13/2023

Note

The referenced Facilities Report/Habeeb Report can be found at https://www.mersd.org/Page/1759

Please advise if this should be submitted electronically or hard copy sent.

Thank you.

The following Priorities have been included in the Statement of Interest:

1. ☐ Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of school children, where no alternative exists.
2. ☐ Elimination of existing severe overcrowding.
3. ☐ Prevention of the loss of accreditation.
4. ☐ Prevention of severe overcrowding expected to result from increased enrollments.
5. ☑ Replacement, renovation or modernization of school facility systems, such as roofs, windows, boilers, heating and ventilation systems, to increase energy conservation and decrease energy related costs in a school facility.
6. ☐ Short term enrollment growth.
7. ☑ Replacement of or addition to obsolete buildings in order to provide for a full range of programs consistent with state and approved local requirements.
8. ☐ Transition from court-ordered and approved racial balance school districts to walk-to, so-called, or other school districts.

SOI Vote Requirement

☑ I acknowledge that I have reviewed the MSBA's vote requirements for submitting an SOI, which are set forth in the Vote Tab of this SOI. I understand that the MSBA requires votes from specific parties/governing bodies, in a specific format using the language provided by the MSBA. Further, I understand that the MSBA requires certified and signed vote documentation to be submitted with the SOI. I acknowledge that my SOI will not be considered complete and, therefore, will not be reviewed by the MSBA unless the required accompanying vote documentation is submitted to the satisfaction of the MSBA. All SOI vote documentation must be uploaded on the Vote Tab.

SOI Program: Core
Potential Project Scope: Potential New School
Is this a Potential Consolidation? No

Is this SOI the District Priority SOI? Yes

School name of the District Priority SOI: 2023 Essex Elementary

Is this part of a larger facilities plan? Yes

If "YES", please provide the following:

Facilities Plan Date: 11/15/2022

Planning Firm: Habeeb & Associates Architects

Please provide a brief summary of the plan including its goals and how the school facility that is the subject of this SOI fits into that plan:

The Manchester Essex Regional District (MERSD) was formed in 2000 by the Towns of Manchester-by-the-Sea and Essex, Massachusetts. Following regionalization, MERSD evaluated its facility priorities, and based on building conditions, determined that the first facility requiring attention would be the regional middle high school (MSHS). MERSD's MSHS was built in partnership with the MSBA and completed in 2010. Following the completion of this project, MERSD turned its attention to its elementary facilities, one in each town, and contracted with Habeeb & Associates Architects (H&A) in 2013 to conduct an independent Facilities Condition Assessment (FCA) to document the condition of both elementary schools. Based on the findings of the 2013 FCA, MERSD submitted Statements of Interest (SOIs) to MSBA for both schools in 2015. The 2013 FCA findings made clear that the needs and investment required at the Manchester Memorial Elementary School (MMES) were much more significant compared to Essex Elementary School (EES), and as a result, MMES was determined to be MERSD's priority SOI. The MSBA accepted MMES into its pipeline and a new elementary school was constructed and completed by the 2021-2022 school year. MERSD is currently in MSBA's Closeout phase for the MMES project.

Knowing that EES is now approximately 66 years old, MERSD commissioned an update of the FCA for EES, which was completed during the 2022-2023 school year. MERSD has continued to use its operating budget and preventative maintenance practices to maintain EES to the fullest extent possible. MERSD earned 1.93% out of a maximum possible 2.0% incentive reimbursement points from MSBA for the MMES project, based on the District's preventative maintenance practices, which, for EES include annual inspections by external contractors of the roof, boiler, HVAC system, grease traps, playground, kitchen equipment, wheelchair lift and fire alarms as well as frequent ongoing internal maintenance by MERSD's maintenance supervisor, a position added via budget restructuring, in order to more efficiently maintain key facility assets and infrastructure.

Additionally, the District has used its General Fund budget, Stabilization reserve funds, and the State's Green Communities Grant program (in partnership with the Town of Essex), to invest more significantly in certain key facility areas at EES in a best effort to extend the useful life of the building and strive for programmatic equity for students. Investment examples include:

new digital HVAC controls and other energy efficiency measures (e.g., steam trap replacement, LED lighting conversion) totaling nearly $578K through the Green Communities Grant, updated security systems ($47K)

new playground ($400K)

updated Project Adventure courses infrastructure ($16K)

student and staff technology upgrades ($170K upgrade of classroom interactive teaching panels, in addition to ongoing operating investments in modern computer device technology),

a new fire alarm system ($169K)

reconfiguration of outmoded locker room spaces into speech-language space ($70K)

asphalt repair to sidewalks and recreational play surfaces ($34K)

new burner assembly for 2008 boiler ($44K)

Replacement of rotted wood in courtyard, around windows, on accessible ramps and surrounding playground ($27K)

Despite these significant investments, the recent FCA makes clear that due to the age of the building, significant infrastructure investments are necessary across all aspects of the building, including site, envelope, interiors, mechanical systems and interiors. Many of these investments are needs within the next five years with an estimated cost of $18.8 million, based on recent market pricing, suggesting that a systemic solution is necessary, rather than a piecemeal approach. A systemic solution would require MERSD to bring the building up to code in certain grandfathered areas, leading to a total estimated cost of remediation of $28.7 million, based on the detailed FCA cost analysis. A copy of the 2022-2023 updated FCA from H&A is attached to our SOI submission.

Please provide the current student to teacher ratios at the school facility that is the subject of this SOI: 19 students per teacher

Please provide the originally planned student to teacher ratios at the school facility that is the subject of this SOI: 19 students per teacher

Does the District have a Master Educational Plan that includes facility goals for this building and all school buildings in District? Yes

If "YES", please provide the author and date of the District's Master Educational Plan.

Yes, the District has a Master Educational Plan. The MERSD Strategic, District, and School Improvement plans in conjunction with our capital improvement plan informed by the Habeeb Report serve as the educational master plan. Drafted by MERSD Leadership Team with the guidance of the Strategic planning committee and input from community stakeholders, the plan was approved by the School Committee in the Fall of 2022. The plan can be reviewed by visiting the MERSD website at www.mersd.org Quick Lin

Is there overcrowding at the school facility? No

If "YES", please describe in detail, including specific examples of the overcrowding.

Has the district had any recent teacher layoffs or reductions? Yes

If "YES", how many teaching positions were affected? 5
At which schools in the district? All
Please describe the types of teacher positions that were eliminated (e.g., art, math, science, physical education, etc.).

To address a decline in enrollment MERSD reduced full-time equivalent positions by attrition. Elementary Classroom and Specialist Teacher Consolidations [art, music, tech, library] K-6 World Language

Has the district had any recent staff layoffs or reductions? No

If "YES", how many staff positions were affected? 0
At which schools in the district?
Please describe the types of staff positions that were eliminated (e.g., guidance, administrative, maintenance, etc.).

Please provide a description of the program modifications as a consequence of these teacher and/or staff reductions, including the impact on district class sizes and curriculum.

Consolidation of specialist staff [art, music, library, tech / interventionist] now shared between two elementary schools.

Please provide a description of the local budget approval process for a potential capital project with theMSBA. Include schedule information (i.e. Town Meeting dates, city council/town council meetings dates, regional school committee meeting dates). Provide, if applicable, the District's most recent budget approval process that resulted in a budget reduction and the impact of the reduction to the school district (staff reductions, discontinued programs, consolidation of facilities).

MERSD utilizes a collaborative approach to budget planning and works cooperatively with Boards of Selectman and Finance Committees in both Essex and Manchester. Through monthly meetings, we provide one another with on-going progress reports on our planning process and outlook. In October, principals, with input from faculty, formulate and submit school-based budgets that reflect staffing, program, and facility needs. Budgets are then synthesized into the MERSD budget proposal presented for public input. Under the Manchester Essex Regional Agreement, the district presents a tentative budget and holds a public hearing for feedback in December; it is considered the first draft budget. A second public hearing is held in January prior to the submission of the budget in the first week of February. Final budget approval is at the Manchester and Essex town meetings in April and May. The FY24 budget represents what the district believes is needed to maintain quality and position the schools for continual improvement of the educational program and student achievement. For the past four years, MERSD has used reserve funding, intended for capital needs, to keep town assessments within the levy limit, particularly for Essex whose apportioned share has escalated due to enrollment patterns. This year our budget request discontinues the use of reserves for operating revenue. As a result, the annual assessment is higher than in a typical year, and it will require the Town of Essex to seek a proposition 2.5 override to address the revenue gap. The boards are aware and in support of our SOI submissions, and leadership in both towns are committed to addressing Essex Elementary facility needs as it is the third and final building replacement. As such, they are prepared to bring forward the funding request for a feasibility study should we be accepted into the pipeline. For more information: www.mersd.org Quick Link: Budget

General Description

BRIEF BUILDING HISTORY: Please provide a detailed description of when the original building was built, and the date(s) and project scopes(s) of any additions and renovations (maximum of 5000 characters).

Essex Elementary was built in 1957 and expanded with an addition in 1975. The addition included the library and gymnasium which added 13,400 square feet to the original 42,200 square foot facility. Building construction predated the 2000 formation of the regional school district and was designed to serve students in grades K-8. With the formation of the Manchester Regional School District and subsequent construction of a regional middle high school, students in grades 6-8 from the Town of Essex were migrated to the regional middle high school facility (MSHS). The Regional Agreement stipulates that elementary-aged students shall be guaranteed the opportunity to attend elementary school in their town of residence with the exception made for special education programs. As a result, the facility serves grades K-5 for students residing in Essex and districtwide special education programs (SWING and ACE) for elementary-aged students from both member towns. Prior to beginning the MMES project in partnership with MSBA, MERSD solicited community input via a districtwide survey, which confirmed that residents overwhelmingly preferred to retain an elementary school in each member town, instead of consolidating elementary schools into a regional facility.

TOTAL BUILDING SQUARE FOOTAGE: Please provide the original building square footage PLUS the square footage of any additions.

55600

SITE DESCRIPTION: Please provide a detailed description of the current site and any known existing conditions that would impact a potential project at the site. Please note whether there are any other buildings, public or private, that share this current site with the school facility. What is the use(s) of this building(s)? (maximum of 5000 characters).

Essex Elementary School (EES) sits on 9.9 acres, which is ample space for the existing K-5 program. All bituminous parking areas, access drives, rear play area behind the gymnasium and walkway pavements are approximately 40 years old, compared to a typical useful life of twenty years, and have been patched or sealed as needed, but not replaced. Per the most recent facility conditions assessment (FCA) provided by Habeeb & Associates (H&A), the entire pavement should be replaced in 3-5 years with an estimated cost of $191K. Paved site areas also have minimal storm drainage, directed towards either a retention pond southeast of the building or adjacent to lawns, which serve as fields for school sports. The playing field has extremely poor drainage, and a new drainage system was recommended in the Habeeb Report in the next 3-5 years at an estimated cost of $374K. An engineering study of the site could help to clarify the challenges, potential remedies, and cost for this item. The school is also surrounded by wetlands and any work near the wetlands needs prior approval by the Town of Essex Conservation Commission.

In addition to being the sole elementary school for Essex, EES is a community facility. It is used daily for after-school childcare, run in partnership with the YMCA. The gymnasium is a practice site for the Manchester Essex Middle High School athletics program. In the winter, the Manchester Essex Youth Basketball program uses the school gym on a regular basis, as it is the only indoor basketball court in town. Spring and fall youth soccer programs utilize the fields. Essex Elementary School is a community center and hosts several town gatherings such as the annual holiday pancake breakfast, it serves as the official site of all town meetings, and the Essex Elementary playground is a hub for informal community gatherings.

ADDRESS OF FACILITY: Please type address, including number, street name and city/town, if available, or describe the location of the site. (Maximum of 300 characters)

12 Story Street, Essex, MA 01929 /The facility is centrally located in the Town of Essex, a few blocks away from the town center, where the Town Hall and public safety buildings are located.

BUILDING ENVELOPE: Please provide a detailed description of the building envelope, types of construction materials used, and any known problems or existing conditions (maximum of 5000 characters).

Roofing is constructed out of EPDM single-ply fully adhered membrane with rigid insulation. The main portion is approximately 25 years old, and the portion over Side B of the building is approximately 20 years old. MERSD contracts with an external provider to conduct routine roofing inspections, and recent reports have found that lead-coated copper cap flashings at all brick wall-to-roof transitions need significant repair or replacement. Flashing heights are low and new insulation will be above flashings when the membrane is replaced. Cantilevered concrete roof slab exterior soffit areas and vertical fascia edges on the building perimeter are exposed, leading to moisture penetration and spalled concrete at bottom drip edges. Per the FCA, a new roof is needed within 3-5 years with an estimated cost of $3.4M.

The main floor structure is concrete slab on grade and rib-pan concrete slab above the ground floor. Exterior walls are 8” CMU with 4” brick veneer (no cavity or insulation). There is minor face brick veneer cracking and signs of water intrusion near the gym. Masonry repairs to the veneer, per the FCA, should take place within 3-5 years with an estimated cost of $104K. The windows are wood framed, many have original single pane glazing, and some dual pane windows show condensation. This causes rooms to be extremely uncomfortable and drafty and is also extremely inefficient from an energy use perspective. These are in need of replacement, with many original to the building and past their useful lifespan and should be replaced per the FCA in 1-2 years. The wood trim and sills are also original and many are rotted. Total cost for window replacement, including trim and sills, is estimated at $1.5M. With window replacement, blinds and shades will also need replacement, which could add an estimated $57K to the project cost. Skylights throughout the building are also beyond their useful life with deteriorated sealants and condensation patches, with an estimated replacement cost of $47K.

The exterior doors are aluminum storefront and or hollow metal. Some doors have begun to corrode and per the FCA should be replaced, in the next 3-5 years at a potential cost of $31K. The siding is T1-11 plywood, warped and peeled, and shows signs of decay. Based on the building’s age, it is assumed that exterior paint may contain lead and would need to be abated. The estimated cost to replace painted siding in 3-5 years is $105K.

Has there been a Major Repair or Replacement of the EXTERIOR WALLS? NO
Year of Last Major Repair or Replacement:(YYYY) 1957
Description of Last Major Repair or Replacement:
Walls are original to the building with no major repair. Although replacement is not required in the next few years, the walls have little to no insulation and the cost to upgrade to energy code would be significant, above $1 million per the FCA.

Roof Section A
Is the District seeking replacement of the Roof Section? YES
Area of Section (square feet) 48138
Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe)
EPDM
Age of Section (number of years since the Roof was installed or replaced) 25
Description of repairs, if applicable, in the last three years. Include year of repair:
Roofing is constructed out of EPDM single-ply fully adhered membrane with rigid insulation. The main portion is approximately 25 years old, and the portion over Side B of the building is approximately 20 years old. MERSD contracts with an external provider to conduct routine roofing inspections, and recent reports have found that lead-coated copper cap flashings at all brick wall-to-roof transitions need significant repair or replacement. Flashing heights are low and new insulation will be above flashings when the membrane is replaced. Cantilevered concrete roof slab exterior soffit areas and vertical fascia edges on the building perimeter

are exposed, leading to moisture penetration and spalled concrete at bottom drip edges. Per the FCA, a new roof is needed within 3-5 years with an estimated cost of $3.4M.

Roof Section B
Is the District seeking replacement of the Roof Section? YES
Area of Section (square feet) 7000
Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe)
EPDM
Age of Section (number of years since the Roof was installed or replaced) 20
Description of repairs, if applicable, in the last three years. Include year of repair:
Roofing is constructed out of EPDM single-ply fully adhered membrane with rigid insulation. The main portion is approximately 25 years old, and the portion over Side B of the building is approximately 20 years old. MERSD contracts with an external provider to conduct routine roofing inspections, and recent reports have found that lead-coated copper cap flashings at all brick wall-to-roof transitions need significant repair or replacement. Flashing heights are low and new insulation will be above flashings when the membrane is replaced. Cantilevered concrete roof slab exterior soffit areas and vertical fascia edges on the building perimeter are exposed, leading to moisture penetration and spalled concrete at bottom drip edges. Per the FCA, a new roof is needed within 3-5 years with an estimated cost of $3.4M.

Window Section A
Is the District seeking replacement of the Windows Section? YES
Windows in Section (count) 500
Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))
Wood framed with original (66 year old) single pane glazing and steel operable vent sash. Some wood windowalls are
retrofitted with 2nd pane or insulated glazing. Aluminum storefront frames and insulated glazing are on building addition.
Age of Section (number of years since the Windows were installed or replaced) 66
Description of repairs, if applicable, in the last three years. Include year of repair:
None

MECHANICAL and ELECTRICAL SYSTEMS: Please provide a detailed description of the current mechanical and electrical systems and any known problems or existing conditions (maximum of 5000 characters).

The school only has one functioning gas-fired steam boiler that was installed in 2008. This unit has begun to experience operating interruptions, which are managed through the operating budget for facility maintenance. MERSD believes that having a backup boiler would align with best practice to avoid interruptions in instructional delivery, should an outage occur during the heating season. An additional boiler, working with the 2008 boiler, would also help extend the useful life of the 2008 unit. The FCA recommended addition of a new boiler within 1-2 years at a cost of $325K but to avoid instructional interruptions, MERSD intends to proceed with this project before a more systemic building solution can be initiated. This exemplifies investments that are immediately necessary throughout EES, but not ideal or cost effective on a stand-alone basis, given the need for a building wide systemic solution. Ultimately, continuity of operations may necessitate additional, piecemeal immediate investments that, from a financial efficiency standpoint, would be better suited to include in a future (ideally near-term), systemic building project.

Individual classroom unit ventilators are original to the building and are not efficient and cause inconsistent heat into the rooms, despite the recent introduction of a new, building-wide digital control solution. Servicing these units has become increasingly problematic, as many essential parts are no longer available. There are also 4 Air Handling Units that service the gym, cafeteria, and basement area, which were installed in 1975. All rooftop exhaust fans appear to be original. Per the FCA, based on the useful life and condition of the units, the entire system should be replaced in 3-5 years at a cost of $2.2M.

Except for natural gas service, which is about 20 years old, other service lines into and out of the building are believed to be original and at least 66 years old, including water and sanitary. Although no known issues exist with these systems, given their age, replacement will become necessary at some point in the future, with costs estimated in the FCA to exceed $300K. The hot water boiler in the building is approximately 16 years old and will need replacement in the next 3-5 years at an estimated cost of $33K.

The electrical system consists of 800 Amp 120/208-volt 3 phase service. Main service and disconnect panel and distribution wireways appear to be original. Sub-panels were added with the 1975 building addition. Building usage is near maximum for the present system and a replacement cost is estimated at $650K. The cost of replacing electrical wiring and sub-distribution system, in an electrical upgrade, is estimated in the FCA at $1.1 million.

Boiler Section 1
Is the District seeking replacement of the Boiler? YES
Is there more than one boiler room in the School? NO
What percentage of the School is heated by the Boiler? 100
Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)
Natural Gas
Age of Boiler (number of years since the Boiler was installed or replaced) 15
Description of repairs, if applicable, in the last three years. Include year of repair:
One of the two boilers was replaced in 2008. A BMS along with programmable thermostats was installed in 2017 and 2021 at a total cost of $275K to replace the old pneumatic system throughout the building so the HVAC system can be scheduled with occupied and non-occupied settings to reduce the load on the boiler. Nevertheless, efficiency of the new system is limited by dated steam tramp technology (recently upgraded as well at a cost of $36K) and unit ventilators that struggle to maintain even temperatures. Heating delivery is also negatively impacted by single pane windows throughout the building.

Has there been a Major Repair or Replacement of the HVAC SYSTEM? YES
Year of Last Major Repair or Replacement:(YYYY) 2008
Description of Last Major Repair or Replacement:
One of the two boilers was replaced in 2008. A BMS along with programmable thermostats was installed in 2017 and 2021 at a total cost of $275K to replace the old pneumatic system throughout the building so the HVAC system can be scheduled with occupied and non-occupied settings to reduce the load on the boiler. Nevertheless, efficiency of the new system is limited by dated steam tramp technology (recently upgraded as well at a cost of $36K) and unit ventilators that struggle to maintain even temperatures. Heating delivery is also negatively impacted by single pane windows throughout the building.

Has there been a Major Repair or Replacement of the ELECTRICAL SERVICES AND DISTRIBUTION SYSTEM? NO
Year of Last Major Repair or Replacement:(YYYY) 1957
Description of Last Major Repair or Replacement:
None

BUILDING INTERIOR: Please provide a detailed description of the current building interior including a description of the flooring systems, finishes, ceilings, lighting, etc. (maximum of 5000 characters).

Floor structure: concrete slab-on grade and rib-pan framed slab above ground floor.

Floor finishes: vinyl 9x9 tiles in corridors classrooms. These non-ACM tiles have been identified to contain black mastic according to the 2023 AHERA report. The cost to replace the tiles is approximately $1.3M. There is wood flooring in the gym and cafetorium, and carpet in various staff areas, media center, and K classrooms. All carpeting is past its useful life and the condition suggests that replacement is necessary with an estimated cost of $65K. Epoxy painted concrete is present on ramps and in locker/bathrooms in the building addition.

Wall finishes: mostly painted concrete block. Glazed block and ceramic tile dado walls in the bathrooms.

Ceiling finishes: exposed metal deck in gym, exposed concrete in mechanical and storage room. Entire building addition and corridors of classroom wings and cafetorium are 2x4 acoustic tile ceilings. The staff area, lobby main corridor and classrooms have 1x1 acoustic tile ceilings. Many ceiling tiles are cupping, mismatched or discolored and full building replacement is required but would be costly. All but one bathroom each for staff, and boy and girl students are not HP accessible.

Interior lighting was converted to LED between 2018 and 2019, through the MA Green Communities Grant program, in partnership with the Town of Essex, at a total cost of $267K. Emergency lighting is approximately 12 years old.

Much of the kitchen equipment is original to the building, and other equipment is in excess of 30 years old. Repairs can be challenging, given the lack of available parts inventory. This limits options for cooking operations and meal preparation at the school. The school lacks an ANSUL fire suppression system.

PROGRAMS and OPERATIONS: Please provide a detailed description of the current grade structure and programs offered and indicate whether there are program components that cannot be offered due to facility constraints, operational constraints, etc. (maximum of 5000 characters).

The Manchester Essex elementary schools employ a broad- range of teaching methodologies that strive to balance the best of progressive methodology with tried-and-true traditional approaches. Our curriculum and instructional program are designed to support our mission, vision, and core values. To that end we provide a rigorous core curriculum that is complemented by a rich program of experiential and exploratory learning experience designed to utilize an interdisciplinary approach that creates connections between learning and the real world. Overall, MERSD elementary level curriculum and instruction is delivered in a single classroom model with the elementary classroom teacher responsible for the delivery of all core content instruction. All classroom lessons are differentiated based on formative assessment data and whole group, small group, and individual work is integrated into all lessons with an increasing number of lessons relying on anywhere, anytime access to technology and a flexible learning environment. In addition to general differentiated instruction, students receive a variety of support services that are provided through inclusion and push-in services whenever possible.

EES is the smallest of two MERSD elementary schools. Per the regional agreement, students in grades K-5 are entitled to attend elementary school in the town in which they reside unless they are a special education student requiring specialized programing. Grades K-5 are organized into two sections per grade level; art, music, library, and technology are weekly specials with dedicated classroom spaces, and physical education meets twice per week in the gymnasium. EES is a Title I School (poverty rate 21%) and serves a diverse range of students. EES houses our district-wide Students with Integrated Goals (SWING) and Academic and Communication Enhancement (ACE) substantially separate special education programs, and the English Language Learner (ELL) program.

While we can physically accommodate our current student population and critical program needs, the age and condition of the facility limit the scope of the academic program in both general and special education. The end-of-life facility results in frequent disruptions of the educational program, challenges our ability to meet state regulations, and limits the scope of the academic program in both regular and special education. Primarily impacted are instructional opportunities for students and teachers. Outdated learning spaces that do not support flexible learning, extreme swings in building temperatures, leaking windows, basement level classrooms, absence of kindergarten lavatories and lack of handicap accessibility throughout the building, acoustically unsound learning spaces, limited and large group gathering space, and no small group learning spaces or project rooms, are all barriers to our program and current best practice instruction.

Substandard Physical Plant Impact on Program & Special Education

Moderate special education support services are delivered in two classrooms, one severely undersized, limiting the number of students that can be supported at any given time. This undersized space houses both a special education teacher and a paraprofessional which contributes to a noisy and distracting environment for the delivery of

individual and small group tutorials. Appropriate educational space is not available due to an inadequate number of small group learning spaces available in an outdated building.

Occupational and physical therapy occurs in a basement area with damp and musty conditions. This space abuts the boiler room and is accessed by walking through the art classroom which does not allow for student privacy. This undersized space restricts the amount and type of equipment utilized and limits the number of students that can be served during a class period. Speech and Language services are delivered in a converted locker room space in an attempt to create small group learning spaces.

Handicap accessibility deficits include door construction, parking and ramp access, water fountains, bathroom facilities, lockers, classroom sinks which do not meet current MAAB/ADA code.

EES has no appropriate dedicated, private rooms for state mandated student evaluations by the special education department.

EES has no space for de-escalation, in-school suspensions, or time outs for both general and special education students.

EES does not have appropriate science laboratory space for the older grades to conduct experiments which significantly limits the school's ability to implement its STEM curriculum. Experiments are done in the classrooms, which are carpeted, leading to cleanliness and safety issues.

EES does not have adequate large group space. Performances and school assemblies are held in the dated "cafetorium." This limits the number and type of school performances for student.

EDUCATIONAL SPACES: Please provide a detailed description of the Educational Spaces within the facility, a description of the number and sizes (in square feet) of classrooms, a description of science rooms/labs including ages and most recent updates, a description of the cafeteria, gym and/or auditorium and a description of the media center/library (maximum of 5000 characters).

EES has 12 core academic spaces, of which 2 serve Kindergarten, averaging 1,200 square feet (sf) and 10 serve grades 1-5, averaging 936 sf. Kindergarten rooms do not have toilets. Grade 1-5 classrooms have 1 sink per classroom, which are not accessible. EES has 4 special education classrooms, averaging 936 sf, and 1 small group reading room of 936 sf. There is one technology room at 936 sf. The art classroom serving 25 students with 1,980 sf, is located in the basement, adjacent to the mechanical room, which is below grade, and can be musty and damp. There is one music classroom at 936 sf. There are no stand-alone science rooms/labs. The media center is 2,830 sf.

CAPACITY and UTILIZATION: Please provide the original design capacity and a detailed description of the current capacity and utilization of the school facility. If the school is overcrowded, please describe steps taken by the administration to address capacity issues. Please also describe in detail any spaces that have been converted from their intended use to be used as classroom space (maximum of 5000 characters).

As noted, EES was originally designed as a K-8 facility. While there is no overcrowding, many substandard spaces are being used in ways that do not match the original design intent. The art classroom and occupational and physical therapy classrooms are in the basement, adjacent to mechanical room spaces, and below grade, leading to mustiness and dampness. Self-contained special education classrooms, which serve elementary students from both towns, do not contain toilets. The music room is not adequately sized for classes and practice spaces. Storage is in a modular addition that is over 20 years old with water intrusion at the connection to the main building and from the aging roof. The modular addition is also showing issues with uneven flooring. Metal student lockers are not accessible. The gym area includes a boys' and girls' locker room, which is no longer in use. A portion of this space has been converted for use by the school's speech-language pathologist. The CMU walls of the gymnasium are showing evidence of water intrusion and the exterior brick wall throughout the building has little to no insulation, making the building thermally inefficient. The medical suite has a toilet, but it does not meet accessibility

standards. Given the presence of non-ambulatory students in the SWING program, a more modern facility and enhanced outdoor recreational facilities would better serve the physical needs of students and program.

MAINTENANCE and CAPITAL REPAIR: Please provide a detailed description of the district's current maintenance practices, its capital repair program, and the maintenance program in place at the facility that is the subject of this SOI. Please include specific examples of capital repair projects undertaken in the past, including any override or debt exclusion votes that were necessary (maximum of 5000 characters).

The boiler, HVAC systems, grease traps, playground kitchen equipment, roof, wheelchair lift and fire alarm systems are checked by professional contractors each year to ensure proper operation. Maintenance staff perform regular inspections on all items and perform minor repairs, as well as changing the filters to all AHU. The District employs a facility "ticketing" system, whereby staff can send in needs for maintenance that are prioritized, tracked and closed by the facilities department. As part of each year's budgeting process, building principals meet with the facilities manager to identify "small capital" (i.e., $5-25K) projects that are prioritized together with the Director of Finance & Operations, and budgeted pending funding availability to take place typically over the summer when school is not in session. Additionally, the district uses its FCA, maintenance staff and contractor inspections to identify and prioritize larger capital investment projects (>$25K typically) that can be funded through the District's stabilization and other reserve funds.

Over the past five years, the district has completed many facility capital projects at EES including:

-New Playground ($400K)

-New BMS on all unit vents, boiler and AHU ($275K)

-Steam trap replacement building-wide ($36K)

- LED lighting upgrades, building-wide ($267K)

-New pull-down shades for all classrooms ($26K)

-New camera and burglar alarm system for better security and protection ($47K)

-New fire alarm system ($169K)

- New burner assembly for boiler ($44K)

- Sidewalk asphalt repair, blacktop recreational area sealcoating and basketball installation repair ($34K)

- Replacement of rotted wood in courtyard, around window sills, on accessible ramps, and surrounding playground ($27K)

- Reconfigure locker room space into Speech-Language space ($70K)

Each of these repairs was funded within the district's operating budget or Stabilization reserve funds. There has been no debt issued to cover maintenance of EES facility needs. The District will use the recent Habeeb Report FCA to further develop our capital plan and prioritize maintenance projects.

Priority 5

Question 1: Please provide a detailed description of the issues surrounding the school facility systems (e.g., roof, windows, boilers, HVAC system, and/or electrical service and distribution system) that you are indicating require repair or replacement. Please describe all deficiencies to all systems in sufficient detail to explain the problem.

Per the FCA, due to the building's age, significant infrastructure investments are necessary across all aspects of the building, including site, envelope, interiors, mechanical systems and interiors. Many of these investments are needs within the next five years with an estimated cost of $18.8 million, based on recent market pricing, suggesting that a systemic solution is necessary, rather than a piecemeal approach. A systemic solution would also require MERSD to bring the building up to code in certain grandfathered areas, leading to a total estimated cost of remediation of $28.7 million, based on the detailed FCA cost analysis. A copy of the 2022-2023 updated FCA from H&A is attached to our SOI submission.

From a site perspective, bituminous parking areas, access drives, rear play area behind the gymnasium and walkway pavements are approximately 40 years old, compared to a typical useful life of twenty years, and have been patched or sealed as needed, with investments over the past five years totaling $34K although a full replacement, which is needed, has not yet occurred. Per the most recent facility conditions assessment (FCA) provided by Habeeb & Associates (H&A), the entire pavement should be replaced in 3-5 years with an estimated cost of $191K. The paved site areas also have minimal storm drainage, directed towards either a retention pond southeast of the building or adjacent to lawns, which serve as fields for school sports. The playing field has extremely poor drainage, and a new drainage system was recommended in the Habeeb Report in the next 3-5 years at an estimated cost of $374K. An engineering study of the site could help to clarify the challenges, potential remedies, and cost for this item. The school is also surrounded by wetlands and any work near the wetlands needs prior approval by the Town of Essex Conservation Commission.

With regard to building envelope, the main portion of the EPDM single-ply membrane roof is approximately 25 years old; a portion over Side B of the building is approximately 20 years old. MERSD contracts with an external provider to conduct routine roofing inspections, and recent reports have found that lead-coated copper cap flashings at all brick wall-to-roof transitions need significant repair or replacement. Flashing heights are low and new insulation will be above flashings when the membrane is replaced. Cantilevered concrete roof slab exterior soffit areas and vertical fascia edges on the building perimeter are exposed, leading to moisture penetration and spalled concrete at bottom drip edges. Per the FCA, a new roof is needed within 3-5 years with an estimated cost of $3.4M.

Additionally, the windows are wood framed. Many have original single pane glazing, and some dual pane windows show condensation. This causes rooms to be extremely uncomfortable and drafty and is also extremely inefficient from an energy use perspective. These are in need of replacement with many original to the building and past their useful lifespan and should be replaced per the FCA in 1-2 years. The wood trim and sills are also original (1957) and rotted although MERSD has invested in wood replacement throughout the building, the total cost for window replacement, including trim and sills, is estimated at $1.5M. With window replacement, blinds and shades will also need replacement, which could add an estimated $57K to the project cost. Skylights throughout the building are also beyond their useful life with deteriorated sealants and condensation patches, with an estimated replacement cost of $47K. Siding throughout the building is T1-11 plywood, warped and peeled, and shows signs of decay. Based on the building’s age, it is assumed that exterior paint may contain lead and would need to be abated. The estimated cost to replace painted siding in 3-5 years is $105K. Walls are original to the building, and although replacement is not required in the next few years, the walls have little to no insulation and the cost to upgrade to energy code would be significant, above $1 million per the FCA. There is minor face brick veneer cracking and signs of water intrusion near the gym. Masonry repairs to the veneer, per the FCA, should take place within 3-5 years with an estimated cost of $104K.

Mechanical and Electrical Systems further contribute to the time-sensitive need for a systemic building solution. There is currently only 1 working boiler, installed in 2008, which has begun to experience operating interruptions. MERSD believes adding a backup boiler would align with best practice to avoid interruptions in instructional delivery, should an outage occur during the heating season. An additional boiler, working with the 2008 boiler, would also help extend the useful life of the 2008 unit. The FCA recommended addition of a new boiler within 1-2

years at a cost of $325K but to avoid instructional interruptions, MERSD intends to proceed with this project before a more systemic building solution can be initiated. This exemplifies investments that are immediately necessary throughout EES, but not ideal or cost effective on a stand-alone basis, given the need for a building wide systemic solution. Ultimately, continuity of operations may necessitate additional, piecemeal immediate investments that, from a financial efficiency standpoint, would be better suited to include in a future (ideally near-term), systemic building project.

Individual classroom unit ventilators are original to the building and are not efficient and cause inconsistent heat into the rooms, despite the recent introduction of a new, building-wide digital control solution. Servicing these units has become increasingly problematic, as many essential parts are no longer available. There are also 4 Air Handling Units that service the gym, cafeteria, and basement area, which were installed in 1975. All rooftop exhaust fans appear to be original. Per the FCA, based on the useful life and condition of the units, the entire system should be replaced in 3-5 years at a cost of $2.2M.

Except for natural gas service, which is about 20 years old, other service lines into and out of the building are believed to be original and at least 66 years old, including water and sanitary. Although no known issues exist with these systems, given their age, replacement will become necessary at some point in the future, with costs estimated in the FCA to exceed $300K. The hot water boiler in the building is approximately 16 years old and will need replacement in the next 3-5 years at an estimated cost of $33K.

The electrical system consists of 800 Amp 120/208-volt 3 phase service. Main service and disconnect panel and distribution wireways appear to be original. Sub-panels were added with the 1975 building addition. Building usage is near maximum for the present system and a replacement cost is estimated at $650K. The cost of replacing electrical wiring and sub-distribution system, in an electrical upgrade, is estimated in the FCA at $1.1 million.

Much of the kitchen equipment is original to the building, and other equipment is in excess of 30 years old. Repairs can be challenging, given the lack of available parts inventory. This limits options for cooking operations and meal preparation at the school. The school lacks an ANSUL fire suppression system.

Priority 5

Question 2: Please describe the measures the district has already taken to mitigate the problem/issues described in Question 1 above.

A new BMS was installed in 2017 and 2021 for $275K in partnership with the Town of Essex through the MA Green Communities Grant, so the HVAC system can be scheduled with occupied and non-occupied settings to reduce the load on the boiler. Nevertheless, efficiency of the new system is limited by dated steam tramp technology (recently upgraded as well at a cost of $36K) and unit ventilators that struggle to maintain even temperatures.

A maintenance plan is completed every year on the boiler to provide proper operation prior to the heating system. MERSD was able to salvage a burner assembly from the Memorial Elementary School (which was recently reconstructed in partnership with MSBA) and installed it on the EES 2008 boiler to extend its useful life.

The roof is inspected every year and recent repairs include repairing 20 failed patches and flashing conditions on all roof sections and repair 30 failed patches over edge metal laps on all roof sections. Repairs to the rotted sills and frames are planned to be addressed in the summer of 2023. MERSD has replaced rotted wood in the courtyard around some windows and on accessible ramps and surrounding the playground ($27K) over the past several years.

Asphalt repairs have been to sidewalks and recreational play surfaces over the past several years ($34K).

Despite these significant investments, the recent FCA makes clear that due to the age of the building, significant infrastructure investments are necessary across all aspects of the building, including site, envelope, interiors, mechanical systems and interiors. Many of these investments are needs within the next five years with an estimated cost of $18.8 million, based on recent market pricing, suggesting that a systemic solution is necessary, rather than a piecemeal approach. A systemic solution would also require MERSD to bring the building up to code in certain grandfathered areas, leading to a total estimated cost of remediation of $28.7 million, based on the detailed FCA cost analysis. A copy of the 2022-2023 updated FCA from H&A is attached to our SOI submission.

Priority 5

Question 3: Please provide a detailed explanation of the impact of the problem/issues described in Question 1 above on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.

The age and condition of the facility limits the scope of the academic program in both regular and special education. Outdated learning spaces that do not support flexible learning, extreme swings in building temperatures, leaking windows, basement level classrooms, absence of kindergarten lavatories and lack of handicap accessibility throughout the building, acoustically unsound learning spaces, limited and large group gathering space, and no small group learning spaces or project rooms, are all barriers to our program and current best practice instruction.

Substandard Physical Plant Impact on Program Delivery

- Limited climate control which creates safety issues for students with identified disabilities and prevents summer programming for students with special needs.
- Outdated unit ventilators do not properly regulate heat in classrooms. Despite recently upgraded digital controls, excessive temperature swings interrupt instruction. Students at times need to wear coats in classrooms. Temperature problems also present safety and health concerns.
- Rainwater leaks into the building requiring the school to put out buckets in hallways and create the potential for hazardous slips, and water damage inside the building. Leaks also present a hazard to educational technology.
- Handicap accessibility deficits door construction, parking and ramp access, water fountains, bathroom facilities, lockers, classroom sinks do not meet current MAAB/ADA code.
- Moderate special education support services are delivered in two classrooms, one severely undersized, limiting the number of students that can be supported at any given time. This undersized space houses both a special education teacher and a paraprofessional. Three to four staff members share resource room space, which contributes to a noisy and distracting environment for the delivery of individual and small group tutorials. Appropriate educational space is not available due to an inadequate number of small group learning spaces available in an outdated building.
- Occupational and physical therapy occurs in a basement area regularly impacted by damp and musty conditions. This space abuts the boiler room and is accessed by walking through the art classroom which does not allow for student privacy. This undersized space restricts the amount and type of equipment utilized and limits the number of students that can be served during a class period.
- Speech and Language services are delivered in a converted locker room space in an attempt to create small group learning spaces.
- English Language Learning instruction takes place in a converted storage space that is in adequate in square footage and lacks appropriate furniture. There is no available space to relocate this program.
- EES has no appropriate dedicated, private rooms for state mandated student evaluations by the special education department.
- EES has no space for de-escalation, in-school suspensions, or time outs for both general and special education students.
- EES does not have appropriate science laboratory space for the older grades to conduct experiments which significantly limits the school's ability to implement its STEM curriculum. Experiments are done in the classrooms, which are carpeted, leading to cleanliness and safety issues.
- EES does not have adequate large group space. Performances and school assemblies are held in the dated cafetorium. This limits the number and type of school performances for students and families.
- Security measures, considered common in all schools today, are either missing or retrofitted in less than efficient ways. A lack of door alarms, signals for open doors, PA system accessible by all classrooms/office spaces, and an emergency direct-call button to the local police/fire are all cause for concern, particularly when these safety measures are in place in other district schools.
- Antiquated and broken kitchen equipment results in less variety in menu items, point of service choices and farm-to-table nutrition initiatives. Nutrition instruction is limited by these representational choices.

Priority 5

Question 4: Please describe how addressing the school facility systems you identified in Question 1 above will extend the useful life of the facility that is the subject of this SOI and how it will improve your district's educational program.

Based on the facility condition assessment conducted by Habeeb & Associates, addressing the school facility systems would extend the useful life of the space at a projected preliminary cost of $28.75M. Although, this would not address some of the needs of the educational deficiencies the school has. However, a new elementary school has a projected cost of $32M as per the Habeeb Report and would address the schools' educational needs.

Please also provide the following:

Have the systems identified above been examined by an engineer or other trained building professional?:
YES

If "YES", please provide the name of the individual and his/her professional affiliation (maximum of 250 characters):
Habeeb & Associates Architects

The date of the inspection: 9/13/2022

A summary of the findings (maximum of 5000 characters):
An attached copy of the full Habeeb Report will be provided.

Priority 7

Question 1: Please provide a detailed description of the programs not currently available due to facility constraints, the state or local requirement for such programs, and the facility limitations precluding the programs from being offered.

The Manchester Essex elementary schools employ a broad- range of teaching methodologies that strive to balance the best of progressive methodology with tried-and-true traditional approaches. Our curriculum and instructional program are designed to support our mission, vision, and core values. To that end, we provide a rigorous core curriculum that is complemented by a rich program of experiential and exploratory learning experiences designed to utilize an interdisciplinary approach that creates connections between learning and the real world. Project-based, authentic learning is a key strategic priority for MERSD. Inherent in this approach are long-range, multi-disciplinary investigations and/or projects. The final outcomes of a project-based learning experience vary in nature and are frequently used to display information regarding the in-depth study of the topic and/or problem.

The structure of the classrooms, with their lack of storage and/or counter space, inability to accommodate a large number of students and lack of flexible workspaces, hinder the integration of project-based learning across the curriculum. Teachers struggle to find spaces in which ongoing projects can remain undamaged and readily available to students as they continue with these long-range projects. Outdated learning spaces that do not support flexible learning, extreme swings in building temperatures, leaking windows, basement level classrooms, absence of kindergarten lavatories and lack of handicap accessibility throughout the building, acoustically unsound learning spaces, limited and large group gathering space, and no small group learning spaces or project rooms, are all barriers to our program and current best practice instruction.

- Science instruction lacks the robust engagement the discipline offers. Lack of a designated space, no counter space in classroom areas, limited large group spaces and no flexible seating means that instruction is limited, lacking experimentation, particularly on experiments that continue over many school days. Again, storage impacts instruction with materials related to science stored in an on-site, attached modular.
- Program limitations arise throughout the building because of the antiquated structure of the learning spaces. A lack of instructional materials storage has resulted in the addition of an attached storage modular as well as the use of a basement space impacted by mustiness and dampness. Space to work on and store ongoing projects restricts project-based learning opportunities. With no counters, shelves or additional storage in the classrooms, the outcomes for long term projects are often limited to paper or two-dimensional products. Students can frequently be found spread out in hallways (not designed as flexible learning space) to work on group projects with shared resources, threatening the ability of safe traverse through the hallways.
- Of primary concern for our instructional program is the inclusion of all students. Acoustically, the structure and construction of several instructional spaces make proper acoustics a challenge, particularly for those students with hearing and/or attention concerns. The gymnasium, one of the few large area gathering spaces, is one such learning space. Hearing and understanding directions are particularly challenging in this space. Due to safety concerns, large visual displays such as smartboards are also not available for instructional modifications to make up for this acoustical challenge.
- Physically, the OT/PT space and the Art room are located in the basement. This area is made available through a ramp that requires careful thought and supervised use for students with physical handicaps. Services for students with physical disabilities are located in the basement PT/OT space, requiring travel down the ramp to access services. Students and staff must pass through the art classroom to access the PT/OT space, disrupting learning as well as serving to identify students in need of these services. This location is susceptible to mustiness, dampness, and cold, particularly in the spring and fall when the heat in the building is not on. For art materials, these conditions often lead to waste and an inability to store materials necessary for instruction. Not only are these spaces unappealing to students due to the submerged position of the classroom but also, they are unsafe and/or unable to get important notifications as interference occurs when employing the walkie-talkie communication systems used throughout the building. Walkie-talkies are used to call for additional support for dysregulated students as well as dismissal announcements. Particularly troubling is that students who are dysregulated are

often found using the sensory equipment in the PT/OT space. In the event of the need for additional personnel to support a student, communication often fails if the call is made to, or intended for, staff located in this space. Emergency communications are also restricted in this manner.

- Increasingly, students with physical disabilities, and even those with in-the-moment childhood injuries, such as a broken leg, find using the bathrooms a challenge. While all students report feeling “unsafe” in the bathrooms because of a lack of privacy related to the old stall fixtures and acoustics within, students in wheelchairs, crutches or that require toileting, are at an even more heightened disadvantage. The single bathroom found in the nurse’s office is not ADA compliant. Only one bathroom, attached to a classroom, allows enough privacy and space for toileting a student. Any child in a wheelchair must use a designated staff bathroom due to space constraints.
- The social-emotional programming found at the school and district level has been enhanced since the pandemic shutdown. With the SEL needs of students on the rise, the need for a flexible, appropriate counseling space is paramount. Office space exists for the school adjustment counselor; however, the office is undersized for any service group size larger than one individual. Group meetings must be scheduled in conjunction with openings in other larger office spaces and/or classrooms. This fluidity in movement threatens privacy as well as requiring the counselor to shift her instructional materials consistently to accommodate instruction.
- Offering opportunities to our students as a collective learning community strengthens the social emotional learning of the district and of the school. Community meetings and school-wide presentations are restricted by the lack of risers and ease of access to the stage, which is part of the cafeteria. Due to the multi-use nature of this space, time restrictions also impact the ability to gather as a school-wide learning community. No other performance space is available in the building.

Priority 7

Question 2: Please describe the measures the district has taken or is planning to take in the immediate future to mitigate the problem(s) described above.

The District has used its General Fund budget, Stabilization reserve funds, and the State's Green Communities Grant program (in partnership with the Town of Essex), to invest more significantly in certain key facility areas at EES in a best effort to extend the useful life of the building and strive for programmatic equity for students. Investment examples include:

- new playground ($400K)
- updated Project Adventure courses infrastructure ($16K)
- student and staff technology ($170K in one-time upgrades of classroom interactive teaching panels, in addition to ongoing operating investments in modern computer device technology),
- a new fire alarm system ($169K)
- reconfiguration of outmoded locker room spaces into speech-language space ($70K)
- asphalt repair to sidewalks and recreational play surfaces ($34K)
- new burner assembly for 2008 boiler ($44K)
- replacement of rotted wood in courtyard, around windows, on accessible ramps and surrounding playground ($27K)

The facility constraints that impact the program are related to the overall construction, design, and age of the building. Despite these significant investments, the recent FCA makes clear that due to the age of the building, significant infrastructure investments are necessary across all aspects of the building, including site, envelope, interiors, mechanical systems and interiors. Many of these investments are needed within the next five years with an estimated cost of $18.8 million, based on recent market pricing, suggesting that a systemic solution is necessary, rather than a piecemeal approach. A systemic solution would require MERSD to bring the building up to code in certain grandfathered areas, leading to a total estimated cost of remediation of $28.7 million, based on the detailed FCA cost analysis. A copy of the 2022-2023 updated FCA from H&A is attached to our SOI submission.

Priority 7

Question 3: Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.

As the oldest building in the Manchester Essex Regional School District, the inequities of instructional approach, programmatic offerings, up-to-date accommodations, and resource management are stark. Essex Elementary School houses the elementary ELL student population and two sub-separate special education programs. Additionally, EES has the highest percentage of high-risk students in the district. The inequities in facilities with their elementary peers at the Manchester Memorial Elementary School, its district sister school, result in a significantly different educational experience. Lack of project rooms, science labs, flexible use spaces, appropriate performance spaces, and spaces large enough to accommodate multiple classroom groups hinders the collaboration among grade levels and classrooms as well as robust, engaging, real-life instructional connections. Lack of storage and counter space in classrooms restricts the instructional practices that teachers can employ daily to engage students.

While we can physically accommodate our current student population and critical program needs, the age and condition of the facility limit the scope and delivery of the academic program in both general and special education. The end-of-life facility results in frequent disruptions of the educational program, challenges our ability to meet state regulations, and limits the scope of the academic program in both regular and special education. Primarily impacted are instructional opportunities for students and teachers, both in regular and in special education. Outdated learning spaces that do not support flexible learning, extreme swings in building temperatures, leaking windows, basement level classrooms, absence of kindergarten lavatories, lack of handicap accessibility throughout the building, acoustically unsound learning spaces, limited and large group gathering space, and no small group learning spaces or project rooms are all barriers to our program and current best practice instruction.

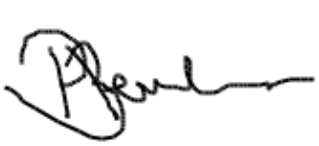
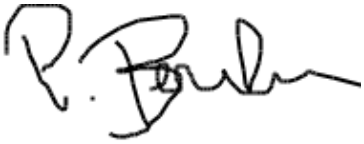
Substandard Physical Plant Impact on Program & Special Education Compliance:

- Limited climate control which creates safety issues for students with identified disabilities and prevents summer programming for students with special needs.
- Outdated unit ventilators do not properly regulate heat in classrooms. Despite recently upgraded digital controls, excessive temperature swings interrupt instruction. Students at times need to wear coats in classrooms. Temperature problems also present safety and health concerns.
- Rainwater leaks into the building requiring the school to put out buckets in hallways and create the potential for hazardous slips, and water damage inside the building. Leaks also present a hazard to educational technology.
- Handicap accessibility deficits: door construction, parking and ramp access, water fountains, bathroom facilities, lockers, and classroom sinks do not meet the current MAAB/ADA code.
- Moderate special education support services are delivered in two classrooms, one severely undersized, limiting the number of students that can be supported at any given time. This undersized space houses both a special education teacher and a paraprofessional which contributes to a noisy and distracting environment for the delivery of individual and small group tutorials. Appropriate educational space is not available due to an inadequate number of small group learning spaces available in an outdated building.
- Occupational and physical therapy occurs in a basement area regularly impacted by damp and musty conditions. This space abuts the boiler room and is accessed by walking through the art classroom which does not allow for student privacy. This undersized space restricts the amount and type of equipment utilized and limits the number of students that can be served during a class period.
- Handicap accessibility deficits door construction, parking and ramp access, water fountains, bathroom facilities, lockers, classroom sinks do not meet current MAAB/ADA code.
- Speech and Language services are delivered in a converted locker room space in an attempt to create small group learning spaces.
- EES has no appropriate dedicated, private rooms for state mandated student evaluations by the special education department.
- EES has no space for de-escalation, in-school suspensions, or time outs for both general and special education students.

- EES does not have appropriate science laboratory space for the older grades to conduct experiments which significantly limits the school's ability to implement its STEM curriculum. Experiments are done in the classrooms, which are carpeted, leading to cleanliness and safety issues.
- EES does not have adequate large group space. Performances and school assemblies are held in the dated "cafetorium." This limits the number and type of school performances for students and families.
- Security measures, considered common in all schools today, are either missing or retrofitted in less than efficient ways. A lack of door alarms, signals for open doors, PA system accessible by all classrooms/office spaces, and an emergency direct-call button to the local police/fire are all cause for concern, particularly when these safety measures are in place in other district schools.
- Antiquated and broken kitchen equipment results in less variety in menu items, point of service choices and farm-to-table nutrition initiatives. Nutrition instruction is limited by these representational choices.

CERTIFICATIONS

The undersigned hereby certifies that, to the best of his/her knowledge, information and belief, the statements and information contained in this statement of Interest and attached hereto are true and accurate and that this Statement of Interest has been prepared under the direction of the district school committee and the undersigned is duly authorized to submit this Statement of Interest to the Massachusetts School Building Authority. The undersigned also hereby acknowledges and agrees to provide the Massachusetts School Building Authority, upon request by the Authority, any additional information relating to this Statement of Interest that may be required by the Authority.

Chief Executive Officer *	**School Committee Chair**	**Superintendent of Schools**
Pamela Beaudoin	Theresa Whitman	Pamela Beaudoin
Superintendent		
		
(signature)	(signature)	(signature)
Date	Date	Date
4/13/2023 1:46:12 PM	4/13/2023 3:29:42 PM	4/13/2023 1:56:24 PM

* Local chief executive officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated to the chief executive office under the provisions of a local charter. Please note, in districts where the Superintendent is also the Local Chief Executive Officer, it is required for the same person to sign the Statement of Interest Certifications twice.

MSBA BOARD ACTION LETTER – INVITATION TO FEASIBILITY

SECTION 3.1.8.2

Massachusetts School Building Authority

Deborah B. Goldberg
Chair, State Treasurer

James A. MacDonald
Chief Executive Officer

Mary L. Pichetti
Executive Director / Deputy CEO

December 13, 2024

Ms. Pamela Beaudoin, Superintendent
Manchester-Essex Regional School District
36 Lincoln Street
Manchester-by-the-Sea, MA 01944

Re: Manchester-Essex Regional School District, Essex Elementary School

Dear Superintendent Beaudoin:

I am pleased to report that the Board of the Massachusetts School Building Authority (the "MSBA") has voted to invite the Manchester-Essex Regional School District (the "District") to partner with the MSBA in conducting a Feasibility Study for the Essex Elementary School. The Board's vote follows the District's timely completion of all of the requirements of the MSBA's Eligibility Period.

I do want to emphasize that this invitation to partner on a Feasibility Study is ***not*** approval of a project, but is strictly an invitation to the District to work with the MSBA to explore potential solutions to the problems that have been identified. Moving forward in the MSBA's process requires collaboration with the MSBA, and communities that "get ahead" of the MSBA without MSBA approval will not be eligible for grant funding. To qualify for any funding from the MSBA, local communities must follow the MSBA's statute, regulations, and policies which require MSBA collaboration and approval at each step of the process.

During the Feasibility Study phase, the District and the MSBA will partner pursuant to the terms of the Feasibility Study Agreement to find the most fiscally responsible and educationally appropriate solution to the problems identified at the Essex Elementary School. The Feasibility Study, which will be conducted pursuant to the MSBA's regulations and policies, requires the District to work with the MSBA on the procurement of an Owner's Project Manager and Designer, which will help bring the District's Feasibility Study to fruition.

We will be contacting you soon to discuss these next steps in more detail. In the meantime, however, I wanted to share with you the Board's decision and provide a brief overview of what this means for the Manchester-Essex Regional School District.

I look forward to continuing to work with you as part of the MSBA's grant program. As always, feel free to contact me or my staff at (617) 720-4466 should you have any questions.

Sincerely,



Mary L. Pichetti
Executive Director

Cc: Legislative Delegation
Chris Reed, Chair, Manchester-Essex Regional School Committee
Kate Koch-Sundquist, Vice Chair, Manchester-Essex Regional School Committee
Michelle Cresta, Director of Finance and Operations, Manchester-Essex Regional School District
John Binieris, Co-Chair, Manchester-Essex School Building Committee
Theresa Whitman, Co-Chair, Manchester Essex School Building Committee
File: 10.2 Letters (Region 3)

DESIGN ENROLLMENT CERTIFICATION LETTER

SECTION 3.1.8.3

Massachusetts School Building Authority

Deborah B. Goldberg
Chair, State Treasurer

James A. MacDonald
Chief Executive Officer

Mary L. Pichetti
Executive Director / Deputy CEO

August 16, 2024

Ms. Pamela Beaudoin, Superintendent
Manchester-Essex Regional School District
36 Lincoln Street
Manchester-by-the-Sea, MA 01944

Re: Manchester-Essex Regional School District, Essex Elementary School

Dear Superintendent Beaudoin:

I would like to thank representatives of the Manchester-Essex Regional School District (the "District") for meeting with Massachusetts School Building Authority (the "MSBA") staff on June 24, 2024, and July 22, 2024, to review enrollment projections and methodologies for the Essex Elementary School project (the "Proposed Project"). As discussed, the next critical step is for the MSBA and the District to agree on a study enrollment for the Proposed Project.

The MSBA works with local communities to create affordable, sustainable, and energy-efficient schools across Massachusetts. A critical early component in achieving these objectives begins with an appropriate design enrollment that positions the District to efficiently meet space capacity needs throughout potential future enrollment variations.

The MSBA uses a data-driven enrollment projection methodology based on the widely accepted modified grade-to-grade cohort survival methodology (the "enrollment methodology"). The MSBA's enrollment methodology generates a baseline enrollment projection as discussed during the June 24, 2024, enrollment meeting, and as further described on the MSBA's website found under the 'Building With Us', 'MSBA Enrollment Methodology' section.

Based on discussion with and information supplied by the District, data from sources such as the Department of Elementary and Secondary Education ("DESE") and Department of Public Health, the MSBA has been able to create enrollment projections for the Proposed Project, as follows.

The Essex Elementary School presently serves the Town of Essex grade K through 5 enrollments. The MSBA understands that in addition to the current grade configuration, the District would like its Feasibility Study to evaluate a district-wide grade Pre-K through 5 configuration with an expansion to the MSBA-funded Manchester Memorial Elementary School. The District would also like to evaluate a grade Pre-K through 3 configuration at the existing Essex Elementary School resulting in district-wide grades 4 through 5 enrollments attending the MSBA-funded Manchester Memorial Elementary School.

As discussed, Pre-K enrollment is not included in these projections and the determination for required space will be in the early phase of the grant program's feasibility study phase of the MSBA's process at the time of the review of the District's proposed educational space program for the Proposed Project. Accordingly, this analysis will be focused on the enrollment projections for grades K through 5.

The table below illustrates the District's K through 12 enrollments during the most recent ten-year period, including enrollment for the school year 2023-2024 as reported by the Department of Elementary and Secondary Education ("DESE").

School Year	Essex	District Wide			
	K-5	K-5	6-8	9-12	Total
2014-2015	270	672	376	440	1,488
2015-2016	249	610	384	432	1,426
2016-2017	225	574	386	424	1,384
2017-2018	228	560	372	443	1,375
2018-2019	222	538	368	471	1,377
2019-2020	219	518	357	483	1,358
2020-2021	189	450	343	459	1,252
2021-2022	219	497	283	450	1,230
2022-2023	231	489	283	416	1,188
2023-2024	229	489	274	399	1,162

A version of the above table with more detail regarding the District's historic enrollment can also be found in the District's Enrollment Projection package.

The total grade K through 5 enrollments in the Town of Essex as reported by the District for the 2023-2024 school year was 229 students, which reflects a decrease of 61 students (-15.2%) from the maximum grade K through 5 enrollments reported during the preceding ten years. Additionally, the 2023-2024 grade K through 5 enrollment reflects an increase of 1 student (0.4%) from the average grade K through 5 enrollments reported during the preceding ten-year period. The MSBA understands that the District initially proposed an enrollment to accommodate approximately 240 students in grades Pre-K through 5 at the Essex Elementary School.

The total grade K through 5 enrollments in the Manchester-Essex Regional School District as reported by the District for the 2023-2024 school year was 489 students, which reflects a decrease of 183 students (-27.2%) from the maximum grade K through 5 enrollments reported during the preceding ten years. Additionally, the 2023-2024 district-wide grade K through 5 enrollment reflects a decrease of 51 students (-9.4%) from the average grade K through 5 enrollments reported during the preceding ten-year period.

With respect to future enrollments, the MSBA's base enrollment projection indicates the District's grade K-5 enrollment will stabilize then trend upward, peaking in the 2032-2033

school year before declining. A similar pattern is also projected for the Town of Essex. In accordance with the MSBA's Enrollment Methodology, the baseline enrollment is calculated using the ten-year average of projected enrollments. As such, the average base enrollment projections for the Proposed Project through the 2032-2033 school year are as follows:

- Essex Elementary School Current Configuration: Grade K-5 base enrollment projection: 245 students
- Essex Elementary School Proposed Configuration: Grade K-3 base enrollment projection: 160 students
- District-wide proposed Configuration: Grade K-5 base enrollment projection: 505 students

As a result of a sensitivity analysis performed by the MSBA on this base enrollment projection and further discussion with the District, the following adjustment has been made to the base enrollment projection:

Out-of-District Enrollment

- In order to adjust for fluctuations to in the out-of-district enrollment patterns of the District's residents over time, the MSBA has made an additional adjustment to the base enrollment projection.
- In order to make this adjustment, the MSBA adjusted the grade-to-grade survival ratios for grade K through 5 by a total of 3.3% throughout a four-year period in the projection.
- This adjustment added the following numbers of students to the base enrollment, as compared to the projection without this adjustment:
  - Essex Elementary School Current Configuration of grade K-5 enrollment: the adjustment added approximately five students
  - Essex Elementary School Proposed Configuration of grade K-3 enrollment: the adjustment added approximately five students
  - District-wide Proposed Configuration of grade K-5 enrollment: the adjustment added approximately ten students

As a result of the analysis of the base enrollment forecast, the historical enrollment trends of the District and the adjustment described above, the MSBA recommends for planning and study purposes only, study enrollments for the Proposed Project as follows:

- Essex Elementary School Current Configuration of grade K through 5 enrollment: 250 students (plus Pre-K students)
- Essex Elementary School Proposed Configuration of grade K through 3 enrollment: 165 students (plus Pre-K students)
- District-wide Proposed Configuration of grade K through 5 enrollment: 515 students (plus Pre-K students)

Please note that these recommendations for study enrollments do not represent an affirmation by the MSBA for approval and/or funding of any of these options and are intended only to provide a

framework to inform the feasibility study to be conducted as a means of determining the most cost-effective and educationally sound solution to be agreed upon by the District and the MSBA. The MSBA's study enrollment recommendations assume full utilization of all remaining school facilities.

If the current grade K-5 enrollment configuration in the Town of Essex is not determined to be the Preferred Solution, the District will be required to document in the Preferred Schematic Report that the Preferred Solution has been approved by the School Committee and necessary District officials. Further, the MSBA will require a written plan from the District describing the process for determining local support for preferred grade reconfiguration. Please note any potential grant associated with a Proposed Project that includes a grade Pre-K through 3 configuration at the existing Essex Elementary School, resulting in district-wide grades 4 through 5 enrollments attending the MSBA-funded Manchester Memorial Elementary School, will be limited to the work at the Essex Elementary School. Upon approval of the District's Preferred Solution, the MSBA will forward a design enrollment certification that is specific to the grade configuration associated with the approved Preferred Solution.

The MSBA believes that these study enrollment recommendations will position the District to efficiently meet space capacity needs throughout future enrollment variations. Please sign and return the attached certification within 21 calendar days to confirm agreement on these study enrollment recommendations. If the District feels that these study enrollment recommendations do not meet the needs of the District, please respond to this letter via e-mail to Claire Ackerman and propose three meeting/conference call times for which the District can be available to discuss enrollment.

If you have any questions regarding this matter, please do not hesitate to contact me or Claire Ackerman (Claire.Ackerman@massschoolbuildings.org) at 617-720-4466.

Sincerely,

Michael P McGurl

Michael McGurl
Director of Capital Planning

Cc: Legislative Delegation
Chris Reed, Chair, Manchester-Essex Regional School Committee
Kate Koch-Sundquist, Vice Chair, Manchester-Essex Regional School Committee
John Binieris, Co-Chair, School Building Committee
Theresa Whitman, Co-Chair, School Building Committee
Michelle Cresta, Director of Finance and Operations, Manchester-Essex Regional School District
File: 10.2 Letters (Region 3)

MSBA Project No. 202306980020

MASSACHUSETTS SCHOOL BUILDING AUTHORITY
MANCHESTER-ESSEX REGIONAL SCHOOL DISTRICT
ESSEX ELEMENTARY SCHOOL
STUDY ENROLLMENT CERTIFICATION

As a result of a collaborative analysis with the Massachusetts School Building Authority (the "MSBA") of enrollment projections and space capacity needs for the Essex Elementary School (the "Proposed Project"), the Manchester-Essex Regional School District (the "District") hereby acknowledges and agrees that the design of alternatives, which may be evaluated as a part of the feasibility study for the Essex Elementary School, shall be based in accordance with the following:

Town of Essex Grade K-3 Enrollment (plus Pre-K)	**Town of Essex Grade K-5 Enrollment (plus Pre-K)**	**District-wide Grade K-5 Enrollment (plus Pre-K)**
165 students	250 students	515 students

The District further acknowledges and agrees that, pursuant to 963 CMR 2.00 *et seq.*, the MSBA shall determine the square feet per student space allowance and total square footage according to the enrollments noted above. The District acknowledges and agrees that it has no right or entitlement to any particular design enrollment, square feet per student space allowance, or total square footage and that it has no right or entitlement to a design enrollment any greater than any of the enrollments noted above, and further acknowledges and agrees that it shall not bring any claim or action, legal or equitable, against the MSBA, or any of its officers or employees, for the purpose of obtaining an increase in the design enrollment for the Proposed Project that it has acknowledged and agreed to herein. The District further acknowledges and agrees that, among other things, the design enrollment, square feet per student space allowance, and total square footage of the Proposed Project shall be subject to the approval of the MSBA's Board and that the final approval of a Proposed Project shall be within the sole discretion of the MSBA's Board.

The undersigned, for themselves and the District, hereby certify that they have read and understand the contents of this study enrollment certification and that each of the above statements is true, complete and accurate. The undersigned hereby certify that they have been duly authorized by the appropriate governmental body to execute this certification on behalf of the District and to bind the District to its terms.

_____ _____
Chief Executive Officer Duly Authorized Representative of School Committee

_____ _____
Date Date

_____
Superintendent of Schools

_____
Date

CAPITAL BUDGET STATEMENT

SECTION 3.1.8.4

Capital Budget & Financial Capacity Statement

Manchester Essex Regional School District (MERSD)

The Manchester Essex Regional School District (MERSD) works collaboratively with its two member towns—Manchester-by-the-Sea and Essex—to plan, finance, and manage capital investments on a multi-year basis. The District and towns maintain a coordinated approach to capital planning that aligns school construction and major facility investments with long-term municipal financial planning to ensure predictability, affordability, and fiscal sustainability.

MERSD has a demonstrated history of responsibly financing major school construction projects. The District's most recent major construction project was the Manchester Memorial Elementary School project, which was financed through a combination of long-term general obligation bonds and short-term bond anticipation notes (BANs). Permanent financing includes $32.29 million in 30-year general obligation bonds, along with an additional $3.23 million bond issuance, while BAN financing was utilized during construction and will be retired through final MSBA reimbursement. All Memorial School debt service costs are shared regionally between Manchester and Essex using a combined Equalized Valuation (EQV) and population-based assessment methodology established by the Regional Agreement.

Prior to the Memorial School project, the District completed the Middle/High School construction project using approximately $32.3 million in voter-approved general obligation bond. Debt service for this project is similarly apportioned between Manchester and Essex using the District's established assessment methodology.

In addition to large-scale construction projects, MERSD has continued to invest in targeted capital improvements and facility maintenance through a mix of long-term debt, pay-as-you-go funding, and prudent debt management practices, including the use of bond premiums to offset interest costs and smooth annual debt service.

MERSD maintains a comprehensive long-range capital plan, updated annually in coordination with both towns, that incorporates routine maintenance, equipment replacement, and lifecycle planning for District facilities. As part of this work, the District has begun assessing Middle High School facility needs in anticipation of a mid-life (2034) need to invest in major systems and structures including roof replacement, mechanical systems, and technology infrastructure upgrades, ensuring that future capital needs are evaluated within the context of overall district debt capacity.

As part of its Project Development Plan (PDP) submissions to the Massachusetts School Building Authority (MSBA), Essex School Building Project Team has identified preliminary project cost ranges for the future Essex Elementary School Project. These include an estimated range of $45 million to $95 million for an Essex Elementary School project, depending on scope, educational program requirements, and site considerations. Financial planning for future projects assumes that existing debt obligations remain in place, allowing the District and towns to evaluate cumulative impacts and ensure long-term affordability.

PROJECT DIRECTORY

SECTION 3.1.8.5

PROJECT CONTACTS

Work Type	Name		Email
School Building Committee & School Committee Members			
Owner	Michelle Cresta*	Director of Finance & Operations	CrestaM@mersd.org
Town of Lexington	Pam Beaudoin*	Superintendent	BeaudoinP@mersd.org
	Kim Provost*	Principal	ProvostK@mersd.org
	Steve Hunt*	Facilities Manager	hunts@mersd.org
	Theresa Whitman*	SBC Co-Chair	whitmant@mersd.org
	John Binieris*	SBC Co-Chair	binierisj@mersd.org
	Andy Oldeman *	Manchester Finance Committee / Director of Engineering (Structural Engineer)	aoldeman@smma.com
	Charlie Hay*	Architect School Building Experience	charlesmarkhay@gmail.com
	Gordon Brewster*	Engineer, Sr. Proj. Manager, Owner's PM, former Member of MERMHS & Memorial building	gabrewster47@gmail.com
	Tyler Virden*	Project Executive -Wise Construction / Paren	tvirden@wiseconstruction.com
	Annie Cameron*	Manchester Conservation Committee / Education	anniecameron@comcast.net
	Henry Oettinger*		978henrybay@gmail.com
	Ariel Fernando Brian*	Architect - CBT	afbrain@live.com
	Jen Hocherman*	Architect - Partner SV Design	jen.hocherman@gmail.com
	Michael Gerhardt*	Civil Engineer / Parent	mgerhardt100@hotmail.com
	Timonthy McDonald *	Architect - Onion Flats	tim@onionflats.com
	David Pereen	Resident / Plumbing & Fire	dpereen@gmail.com
	Lisa O'Donnell	Design & Construction / Essex Planning Board	lisatheengineer@comcast.net
	Emily Dwyer*	EES Teacher	dwyere@mersd.org
	Kim Field	EES Teacher	fieldk@mersd.org
	Rachelle Russo	EES Teacher	russor@mersd.org

*=Voting Member

Owner's PM			
Dore + Whittier	Mike Burton	Project Director	mburton@doreandwhittier.com
	Christina Dell Angelo	Project Executive	cdellangelo@doreandwhittier.com
260 Merrimac Street	Rachel Rincon	Assitant PM	rrincon@doreandwhittier.com
	Jacob Greco	Assitant PM	jgreco@doreandwhittier.com
Newburyport, MA	John Albright	Project Manager	jalbright@doreandwhittier.com

Architect			
JCJ	James E. LaPosta, FAIA, LEED AP, MCPPO	Design Principal	jlaposta@jcj.com
9 Channel Center St Suite 200	Fawn W. Pellegrini	Associate Principal	fpellegrini@jcj.com
Boston, MA 02210	Jeff Elliott	Associate Design Principal	jelliott@jcj.com
T: (617) 532-6600	Dustin Lombardi	Sr. Project Architect	dlombardi@jcj.com
	Emily E. Czarnecki, NCIDQ	Principal	eczarneck@jcj.com
www.jcj.com	Brenda Hagan	Project Accountant	bhagan@jcj.com

Construction Team
Additional Resources

PROJECT CONTACTS

Structural Engineering			
RSE Associates			
65 Pleasant St., Suite 300	Sofya Auren, PE	Principal	sofya.auren@rseassociates.com
Watertown, MA 02472-4409	Erwin Castillo		erwin.castillo@rseassociates.com

Geotechnical			
McPhail Associates, Inc.	Jonathan W. Patch, P.E.	Principal	jpatch@mcphailgeo.com
	Anna M. Pelletier	Project Manager	apelletier@mcphailgeo.com

GeoEnvironmental			
Mabbett & Associates	Michael L. Bloom, PG, CPG	NE Practice Lead, Site & Remediation	bloom@mabbett.com
105 Central Street, Suite 4100	Stephan Vetere	Vice President	vetere@mabbett.com
Stoneham, MA 02180-1260	Michael F Delaney	Director	Delaney@mabbett.com
	Michael J Weydt	Senior Project Manager	weydt@mabbett.com
	Cassidy Way	Project Manager	way@mabbett.com

Furniture, Fixtures and Equipment (FFE)			
Newcomb & Boyd	Robert S. Laraia, RCDD, TLT	PM & Technology FF&E	RLaraia@newcomb-boyd.com

Food Service			
Crabtree McGrath Assoc., Inc.	John Sousa	President	jsousa@crabtree-mcgrath.com
161 West Main Street			
Georgetown, MA 01833			
T: (978) 352-8500			

Acoustical			
Newcomb & Boyd	Robert S. Laraia, RCDD, TLT	Principal	RLaraia@newcomb-boyd.com
	Daniel D. Choi	Acoustics	dchoi@newcomb-boyd.com

Site Survey			
Samiotes Consultants	Stephen Powers, PE	Director of Engineering	spowers@samiotes.com
20A Street	Daniel F. Fleming, PLS	Director of Surveying	dfleming@samiotes.com
Framingham, MA 01701-41022	Michelle Kayserman	Project Manager, Civil	mkayserman@samiotes.com
T: 508-877-6688			

Traffic			
Greenman-Pedersen	Rebecca Brown, PE,, PTOE		rebeccabrown@gpinet.com
	Nicole Rogers		nrogers@gpinet.com
	Cecilia Donaldson		cdonaldson@gpinet.com

Cost Estimator			
A M Fogarty & Associates, Inc	Peter (Pete) Timothy	President	ptim@amfogarty.com
175 Derby Street, Suite 5	Barbara Khachadoorian	Administration/Marketing	barbara@amfogarty.com
Hingham, MA 02043			
T: 781-749-7272			

PROJECT CONTACTS

Cost Estimator			
PM+C	Peter Bradley	President	peterbradley@pmc-ma.com
20 Downer Avenue			
Suite 5			
Hingham MA 02043			

Code Consultant			
JCJ Architecture	Dustin Lombardi	Sr. Project Architect	DLombardi@jcj.com
120 Huyshope Aveenue, Suite 400			
Hartford, CT 06106			
T: 860.247.9226			

Data/Communications/Security Consultant			
Newcomb & Boyd	Gladys Marroquin	Audio-Visual	GMarroquin@newcomb-boyd.com
Good Harbour Techmark	Matthew Allain, AIA, NCARB, CSL		matt.allain@ghtechmark.com
17 Accord Park Drive, Suite 201	Teresa Paczuska		teresa.paczuska@ghtechmark.com
Norwell, MA 02061	Cody Lattin		cody.lattin@ghtechmark.com

Theatre Consultant			
Newcomb & Boyd	Gladys Marroquin	Audio-Visual	GMarroquin@newcomb-boyd.com
	Gladys Marroquin	Audio-Visual	GMarroquin@newcomb-boyd.com
	Chris Sullins	BIM	csullins@newcomb-boyd.com

Security Consultant			
Good Harbour Techmark	Matthew Allain, AIA, NCARB, CSL		matt.allain@ghtechmark.com
17 Accord Park Drive, Suite 201	Teresa Paczuska		teresa.paczuska@ghtechmark.com
Norwell, MA 02061	Cody Lattin		cody.lattin@ghtechmark.com
	Elijah Georges		elijah.georges@ghtechmark.com

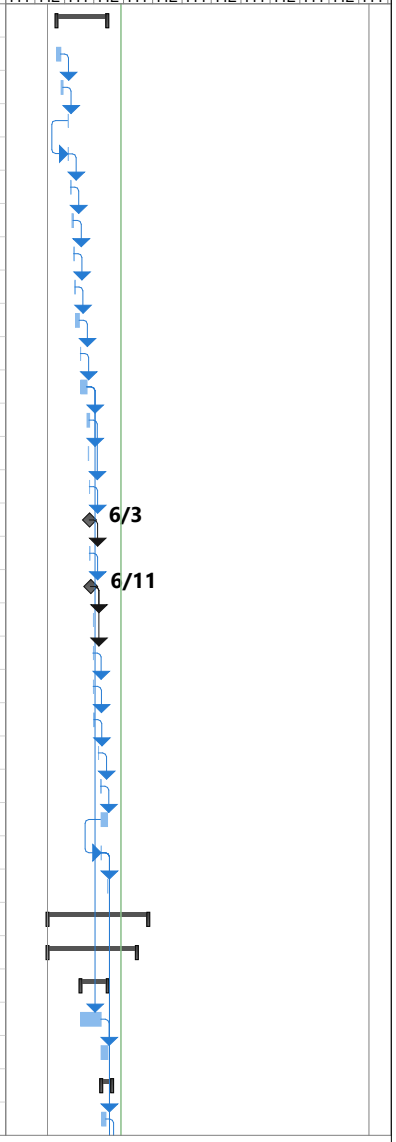
Educational Planner			
MLP Integrated Design	Mike Pirol0, ALEP	Principal	mike@mlpid.com
8 Frances Drive			
Newburyport, MA 01950			
T: 215-630-6831			

HVAC/Electrical/Lighting/Data & Communications Engineering			
GGD Consulting Engineers, Inc.	David M. Pereira, PE	Principal	david_pereira@g-g-d.com
375 Faunce Corner Road, Suite D	Dominick Puniello		dom_puniello@g-g-d.com
Dartmouth, MA 02747-1217	Sean Strassell		sean_strassell@g-g-d.com
T: 508-998-5700	Robert Polleys	Mechanical Engineer	rob_polleys@g-g-d.com
	Matthew Mendonca	Electrical Engineer	matt_mendonca@g-g-d.com
	Jolie Aranjo	Marketing Coordinator	jolie_aranjo@g-g-d.com

PROJECT SCHEDULE

SECTION 3.1.8.6

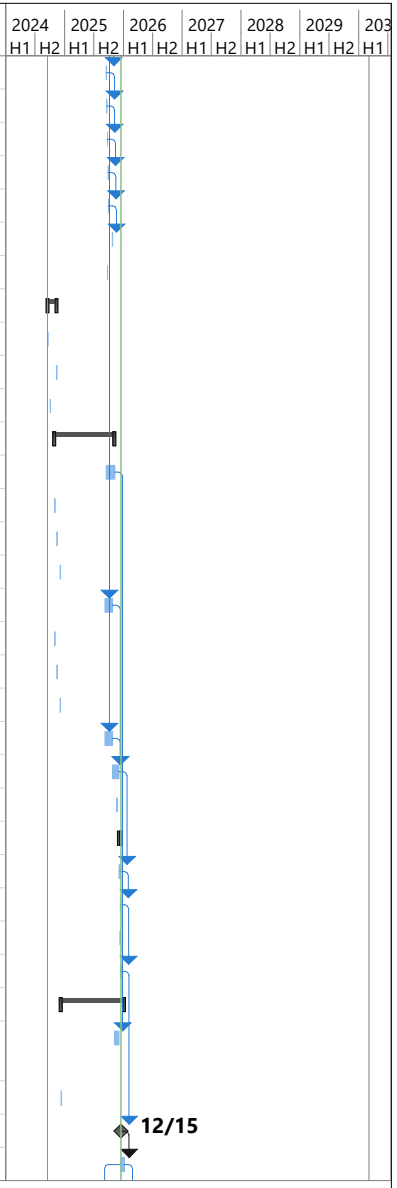
ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1		**Module 2 - Forming the Team**	**227 days**	**Mon 11/11/24**	**Tue 9/23/25**		
2		Develop OPM RFS	20 days	Mon 11/11/24	Fri 12/6/24		
3		Submit to MSBA for comment	10 days	Mon 12/9/24	Fri 12/20/24	2	
4		Upload to CR	1 day	Mon 1/20/25	Mon 1/20/25	3FS+20 days	
5		Public advertisement	1 day	Mon 1/20/25	Mon 1/20/25	4SS	
6		**Proposals due**	**1 day**	**Thu 2/6/25**	**Thu 2/6/25**	5FS+12 days	
7		Shortlist	6 days	Fri 2/14/25	Fri 2/21/25	6FS+5 days	
8		interviews	1 day	Wed 2/26/25	Wed 2/26/25	7FS+2 days	
9		SBC approval for OPM	1 day	Tue 3/4/25	Tue 3/4/25	8FS+3 days	
10		Submit to OPM info to MSBA	18 days	Fri 3/7/25	Tue 4/1/25	9FS+2 days	
11		**MSBA OPM Panel**	**1 day**	**Tue 4/8/25**	**Tue 4/8/25**	10FS+4 days	
12		OPM Finalize contract	27 days	Fri 4/11/25	Mon 5/19/25	11FS+2 days	
13		OPM Develop designer RFS	10 days	Tue 5/20/25	Mon 6/2/25	12	
14		Kickoff meeting w/ MERSD and SBC	1 day	Tue 5/27/25	Tue 5/27/25	12FS+5 days	
15		Submit RFS to MSBA for review	1 day	Tue 6/3/25	Tue 6/3/25	13	
16		SBC Review / approve Designer RFS	0 days	Tue 6/3/25	Tue 6/3/25	15	
17		Submit "ad" to central register	1 day	Wed 6/4/25	Wed 6/4/25	16	
18		**Designer RFS available**	**0 days**	**Wed 6/11/25**	**Wed 6/11/25**	17FS+5 days	
19		Designer Walkthrough	1 day	Thu 6/26/25	Thu 6/26/25	18FS+10 days	
20		Proposals Due	1 day	Thu 6/26/25	Thu 6/26/25	18FS+10 days	
21		Submit package to MSBA	1 day	Fri 6/27/25	Fri 6/27/25	20	
22		Submit package to DSP Panel Members	1 day	Mon 6/30/25	Mon 6/30/25	21	
23		**DSP Meeting**	**1 day**	Tue 7/29/25	Tue 7/29/25	22FS+20 days	
24		**Designer interviews (If required)**	**1 day**	Tue 8/12/25	Tue 8/12/25	23FS+9 days	
25		Finalize contract with Architect	30 days	Wed 8/13/25	Tue 9/23/25	24	
26		Hold Kickoff Meeting w/ OPM & District	1 day	Fri 8/15/25	Fri 8/15/25	25SS+2 days	
27		MSBA Kickoff Meeting	1 day	Tue 9/23/25	Tue 9/23/25	26FS+26 days	
28		**Module 3 - Feasibility**	**449 days?**	**Mon 9/16/24**	**Thu 6/4/26**		
29		**Preliminary Design Program (PDP)**	**397 days?**	**Mon 9/16/24**	**Tue 3/24/26**		
30		**Educational Program**	**120 days**	**Thu 4/10/25**	**Wed 9/24/25**		
31		District Drafts Educational Plan	90 days	Thu 4/10/25	Wed 8/13/25	12	
32		JCJ to Review Districts Ed Plan	30 days	Thu 8/14/25	Wed 9/24/25	31	
33		**Educational Visioning Meetings**	**48 days**	**Mon 8/18/25**	**Wed 10/22/25**		
34		Visioning Kick off	20 days	Mon 8/18/25	Fri 9/12/25	26	



Project: 20251217 Essex ES Pro
Date: Wed 12/17/25

Task	Inactive Task	Manual Summary Rollup	External Milestone
Split	Inactive Milestone	Manual Summary	Deadline
Milestone	Inactive Summary	Start-only	Progress
Summary	Manual Task	Finish-only	Manual Progress
Project Summary	Duration-only	External Tasks	

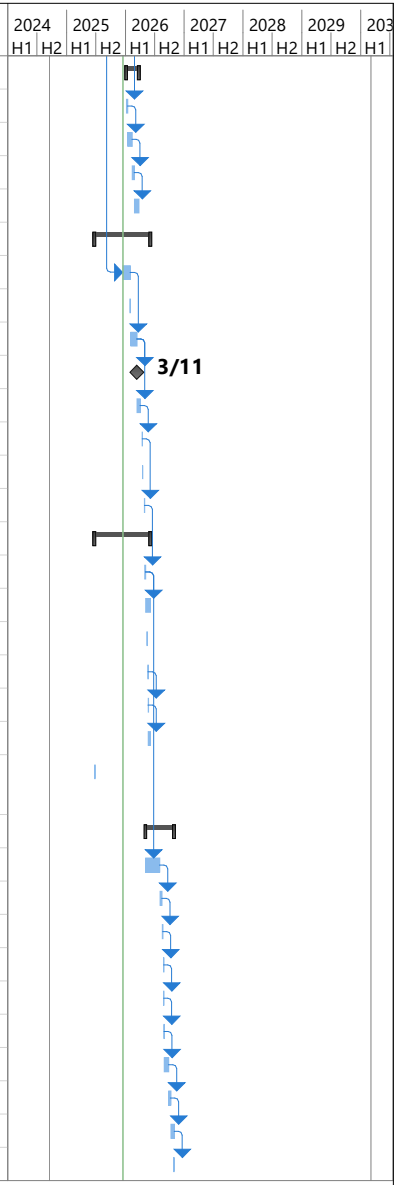
ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
35		Ed Visioning #1: Launch & Priorites	1 day	Tue 9/16/25	Tue 9/16/25	34FS+1 day	
36		Ed Visioning #2: Shadow Day	1 day	Wed 9/17/25	Wed 9/17/25	35	
37		Ed Visioning #3: Grade Configuration	1 day	Mon 9/22/25	Mon 9/22/25	36FS+2 days	
38		Ed Visioning #4: School Tours	1 day	Fri 9/26/25	Fri 9/26/25	37FS+3 days	
39		Ed Visioning #5: Workshop program needs	1 day	Mon 9/29/25	Mon 9/29/25	38	
40		Ed Visioning #6: Teaching and Learning Spaces	1 day	Wed 10/22/25	Wed 10/22/25	39FS+16 days	
41		Ed Visioning #7: SPED	1 day	Mon 9/22/25	Mon 9/22/25		
42		**Educational Programming Meetings**	**41 days**	**Mon 9/16/24**	**Mon 11/11/24**		
43		Educational Programming Meeting 1	1 day	Mon 9/16/24	Mon 9/16/24		
44		Educational Programming Meeting 2	1 day	Mon 11/11/24	Mon 11/11/24		
45		Educational Programming Meeting 3	1 day	Tue 10/1/24	Tue 10/1/24		
46		**Approve Educational Plan**	**267 days?**	**Wed 10/30/24**	**Thu 11/6/25**		
47		District Review of Educational Plan	38 days	Tue 9/16/25	Thu 11/6/25		
48		SBC Review and Acceptance of Educational Plan	1 day?	Wed 10/30/24	Wed 10/30/24		
49		School Committee review draft Educational Plan	1 day	Wed 11/13/24	Wed 11/13/24		
50		School Committee approve Educational Plan	1 day	Mon 12/2/24	Mon 12/2/24		
51		**Initial Space Summary**	33 days	Mon 9/8/25	Wed 10/22/25	26FS+15 days	
52		SBC Review and Acceptance of Space Summary	1 day?	Wed 10/30/24	Wed 10/30/24		
53		School Committeee Reivew of Space Summary	1 day?	Wed 11/13/24	Wed 11/13/24		
54		School Committee Acceptance of Space Summary	1 day?	Mon 12/2/24	Mon 12/2/24		
55		**Existing Conditions Evaluation**	33 days	Mon 9/8/25	Wed 10/22/25	26FS+15 days	
56		**Preliminary Evaluation of Alternatives**	30 days	Thu 10/23/25	Wed 12/3/25	51,55	
57		Community Meeting #2	1 day?	Thu 11/20/25	Thu 11/20/25		
58		**PDP Estimating**	**8 days?**	**Thu 12/4/25**	**Mon 12/15/25**		
59		Submit PDP Package to Estimators	6 days	Thu 12/4/25	Thu 12/11/25	56	
60		Reconciliation	1 day	Fri 12/12/25	Fri 12/12/25	59	
61		Community Meeting #3	1 day?	Tue 12/9/25	Tue 12/9/25		
62		Publish PDP Costs	1 day	Mon 12/15/25	Mon 12/15/25	60	
63		**District Approvals**	**282 days?**	**Mon 12/9/24**	**Tue 1/6/26**		
64		SC Vote to approved Ed Program and Space Summary	18 days	Fri 11/7/25	Tue 12/2/25	47	
65		Community Meeting #3	1 day?	Mon 12/9/24	Mon 12/9/24		
66		SBC Present PDP Costs	0 days	Mon 12/15/25	Mon 12/15/25	62	
67		SBC Vote to approved PDP Submission	17 days	Mon 12/15/25	Tue 1/6/26	66	



Project: 20251217 Essex ES Pro
Date: Wed 12/17/25

Task	Inactive Task	Manual Summary Rollup	External Milestone
Split	Inactive Milestone	Manual Summary	Deadline
Milestone	Inactive Summary	Start-only	Progress
Summary	Manual Task	Finish-only	Manual Progress
Project Summary	Duration-only	External Tasks	

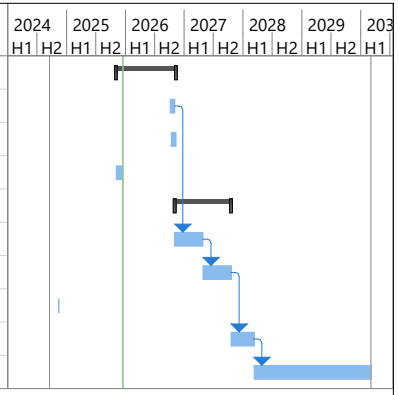
ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
68		**MSBA Submission and approvals**	**55 days**	**Wed 1/7/26**	**Tue 3/24/26**		
69		Submit PDP	5 days	Wed 1/7/26	Tue 1/13/26	67	
70		MSBA Review period	20 days	Wed 1/14/26	Tue 2/10/26	69	
71		District Response to MSBA Comments	10 days	Wed 2/11/26	Tue 2/24/26	70	
72		MSBA Accept PDP	20 days	Wed 2/25/26	Tue 3/24/26	71	
73		**Preferred Schematic Report (PSR)**	**248 days?**	**Tue 6/24/25**	**Thu 6/4/26**		
74		Further Development of Alternatives	35 days	Mon 12/15/25	Fri 1/30/26	67SS	
75		Community Meeting #4	1 day?	Wed 1/28/26	Wed 1/28/26		
76		Development of Preferred solution	28 days	Mon 2/2/26	Wed 3/11/26	74	
77		Cost Estimate Documentation to Estimator	0 days	Wed 3/11/26	Wed 3/11/26	76	
78		Cost Estimates and Reconcilation	15 days	Thu 3/12/26	Wed 4/1/26	76	
79		SBC Present PSR Costs	1 day	Tue 4/14/26	Tue 4/14/26	78	
80		Community Meeting #5	1 day?	Thu 4/16/26	Thu 4/16/26		
81		SBC Approve PSR	1 day?	Tue 4/28/26	Tue 4/28/26	79FS+9 days	
82		**MSBA submission and approvals**	**248 days?**	**Tue 6/24/25**	**Thu 6/4/26**		
83		Submit PSR	5 days	Wed 4/29/26	Tue 5/5/26	81	
84		MSBA Review period	20 days	Wed 5/6/26	Tue 6/2/26	83	
85		Facilities Assessment Subcommittee (FAS)	1 day?	Wed 5/13/26	Wed 5/13/26		
86		Facilities Assessment Subcommittee (FAS)	1 day	Wed 5/20/26	Wed 5/20/26		
87		MSBA issue Comments	1 day	Thu 5/21/26	Thu 5/21/26	86	
88		District response to MSBA Comments	10 days	Fri 5/22/26	Thu 6/4/26	87	
89		MSBA Board Meeting to Approve PSR and proceed into SD	1 day	Tue 6/24/25	Tue 6/24/25		
90		**Module 4 - Schematic**	**127 days**	**Wed 5/6/26**	**Thu 10/29/26**		
91		Schematic Design Development	63 days	Wed 5/6/26	Fri 7/31/26	83	
92		Cost Estimating	10 days	Mon 8/3/26	Fri 8/14/26	91	
93		Reconciliation	3 days	Mon 8/17/26	Wed 8/19/26	92	
94		Provide SD Package to client	1 day	Tue 8/25/26	Tue 8/25/26	93FS+3 days	
95		SBC vote to approve SD	1 day	Tue 8/25/26	Tue 8/25/26	94	
96		Submit SD to MSBA	2 days	Wed 8/26/26	Thu 8/27/26	95	
97		MSBA Review period	20 days	Fri 8/28/26	Thu 9/24/26	96	
98		District Response to comments	10 days	Fri 9/25/26	Thu 10/8/26	97	
99		Project Scope and Budget Conference (PS&B)	15 days	Fri 10/9/26	Thu 10/29/26	98	
100		MSBA Board approval of SD Submission	1 day	Wed 10/28/26	Wed 10/28/26	99	



Project: 20251217 Essex ES Pro
Date: Wed 12/17/25

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Progress
Manual Progress

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
101		**Module 5 - Local Actions and Approvals**	**265 days**	**Tue 11/4/25**	**Mon 11/9/26**		
102		Manchester by The Sea Town Meeting Approval	21 days	Mon 10/5/26	Mon 11/2/26		
103		Town of Essex Town Meeting Approval	21 days	Mon 10/12/26	Mon 11/9/26		
104		Projected Town vote for PS&B and full funding of proj	25 days	Tue 11/4/25	Mon 12/8/25		
105		**Module 6 - Detailed Design**	**250 days**	**Tue 11/3/26**	**Mon 10/18/27**		
106		DD	25 wks	Tue 11/3/26	Mon 4/26/27	102	
107		CD	25 wks	Tue 4/27/27	Mon 10/18/27	106	
108		**Module 7 - Construction**	1 day?	Mon 11/11/24	Mon 11/11/24		
109		Bidding / Procurement	20 wks	Tue 10/19/27	Mon 3/6/28	107	
110		Construction	104 wks	Tue 3/7/28	Mon 3/4/30	109	



Project: 20251217 Essex ES Pro
Date: Wed 12/17/25

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Progress
Manual Progress

EDUCATIONAL VISIONING WORKSHOP NOTES

SECTION 3.1.8.7









ESSEX ELEMENTARY SCHOOL

Educational Visioning Report

November 2025

Manchester Essex Regional School District

MLP INTEGRATED DESIGN

TABLE OF CONTENTS

Executive Summary
- Overview ..... Page 2
- Guiding Educational Principles ..... Page 2
- Developmental Considerations & Impacts ..... Page 2
- Access, Engagement, & Belonging ..... Page 3
- Teaching, Learning, and the Vision of the Future School ..... Page 3
- Design & Physical Space Implications ..... Page 3
- Community Vision ..... Page 3

Launch & Priority Mapping
- Part 1 – Educational, Architectural, and Community Priorities ..... Page 4

Visioning 1
- Part 1 – Understanding the Learner ..... Page 9
- Part 2 – Grade Configuration Considerations ..... Page 13
- Part 3 – Spaces That Support Students ..... Page 17

Visioning 2
- Part 1 – Learning That Sticks ..... Page 26
- Part 2 – Strategic Plan in Action ..... Page 27
- Part 3 – Learning Environments in Action ..... Page 29
- Part 4 – Strategic Plan in Action (Revisited) ..... Page 48
- Part 5 – Closing Reflection ..... Page 50

Sign-In Sheets ..... Page 51

EXECUTIVE SUMMARY

In the fall of 2025, members of the Manchester Essex Regional School District participated in a series of Educational Visioning sessions facilitated by Educational Planner Mike Pirollo and Educational Consultant Paul White from MLP Integrated Design, Inc., in collaboration with JCJ Architecture. Each session was part of a collaborative process designed to inform the Essex Elementary School Feasibility Study and pre-design process. Through interactive workshops and reflective discussions, participants engaged in a step-by-step process aimed at capturing high-level thinking around the following:

- Educational, Architectural, and Community Priorities
- Developmental Needs of PreK–5 Learners
- Vision of Teaching and Learning, Including Practices, Strategies, and Structures
- Vision of Learning Environments that Best Support Student Growth

Through this process, participants shared rich insights about what students need to thrive, how teaching and learning can best support their development, and how the school's physical environment can be designed to align with these goals. The following summary captures the key outcomes and themes that emerged, reflecting the community's aspirations for an educational experience that is responsive, inclusive, and future-focused.

Guiding Educational Principles

The guiding principles emerging from this visioning process emphasize:

1. Students as the Doers and Leaders of Their Own Learning
2. A Learning Environment that Captures and Supports the Energy of Children
3. Flexibility in Space and Practice to Support Collaboration and Engagement
4. A School that Serves as the Hub of the Essex Community
5. Seamless Connections Between Indoor and Outdoor Learning
6. Spaces that Promote Comfort, Belonging, and Accessibility for All Learners

Developmental Considerations & Impacts

Participants reflected deeply on the developmental characteristics of PreK–5 learners, emphasizing the need for environments that balance structure and independence, movement and focus, and social connection and quiet reflection.

They identified major shifts across the early childhood and elementary years, calling for varied and flexible spaces that respond to differences in readiness, regulation, and learning style. PreK and early elementary learners benefit from warm, nurturing environments scaled to their size and independence, while upper elementary students thrive when given opportunities for leadership, autonomy, and peer collaboration.

Movement, sensory regulation, and access to nature were identified as essential to supporting cognitive growth and emotional wellbeing. Participants emphasized that space should not limit engagement—

outdoor classrooms, small breakout areas, and calming zones are as critical to learning as traditional classrooms.

Access, Engagement, and Belonging

Stakeholders envisioned Essex Elementary as a community-centered school where learning extends beyond the classroom walls and across the full day. The facility should support before- and after-school enrichment, family and community gatherings, and integrated partnerships with local organizations such as the library, senior center, and Parks & Recreation. Participants underscored the importance of connection and continuity, valuing relationships that grow across years and across grade levels. Cross-age collaboration, buddy systems, and leadership roles for older students were seen as ways to foster belonging and a shared sense of community.

Teaching, Learning, and the Vision of the Future School

Across all sessions, participants described learning that "sticks" as hands-on, active, joyful, and relevant, learning that connects to real-world experiences and allows students to take ownership. Educators emphasized practices that promote curiosity, critical thinking, and creativity through collaboration, inquiry, and problem solving. The school should enable flexible teaching models, including team-based instruction, project-based learning, and small-group intervention, supported by adaptable spaces and shared professional areas for teacher collaboration. A future Essex Elementary School should celebrate curiosity and encourage risk-taking within a safe, supportive, and inclusive environment.

Design & Physical Space Implications

Participants envisioned a building that reflects Essex's character and values—inviting, connected to nature, and sized for community. Key design implications include:

- Flexible learning neighborhoods that support varied groupings, collaboration, and movement
- Transparency and visibility to promote safety, connection, and shared learning
- Calming and sensory-friendly spaces integrated throughout the school for all learners
- Strong indoor-outdoor connections, with direct access to outdoor learning and play
- Community-scaled gathering spaces for small group, large group, and whole-school events
- Environments that foster comfort, pride, and ownership for students, staff, and families

Community Vision

Ultimately, the community envisions Essex Elementary School as a joyful, flexible, and future-ready learning environment, one that celebrates the unique energy of children, strengthens community identity, and honors the developmental journey of every learner.

The future Essex Elementary will be a hub for learning and connection, designed to nurture curiosity, confidence, and belonging. It will reflect a shared belief that students learn best when they are engaged, supported, and inspired by an environment that grows with them, academically, socially, and emotionally.

Launch & Priority Mapping Overview

On September 16, 2025, members of Manchester Essex Regional School District attended a meeting with Educational Planner Mike Pirollo from MLP Integrated Design, Inc., along with JCJ Architecture. This meeting was part of the visioning effort for the Essex Elementary School building project. The goal of the meeting was to identify educational, architectural, and community goals and priorities.

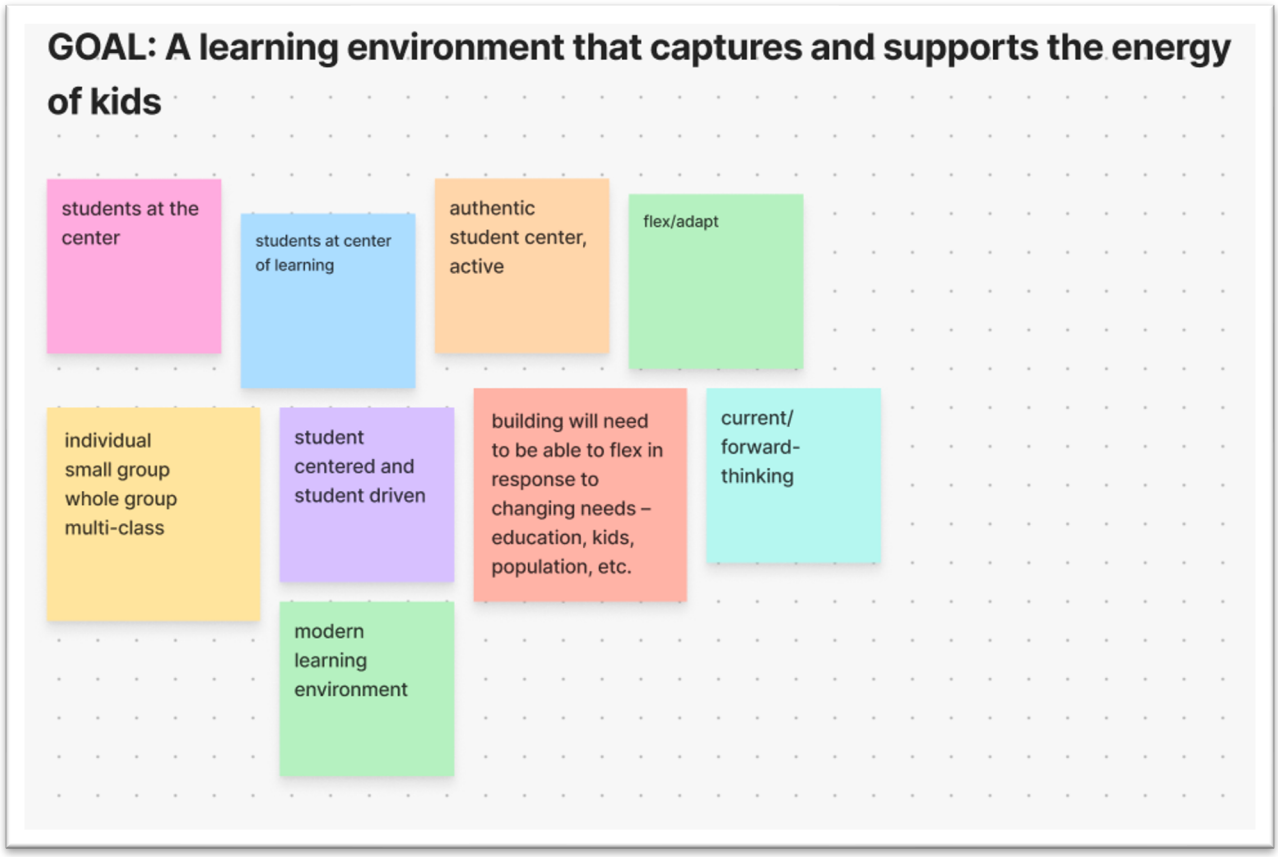
Part 1 - Educational, Architectural, and Community Priorities

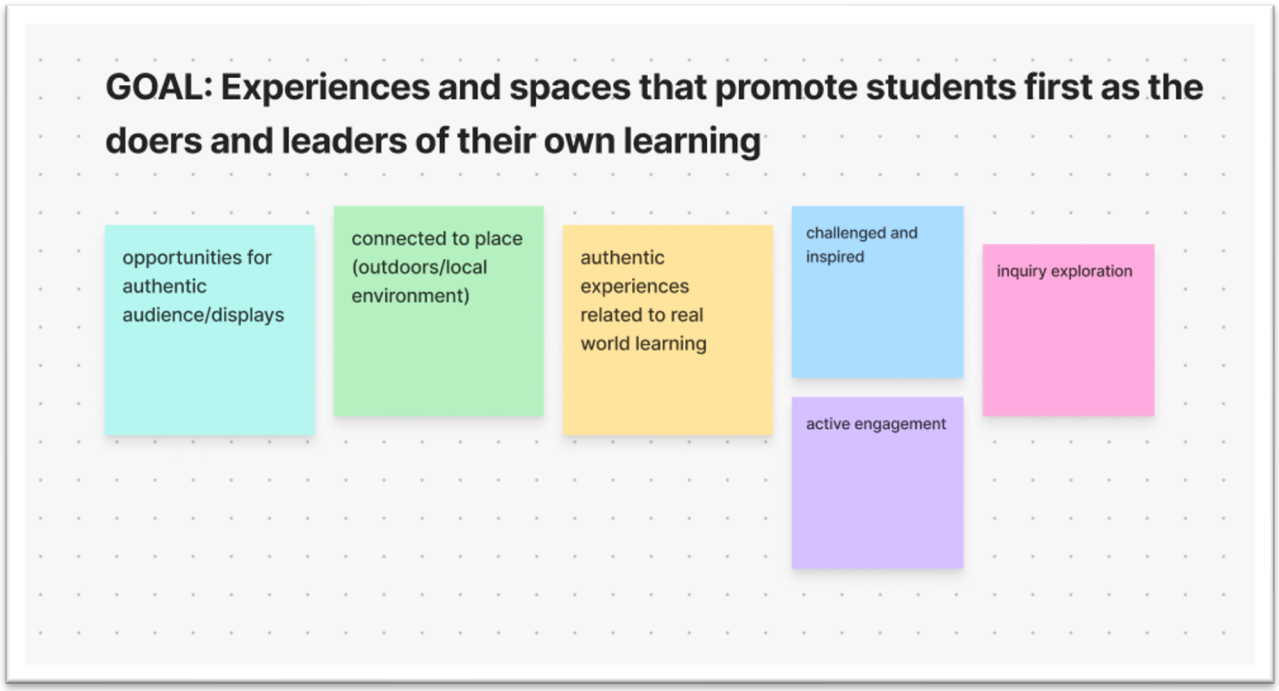
In Part 1, participants were asked to identify educational, architectural, and community priorities on individual sticky notes. After sharing their individual responses, participants grouped and categorized like-ideas to identify overarching project goals and considerations as documented below:

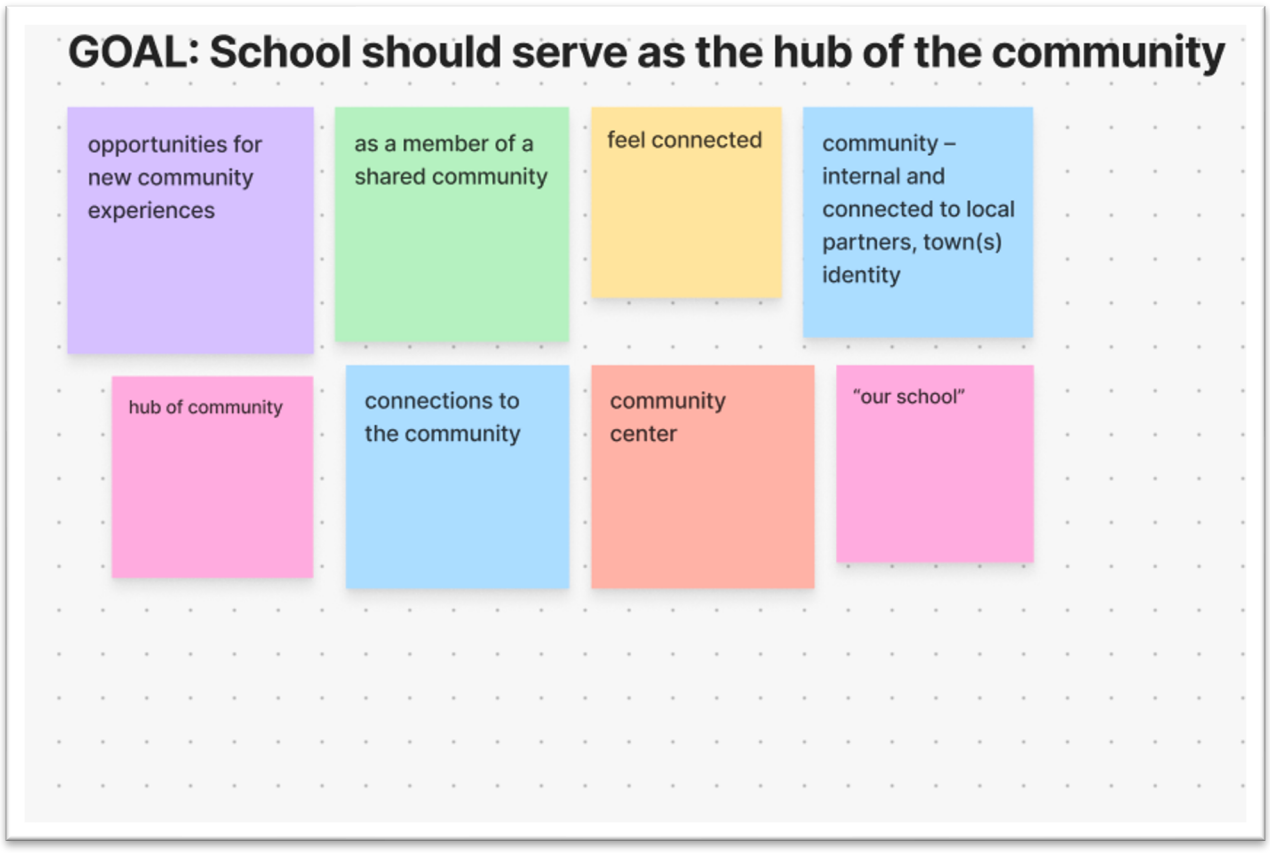
PROJECT GOALS:

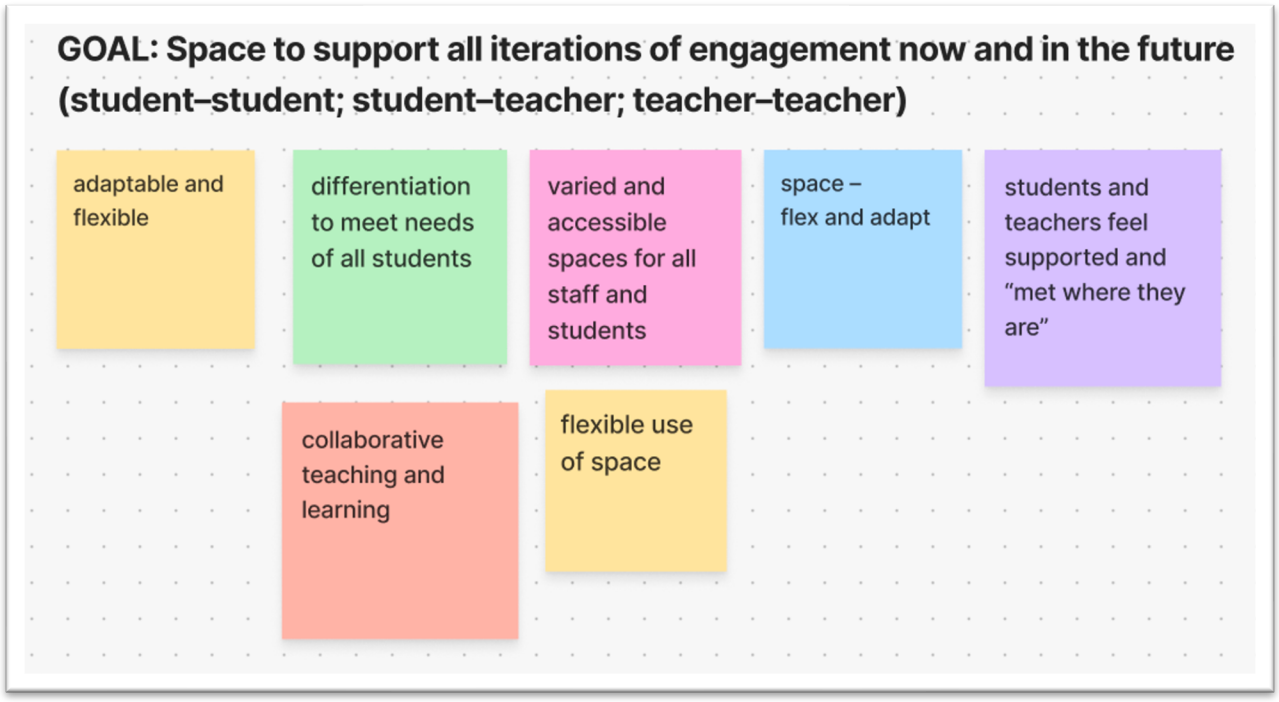
- Experiences and spaces that promote students first as the doers and leaders of their own learning
- A learning environment that captures and supports the energy of kids
- Space to support all iterations of engagement now and in the future (student–student; student–teacher; teacher–teacher)
- School should serve as the hub of the community
- Facility should support extensions of learning, including before and after school opportunities
- A shared large-scale school community for parents and students to experience small group, large group, and whole school gathering

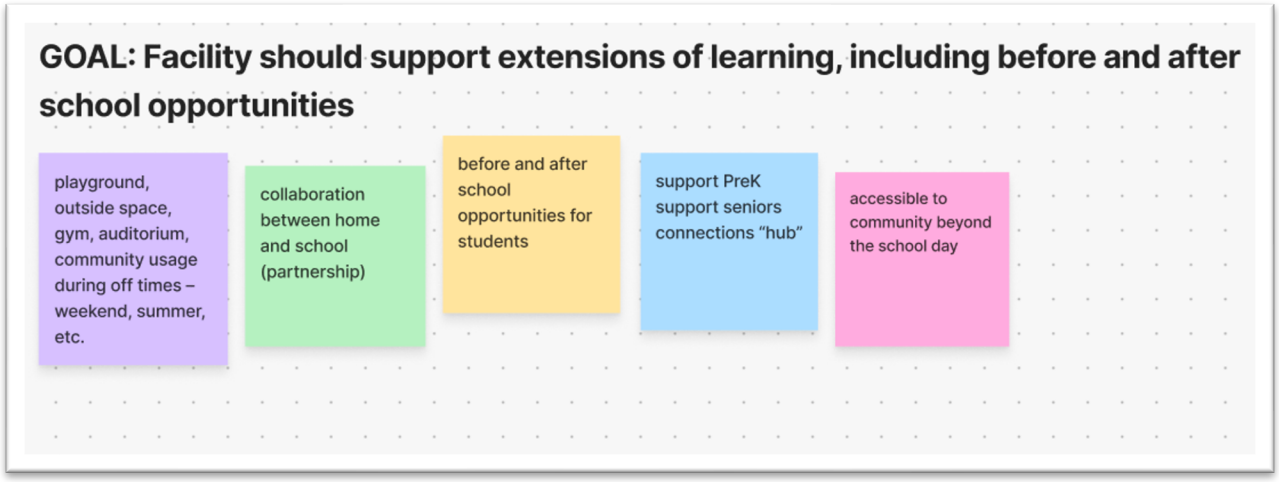
Individual responses that fall under each of these overarching project goals are documented in the pages that follow.

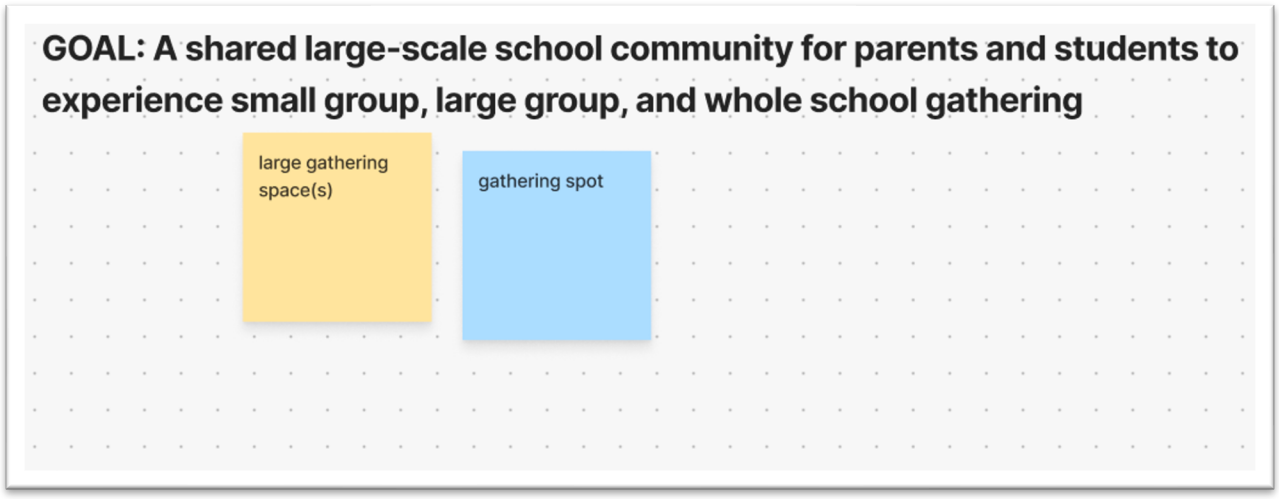

GOAL: A learning environment that captures and supports the energy of kids
students at the center
students at center of learning
authentic student center, active
flex/adapt
individual small group whole group multi-class
student centered and student driven
building will need to be able to flex in response to changing needs – education, kids, population, etc.
current/ forward-thinking
modern learning environment


GOAL: Experiences and spaces that promote students first as the doers and leaders of their own learning
opportunities for authentic audience/displays
connected to place (outdoors/local environment)
authentic experiences related to real world learning
challenged and inspired
inquiry exploration
active engagement


GOAL: School should serve as the hub of the community
opportunities for new community experiences
as a member of a shared community
feel connected
community – internal and connected to local partners, town(s) identity
hub of community
connections to the community
community center
"our school"


GOAL: Space to support all iterations of engagement now and in the future (student–student; student–teacher; teacher–teacher)
adaptable and flexible
differentiation to meet needs of all students
varied and accessible spaces for all staff and students
space – flex and adapt
students and teachers feel supported and "met where they are"
collaborative teaching and learning
flexible use of space


GOAL: Facility should support extensions of learning, including before and after school opportunities
playground, outside space, gym, auditorium, community usage during off times – weekend, summer, etc.
collaboration between home and school (partnership)
before and after school opportunities for students
support PreK support seniors connections "hub"
accessible to community beyond the school day


GOAL: A shared large-scale school community for parents and students to experience small group, large group, and whole school gathering
large gathering space(s)
gathering spot

Visioning 1 Overview

On September 22, 2025, members of Manchester Essex Regional School District attended a meeting with Educational Planner Mike Pirollo and Educational Consultant Paul White from MLP Integrated Design, Inc., along with JCJ Architecture. This meeting was part of the visioning effort for the Essex Elementary School Building Project. The session focused on understanding the developmental needs of PreK–5 learners and beginning to envision the spaces, structures, and experiences that will best support students in a future Essex Elementary School.

The meeting centered around the following goals:

- Understanding the developmental needs of PreK–5 learners
- Exploring grade configuration options and their implications
- Envisioning spaces that best support students' growth and learning

Part 1 – Understanding the Learner

In Part 1, participants explored the developmental characteristics of PreK–5 students. Through cross-grade discussions, they identified key academic, social-emotional, and physical milestones and considered how these shifts shape effective teaching, organization, and learning space design.

The responses from the whole-group wrap-up and learner profile charts are documented below.

- Integrating more movement into daily learning
- Major differences among Pre-K-5 so space and experience should be different
- Integration of SEL throughout day; being able to respond in real time – continuum of available space
- Need for flexibility in practice, space, and group size
- Variety of active and interactive learning
- Outside academic and movement spaces to support more choice
- Access to flexible spaces or outdoor space can't be cumbersome
- Need a feeling of warmth and comfort
- Developmentally appropriate scaled furniture and features – support independence
- Bring the outside in
- Use of glass and transparency for supervision and learning
- Showing students what is theirs to access

SOCIAL and EMOTIONAL

What are the most significant changes they experience?

GRADES PreK-K

Separation from family/ caregiver

making friends

following rules/expectations

managing emotions

problem solving

GRADES 1-3

testing authority/ limits

Changing structure of friendships

academic anxiety

adult guidance/support managing emotions + problem solving

GRADES 4-5

Competitive but cooperative

dating/relationships

hormonal - quick changing emotions

Integration of SEL across the entire School day!

Multi-tiered system of support for SEL

What supports, structures, and experiences can help them navigate this transition successfully?

warm, welcoming fun environment

learning through play - singing
dancing
hands-on experiences

Opportunities for different types of groupings
- large group
- small group
- partners
- individual

PHYSICAL

What are the most significant changes they experience?

- needs movement opportunities
- short amt. sitting
- reduce fine-motor

- Copying from board is hard
- move from lots of movement to more compact
- body control
- play hard/work hard
- low stamina
- short movement breaks

- Copying from board gets easier
- big muscles/larger motor movement developing quickly
- better with tools
- snacks and rest periods
- pushing physical limits
- roughhousing



What supports, structures, and experiences can help them navigate this transition successfully?

- breaks in learning
- variety of types of learning experiences (tactile, auditory etc)
- hands-on experiences - authentic learning
- various ways to present information
- variety of scale of activities
- mutiple seating options/spaces
- different types of play spaces for variety of ages and physical skills.

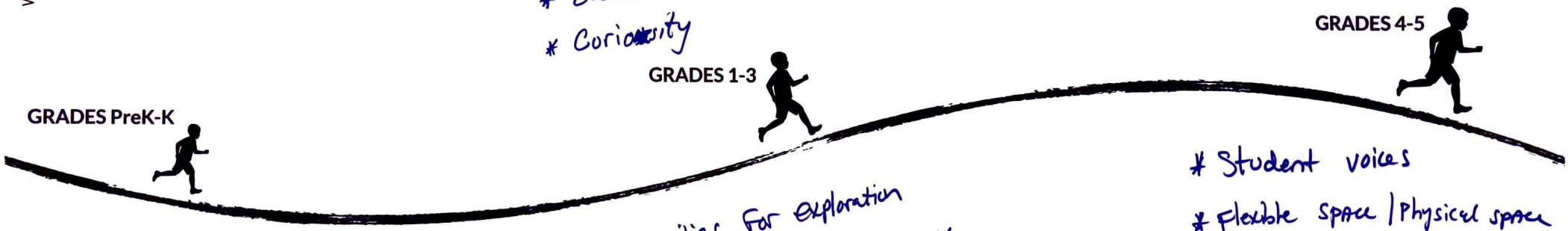
ACADEMIC

What are the most significant changes they experience?

* Play Based
* Gross Motor play

* Structed hands on learning
* tools -vs- toys
* Coriosity

* AWARness - bigger picture worry
* Structur supports learning



What supports, structures, and experiences can help them navigate this transition successfully?

* Variety of options/ Intentional space

Outdoor learning space →

* Opportunities for exploration
* Balance between Lg + Small spaces

* Student voices
* Flexible space / Physical space
* Varied learning spaces

Part 2 – Grade Configuration Considerations

In Part 2, MLP presented several possible grade configuration models for the project. Participants rotated through stations to examine each option, considering its developmental alignment, benefits, and challenges. A gallery walk and group discussion followed, identifying key themes, priorities, and tradeoffs.

The collective feedback from these discussions is summarized below, with items in blue indicating ideas that resonated across groups.

Enrollment Scenario 1: *Town of Essex – K-3 + Pre-K (Essex 4th and 5th at MM) – 165 students*

Developmental Fit: *How well does this grade configuration support the developmental needs of students (social, emotional, academic, and physical?*

- Focus on early childhood' developmentally appropriateness
- One subset of students having an additional transition – not developmentally supported

Advantages: *What are the potential benefits or strengths of this configuration for students, educators, and the school community?*

- Smaller population
- Start education in neighborhood school
- Teaming and collaboration for Grades 4 & 5 teachers
- Access to programming for 4th / 5th – fields, Parks & Rec
- More opportunity to break student dynamics

Challenges: *What potential difficulties, concerns, or drawbacks might arise with this configuration?*

- Transition of 4th / 5th into existing culture / cohort at MMES
- Essex students have additional transition
- Teacher rapport building with Grade 4
- Parent buy-in
- Smaller population
- Too many young – missing older voices
- Many 4th / 5th together – increase in conflicts
- Families of elementary students spilt across sites
- Parent / family culture – having to join MMES PTO, etc.
- Essex as "outsiders" emphasized
- Teacher culture for those that have to move
- Will require focused efforts on culture
- Higher teacher cost (impact) for Special Education – specialized program

Enrollment Scenario 2: *Town of Essex – K-5 + Pre-K (current configuration) – 250 students*

Developmental Fit: *How well does this grade configuration support the developmental needs of students (social, emotional, academic, and physical?*

- Builds community and sense of place
- Small size
- Community keeps staff & families
- Keeps kids and relationships for 6 years (+ 2 Pre-K) – supports SEL
- Cross-grade opportunities

Advantages: *What are the potential benefits or strengths of this configuration for students, educators, and the school community?*

- Older students can support younger students
- Maintains regional agreement for district
- Families / comfort / familiar for local access
- Local community partners: library, shipbuilding, senior center
- Family engagement
- Community hub
- History (traditions)
- Pre-K-5 in 1 location
- Preference of community for neighborhood school
- Maintaining EES staff community / family

Challenges: *What potential difficulties, concerns, or drawbacks might arise with this configuration?*

- "Bubble" classes
- Outdoor structures for wide range Pre-K-5 and space
- Distance from other district schools
- District Sped programs – staff sharing
- Specialists (shared) drive schedule

Enrollment Scenario 3: *District-Wide – K-5 + Pre-K (expansion at Manchester Memorial) – 515 students*

Developmental Fit: *How well does this grade configuration support the developmental needs of students (social, emotional, academic, and physical?*

- Social connections with expanded geographic area
- Maintains same school for 6 years – supports SEL
- Size impacts (?) on all ages

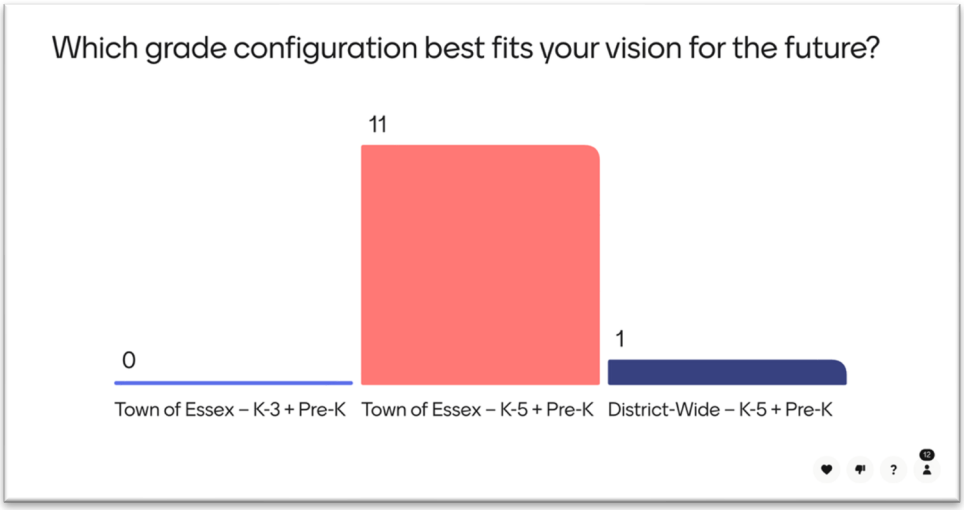
Advantages: *What are the potential benefits or strengths of this configuration for students, educators, and the school community?*

- Economy of scale
- Peer collaboration (staff and students)
- Equity – everyone has the same stuff and experience
- Students already familiar with each other before MS transition
- Single connected campus – upper and lower school
- Minimizes transitions
- No school change needed for specialized Sped
- MERSD culture-building for all

Challenges: *What potential difficulties, concerns, or drawbacks might arise with this configuration?*

- Lots of students currently ride their bike. They don't like the bus.
- Melding cultures / philosophies
- Parent buy-in
- No neighborhood school
- Another Memorial renovation
- Impact on Essex real estate market
- Impact on commute for some staff; traffic
- Community impact of site redesign
- Commuting distance for Essex residents
- Potential staff reduction
- Limited flexibility for growth options

Finally, participants used Mentimeter to indicate their preferred configuration and discussed the results (shown below). The conversation emphasized the importance of alignment between grade configuration, developmental needs, and the district's goals for student success, belonging, and community.



Part 3 – Spaces That Support Students

In Part 3, participants examined how school spaces can best support students' academic, social, and emotional growth. Using precedent images and small-group discussion, participants explored how the environment can address key developmental needs, including movement and sensory regulation, social connection, self-regulation, and a sense of belonging.

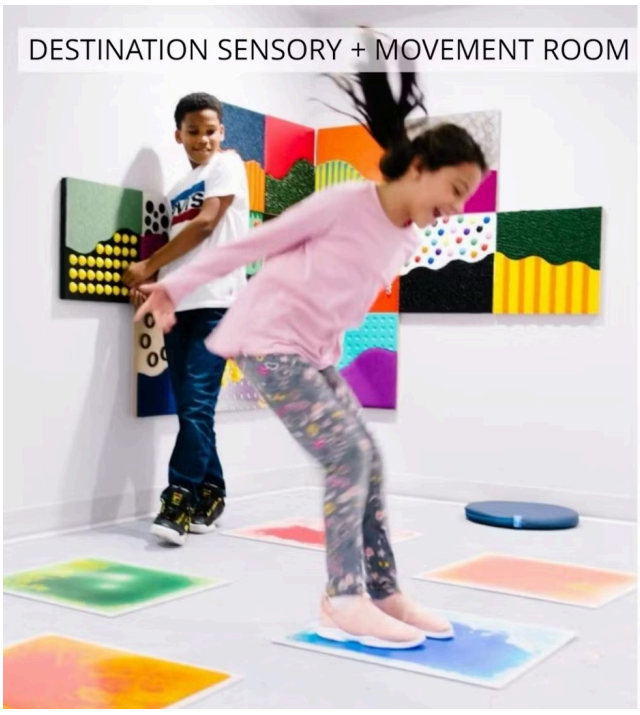
Participants reacted to each photo with a heart if they felt like spaces supported development and their future vision, a question mark if spaces somewhat fit their future vision, or a thumbs down if spaces didn't fit their future vision. Then, the session concluded with groups brainstorming types of spaces that could meet these needs in a future Essex Elementary School. Their ideas and the precedent images with reactions are documented in the following pages.

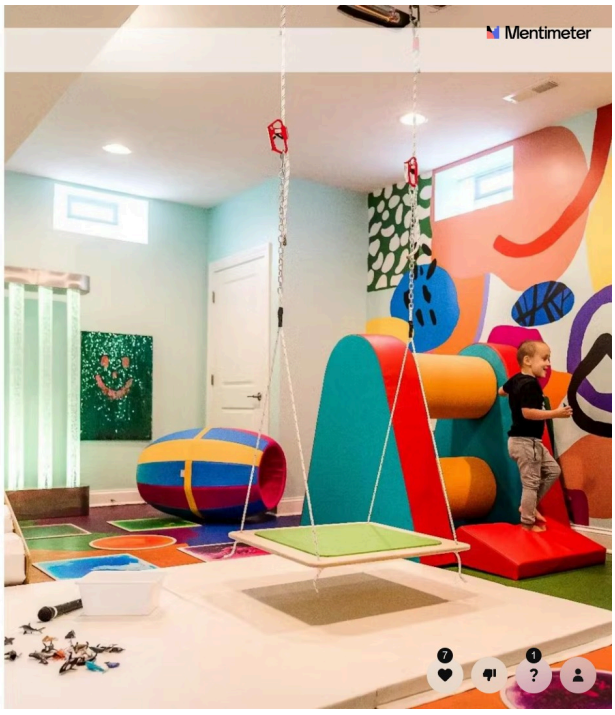
- Spaces that are quiet and calming
- Calming space in & out
- Calming spaces in classes as important as calming spaces elsewhere
- Visibility to outdoors – connection to outside / nature
- More age inclusive outdoor space
- Indoor & outdoor motor opportunities that meets developmental ranges
- Bring the outside in (not sand!)
- Celebration of students / connection to community & Essex culture
- Collaboration spaces support learning (used with intention and purpose)
- Sensory space – specific room
- Destination for movement / sensory experiences
- Sensory movement options / spaces, especially for older students
- Sensory path
- Alternative dining – varied table sizes
- Quiet dining space / varied options
- Porch
- Neighborhood spaces
- Break out neighborhood outside classrooms for partnering classes on science, projects
- Sliding doors between classes with middle shared space
- Small group / intervention spaces near classrooms
- Visibility into shared spaces
- Avoid places where students can hide and not be visible
- Stage / café / gym configuration with non-traditional café seating options
- Make use of "passage" space for SEL
- Lots of light and glass

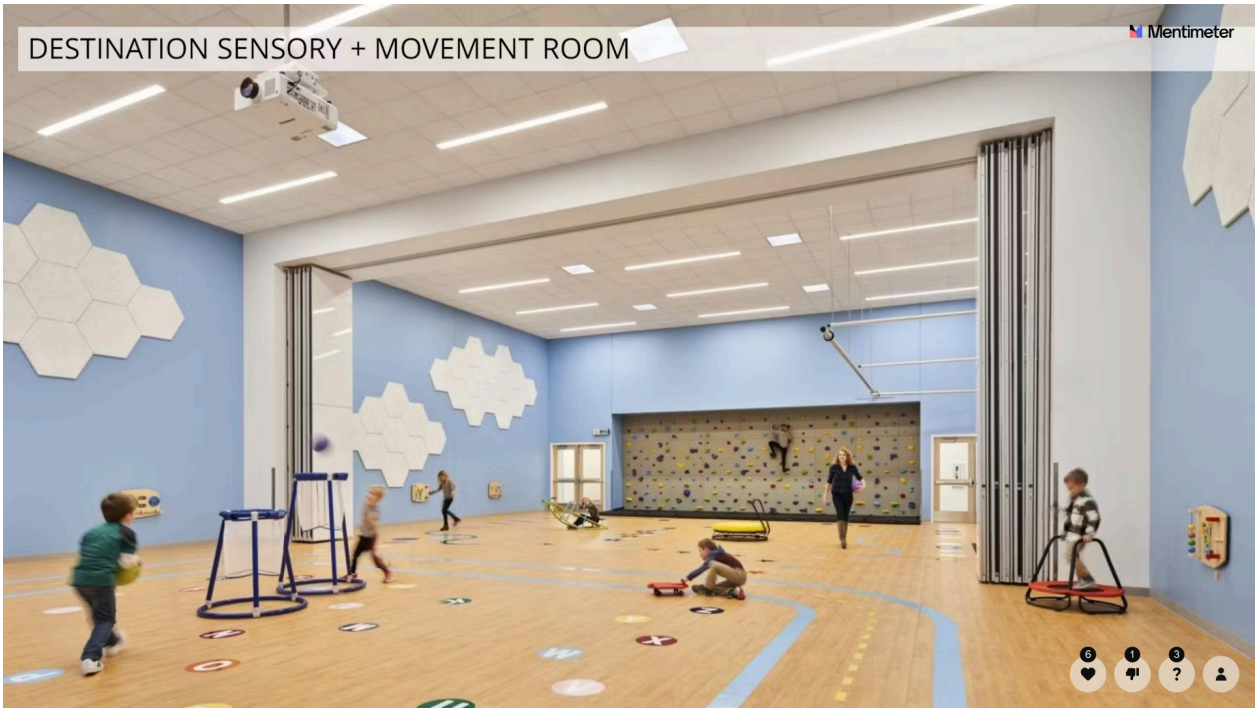
Mentimeter

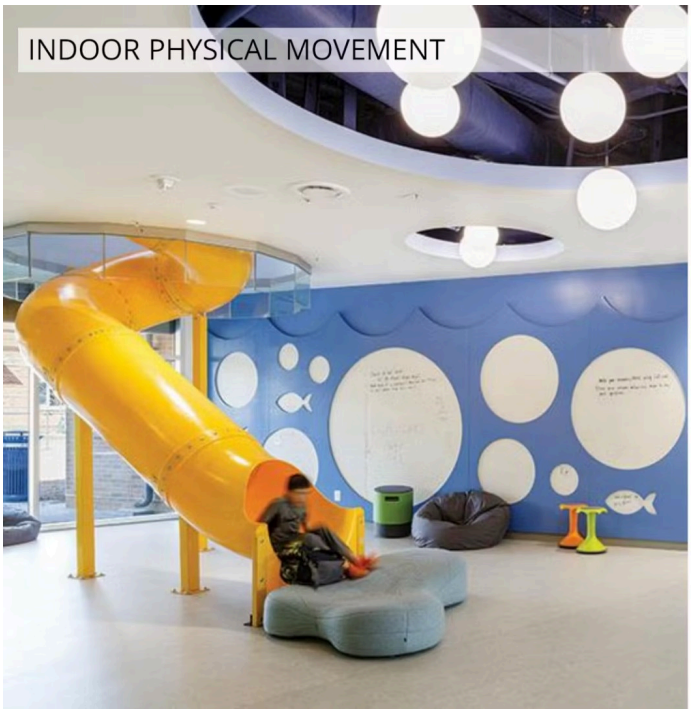
SPACES THAT SUPPORT STUDENTS

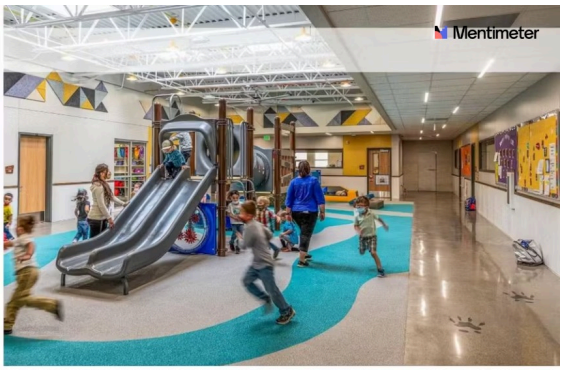
MOVEMENT + SENSORY NEEDS

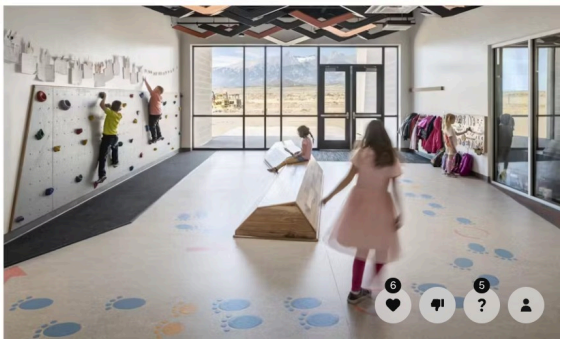





DESTINATION SENSORY + MOVEMENT ROOM
Mentimeter
6
1
3


INDOOR PHYSICAL MOVEMENT


Mentimeter


6
5


OUTDOOR PHYSICAL MOVEMENT
Mentimeter
11


SHARED COMMON SENSORY EXPERIENCES
Mentimeter
6
5


SHARED COMMON SENSORY EXPERIENCES


Mentimeter
3
5
3


OUTDOOR SENSORY EXPERIENCES


Mentimeter


3
7

Mentimeter

SPACES THAT SUPPORT STUDENTS

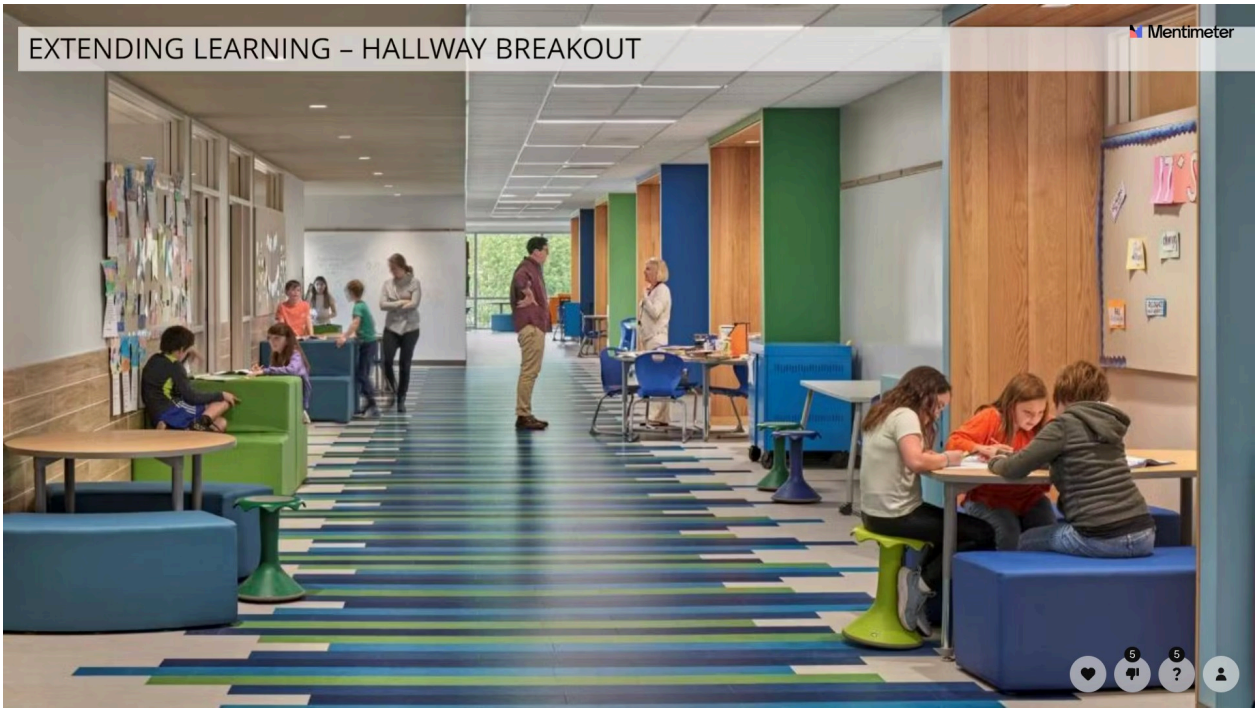
SOCIAL SKILLS + PEER INTERACTION

Mentimeter

EXTENDING LEARNING – PORCH BREAKOUT

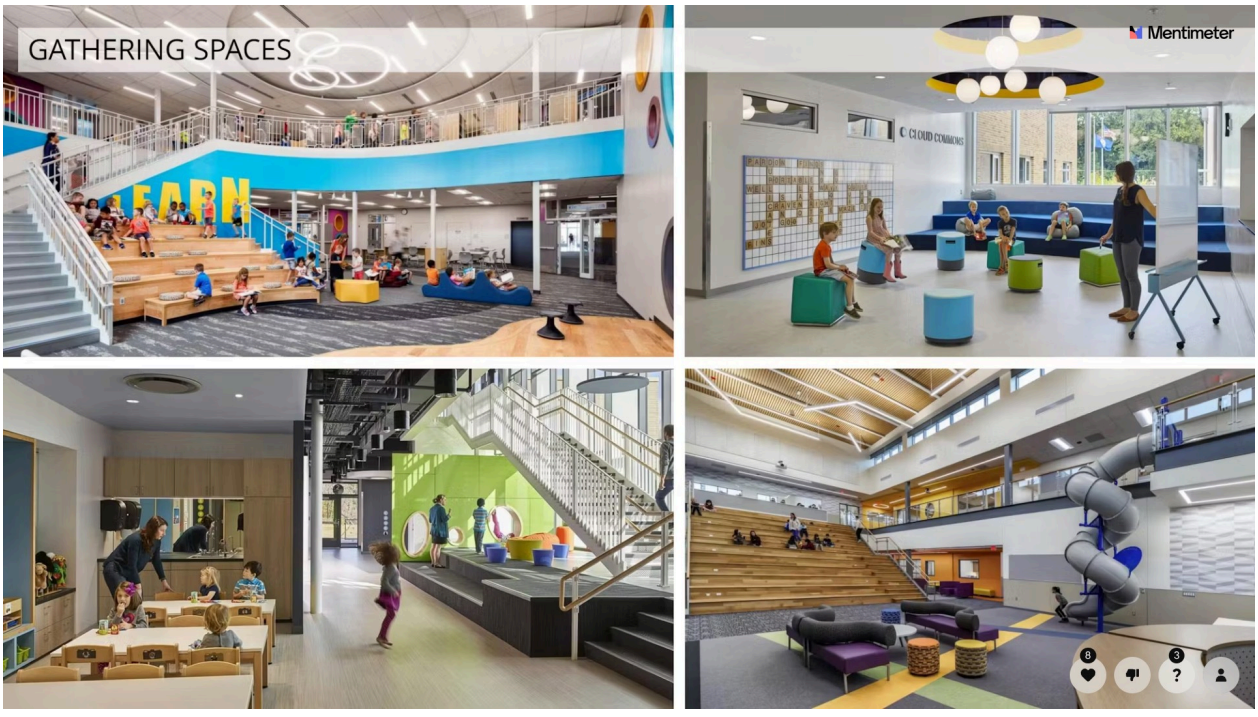





EXTENDING LEARNING – HALLWAY BREAKOUT
Mentimeter
5
5


EXTENDING LEARNING – NEIGHBORHOOD COMMONS
Mentimeter
8
3


EXTENDING LEARNING – NEIGHBORHOOD COMMONS
Mentimeter


GATHERING SPACES
Mentimeter

Mentimeter

SPACES THAT SUPPORT STUDENTS

SELF REGULATION
+ EMOTIONAL GROWTH





Visioning 2 Overview

On October 22, 2025, members of Manchester Essex Regional School District attended the second visioning session for the Essex Elementary School Building Project, facilitated by Educational Planner Mike Pirollo and Educational Consultant Paul White from MLP Integrated Design, Inc., with JCJ Architecture. This session focused on connecting teaching, learning, and student experiences with the design of learning spaces.

The meeting centered around the following goals:

- Reflect on current instructional practice using the district's Strategic Plan
- Explore how space types and design features can support desired learning experiences

Part 1 – Learning That Sticks

In Part 1, participants began by reflecting on moments when learning truly "stuck" for themselves or their students. They identified key descriptors that make learning meaningful and shared them on a "*What We Value in Learning*" wall. This created a shared understanding of what effective, engaging learning looks like.

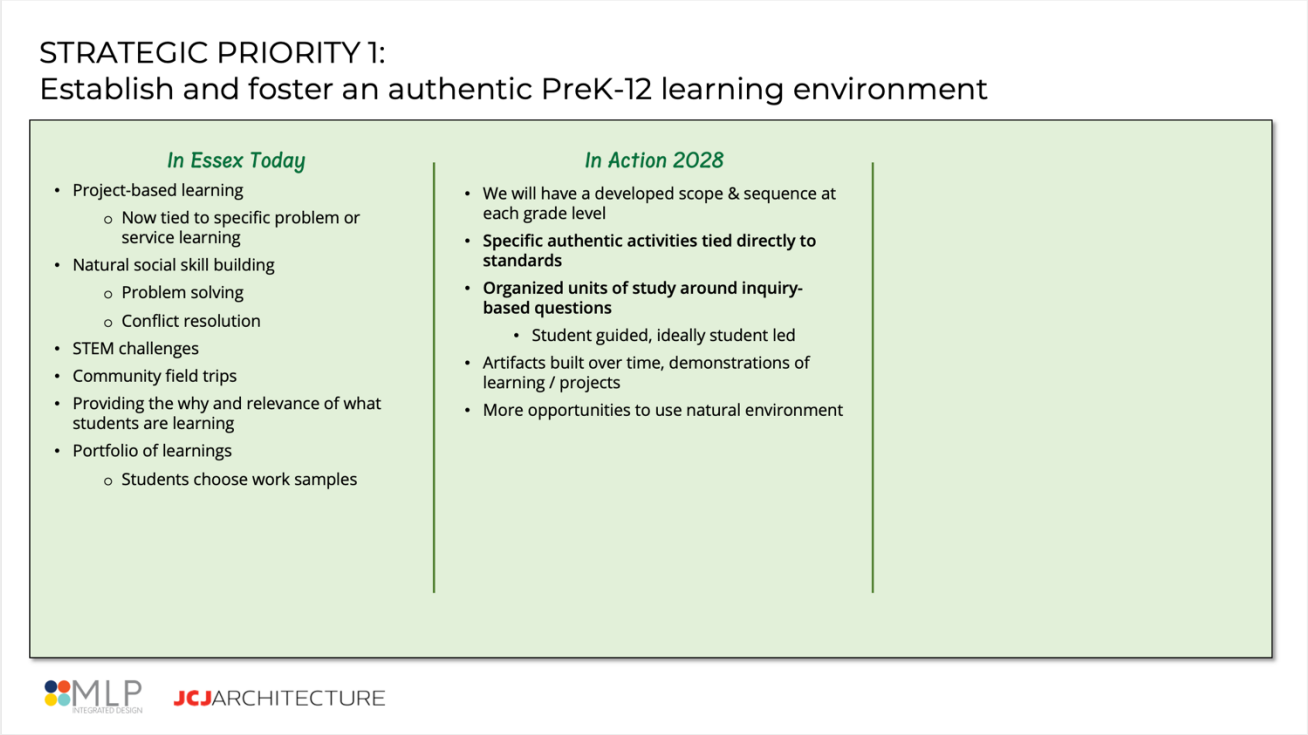
The responses from the *What We Value in Learning* chart is documented below. Please note, numbers in parenthesis signify the number of times a similar idea was made.

- Hands-on activities (4)
- Students helping each other (3)
- Whole class discussion and sharing ideas (2)
- Relationship building (2)
- Motivation / engagement (2)
- Connections to other learning or experiences (2)
- Fun (2)
- Cooperative learning (2)
- Creative
- Team building activities
- Whiteboard work
- Comparing strategies
- Was connected to current, real-world events
- Used knowledge and experiences many years later
- Kids struggled; it was hard but rewarding
- Show learning in different ways
- Choice
- Students taking ownership of their learning (the transfer and expansion)
- Outside in nature
- Active
- Relevant – solving a real problem
- Low-stakes, no pressure
- Data collection and visualization
- Whole-class participation
- Quick, easy
- Inviting space
- Natural light
- Appropriate seating

Part 2 – Strategic Plan in Action

In Part 2, participants worked in small groups to connect the district's Strategic Plan to classroom experiences. Each group documented how a priority is currently realized and how it might look in the final year of the District Improvement Plan, identifying gaps between current practice and desired outcomes.

The responses from the Strategic Plan priority charts are documented below.



STRATEGIC PRIORITY 2:
Integrate social-emotional learning into all aspects of the school day

In Essex Today

- Greet by name at door
- **Morning meetings / school meeting**
- RULER tools:
  - Chart how we want to feel
  - Mood meter
- **Calming spaces in class / school**
- Access to school adjustment counselor
- Multi-year personal relationships, personal connection
- Integrate students' interests in learning
- **Responsive Classroom routines**
- Birthday shout-outs
- After-school clubs – connecting after school with different adults
- Consistent expectations of routines, behavior (model & practice, role-playing)
- Logical consequences
- Student Leadership Council

In Action 2028

- **Consistent vertical scope of skills / practices**
- **Integrating purposeful movement / activators**
- **Integrate SEL assessments and intervention into MTSS model**
- **SEL component on report card**
- Integrate SEL in all academics / specials
- Small group space (close to classroom – visible to have private conversations)
- Peer leaders for conflict resolution
- Accessible spaces to meet SEL needs
- Large group spaces for collaboration

MLP INTEGRATED DESIGN JCJARCHITECTURE

STRATEGIC PRIORITY 3:
Celebrate and nurture an inclusive and diverse school culture through UDL

In Essex Today

- **Differentiation**:
  - Small group
  - Manipulatives
  - Type / amount for showing learning
  - MTSS (support for students in inclusive setting)
  - Title 1
  - Flexible seating
- Choice
  - Groupings
  - Order of completion
  - How to show work
  - Choice in assignment

In Action 2028

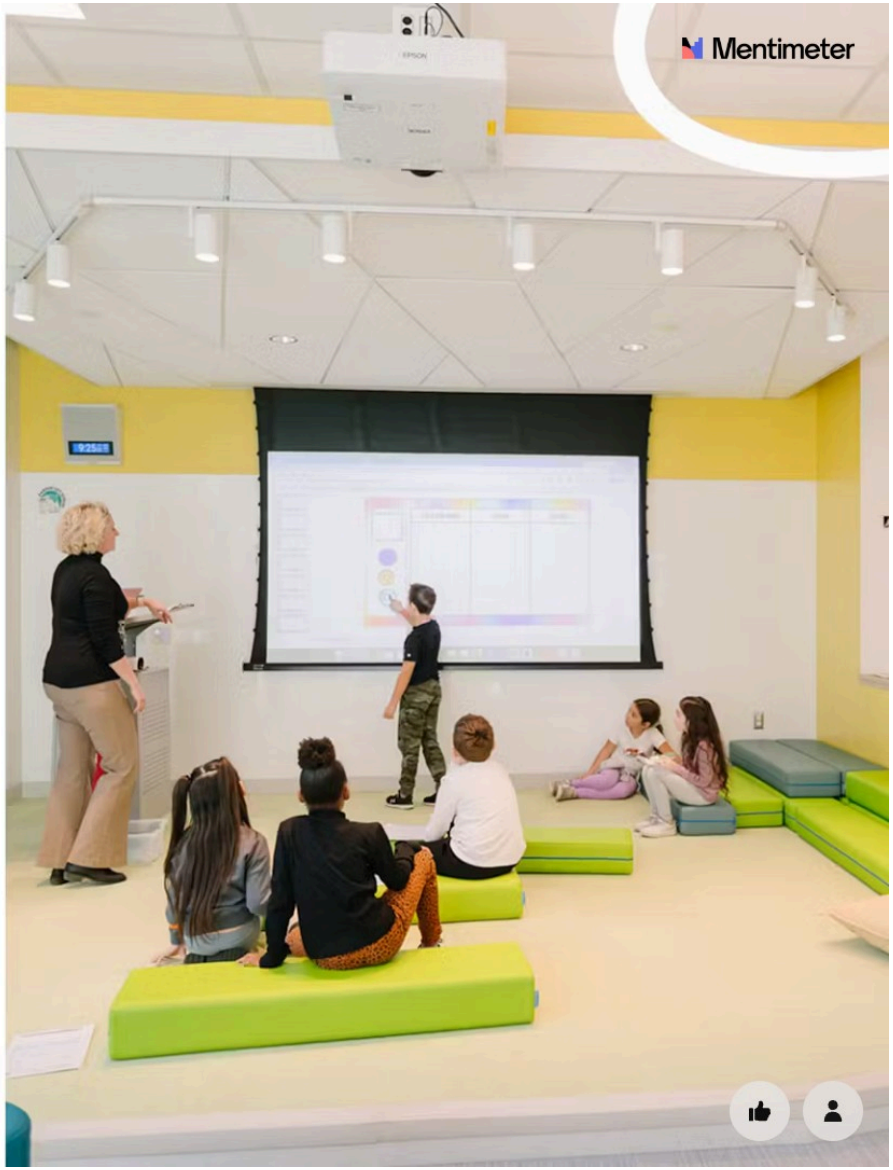
- Know the routines and expectations:
  - Group work
  - Partner work
  - Materials
- Small group spaces next to classrooms for support:
  - Minimize travel times
- Playground closer to lunch room = more time to play
- Flexible use of spaces
- Variety of spaces to meet students' needs (i.e. sensory)
- Programs / classes in the building with diverse learners:
  - SWING / RISE, PreK
  - World language classes
- Children are not stressed / anxious, better self-regulation

MLP INTEGRATED DESIGN JCJARCHITECTURE

Part 3 – Learning Environments in Action

In Part 3, participants explored how different types of spaces can support learning, collaboration, core curriculum, and student wellness. They reflected on which environments resonated most, what experiences they would enable for students, and which spaces felt essential for the future school. There responses to specific prompts are documented in the pages that follow.

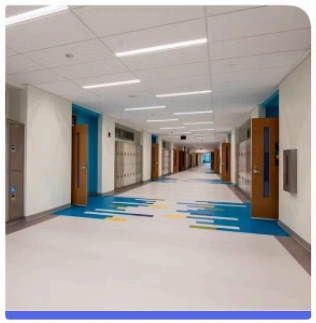
BUILDING ORGANIZATION



Mentimeter

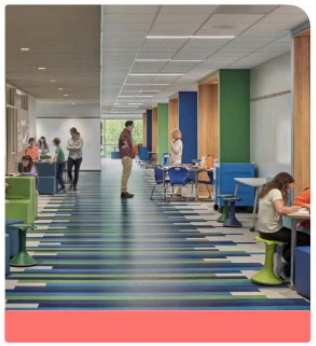
Which level of building organization feels right for MERSD students?

0



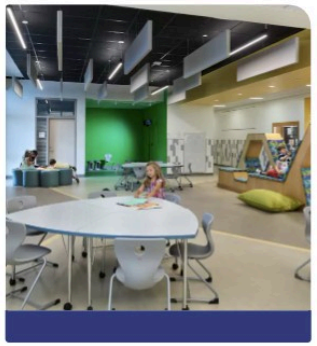
Traditional Corridor, No Breakout

1



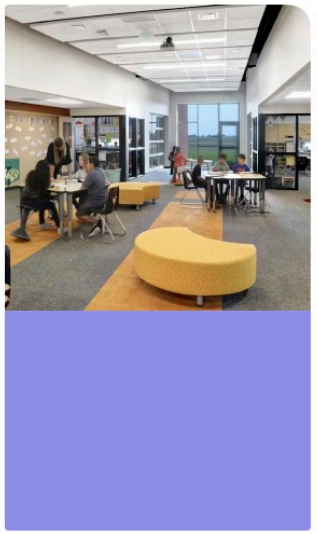
Small Corridor Breakout

1



Grouped Classrooms; Destination Breakout

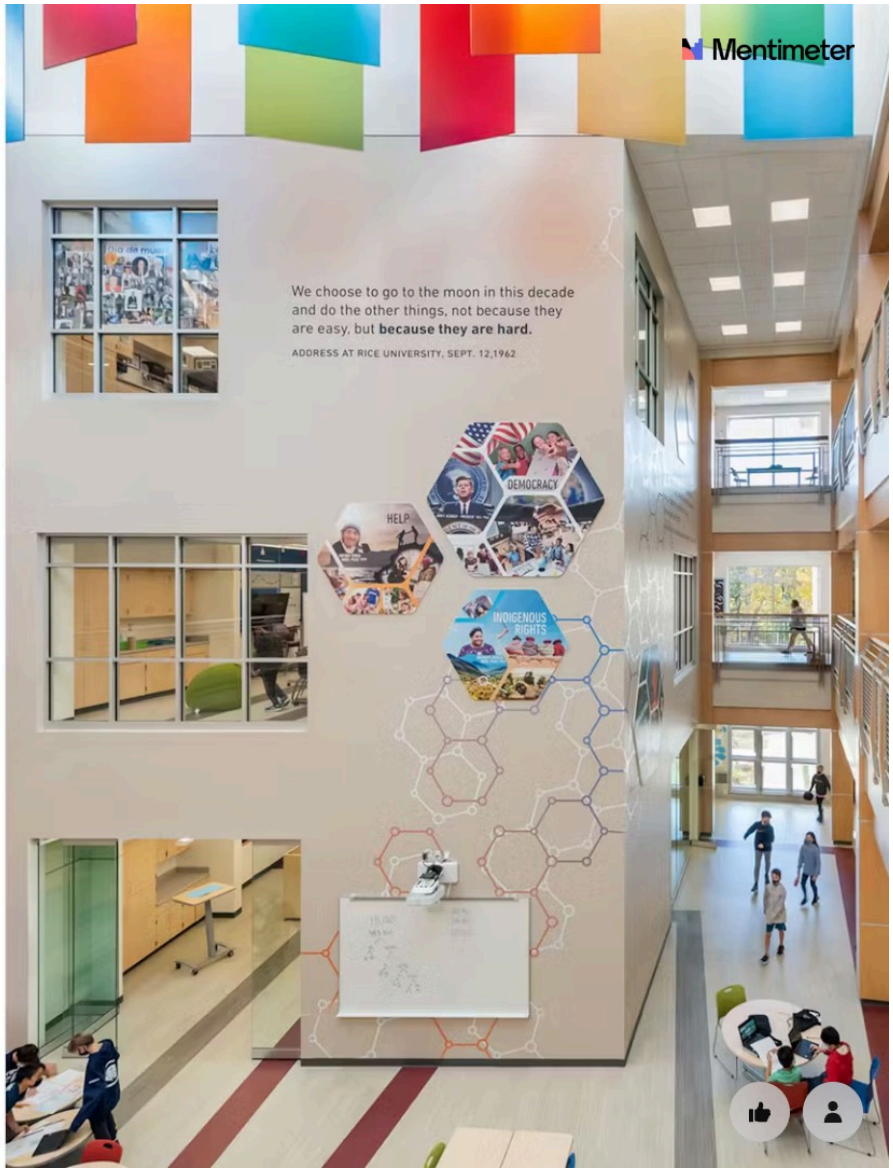
9



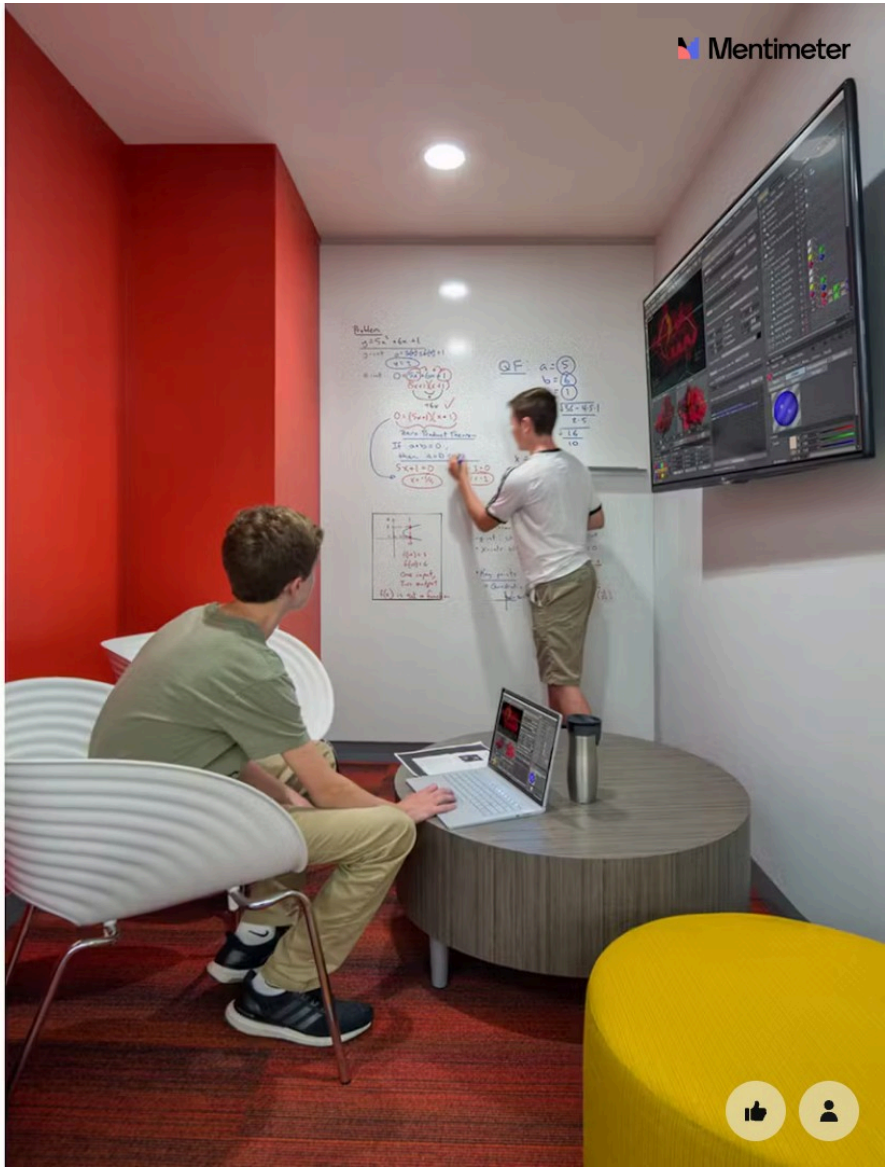
Small Learning Communities

11

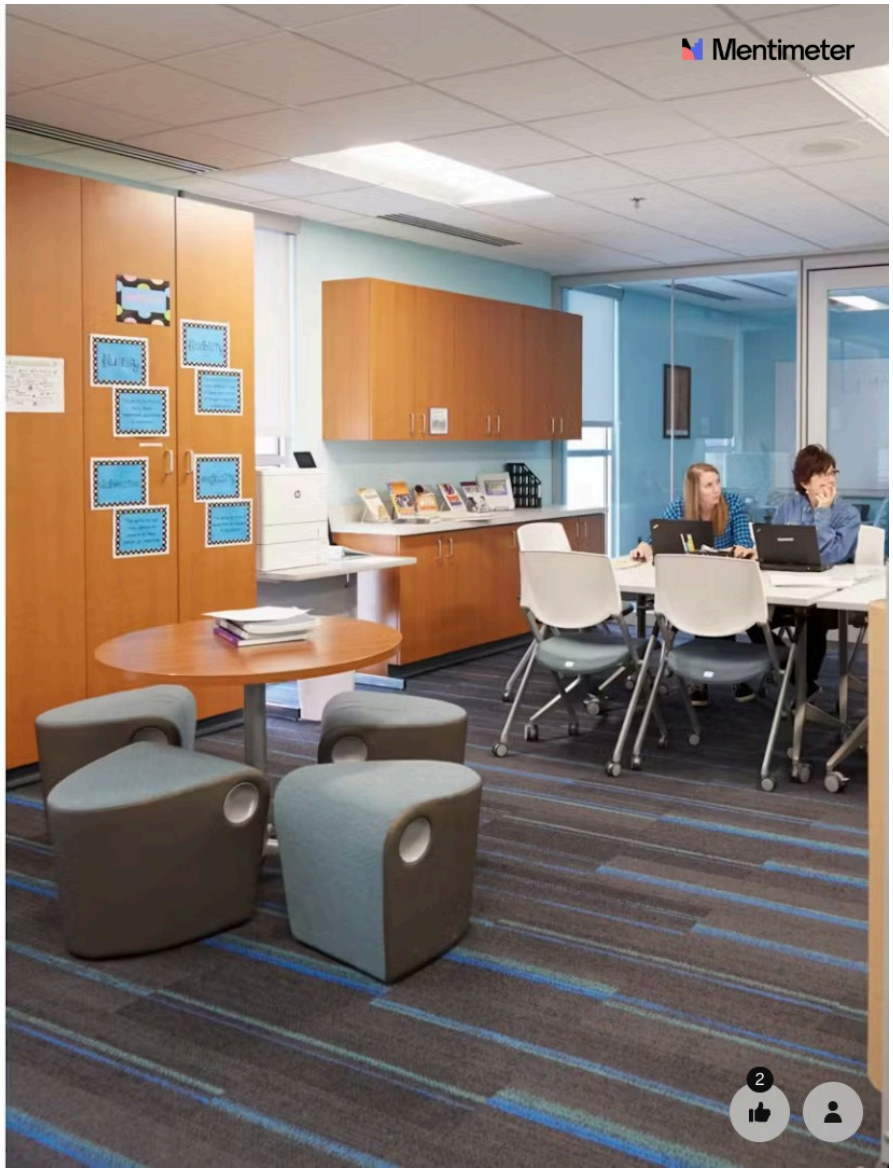
COLLABORATION + INTERACTION



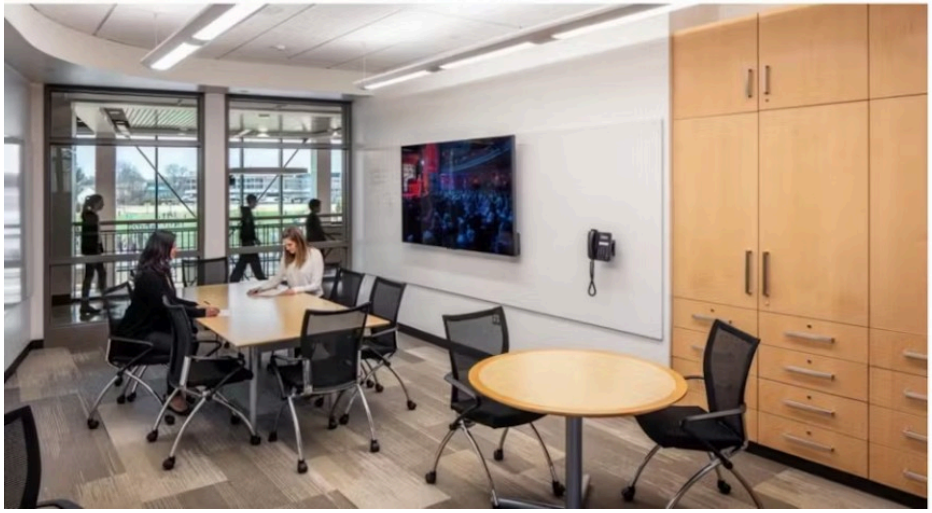
SMALL GROUP COLLABORATION

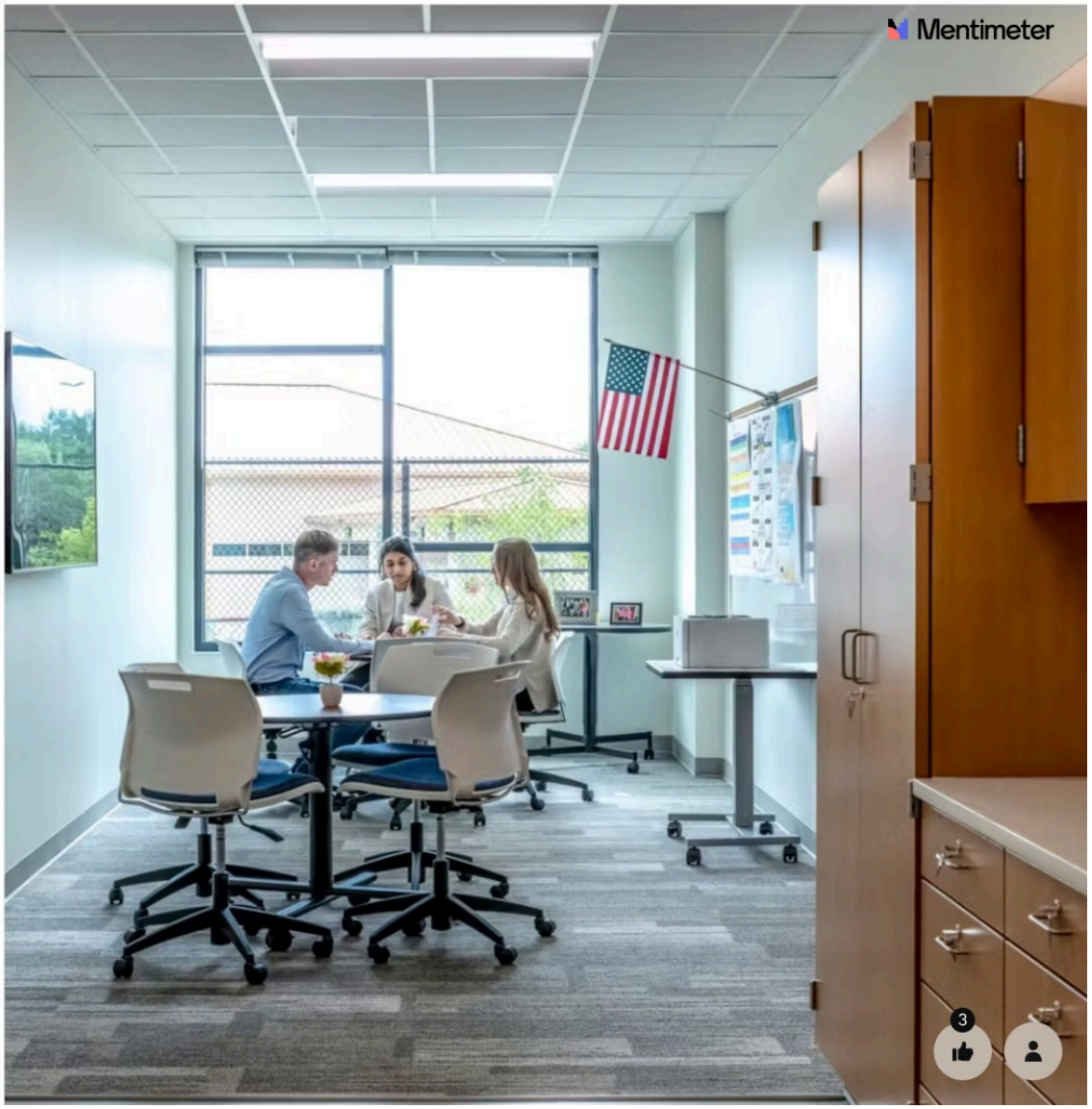


TEACHER COLLABORATION








Mentimeter
3



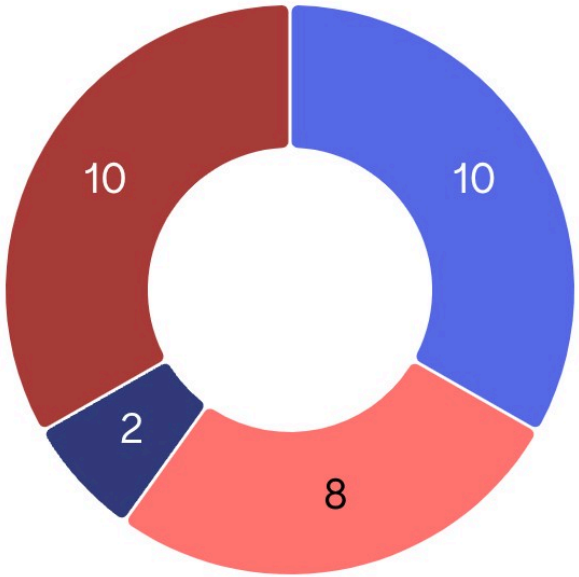
Picture a typical day for students in the new building.

What kinds of learning experiences should be easy and natural in classrooms and breakout spaces?

How should space support movement, hands-on exploration, and small-group learning to reach every child?

Mentimeter

What should collaboration space make *most possible* every day? Pick 3.



10	Active, hands-on exploration and movement
8	Small-group and individualized instruction
2	Collaboration among teachers and support staff
0	Calm, organized routines that help students focus
10	Flexibility to shift between group, partner, and independent learning

10

Mentimeter

Is there anything else collaboration spaces should make possible that isn't listed above?

Flexibility for learners physically. Opportunities for grades to collaborate together. Separate spaces for large projects

Larger class STEM activities or morning meetings

Performance and presentation

Shared space for cross grade collaboration such as k buddies Space for science labs with sinks

Co teaching with other classes.

Learning that can happen over time (like it doesn't have to be cleaned up each day because there's no space) Co-teaching Cross-class or cross-grade collaboration with students

Ability to shift based on changes in education/best practices.

Space for groups to gather for extracurricular activities

8

CONNECTIONS TO CORE LEARNING





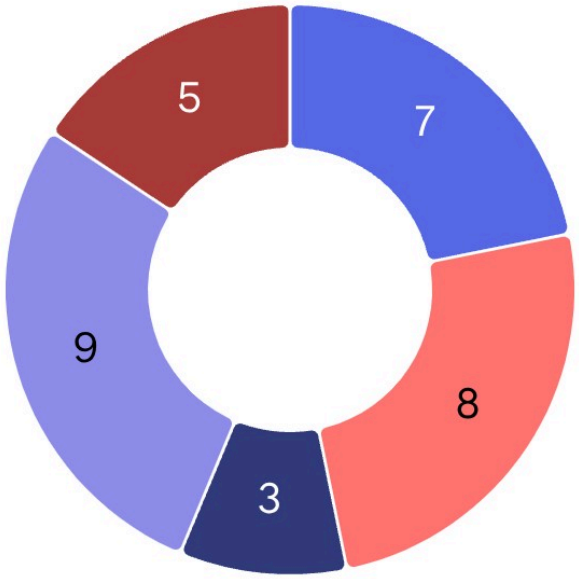
How should creation spaces connect to classroom learning?

When students move into these areas, what experiences do you hope they'll have (i.e. discovery, problem-solving?

How can design make it easy for teachers and specialists to work together so these experiences feel integrated?

Mentimeter

What's most important about how creation and exploration spaces connect to classroom learning? Pick 3.



7	They should be connected and visible to classrooms so learning flows easily between them.
8	They should be shared and flexible, used by different grades or programs for hands-on, creative work.
3	They should be collaborative, allowing teachers and specialists to co-teach or plan together.
9	They should be integrated and student-centered, supporting curiosity, making, and problem-solving.
5	They should also serve as community assets and not spatially connected to academics.

11

EDUCATIONAL WELLNESS & BELONGING



INDOOR – OUTDOOR CONNECTION





Think about an ideal day from morning arrival to lunch to the end of the day.

How can these spaces help students manage energy, focus, and emotions throughout the day?

Mentimeter

What kinds of spaces or design features can help students find calm, make choices, and belong?

Play spaces, distributed nooks and books, outdoor connections/access

Ruckus room

Flex for indoor to outdoor spaces

Lunch seating options are important. Quiet spaces carpeted with nooks, window seats.

Developmentally appropriate spaces for students, spaces that reflect different student interests (academic, sports, arts),

Age-appropriate play spaces; opportunities for outdoor learning activities. Indoor recess space.

Lunch with large, small, indoor and outdoor spaces

Indoor recess space upper grades recess space Lower grades recess space Flexible lunch spaces

9

Mentimeter

What kinds of spaces or design features can help students find calm, make choices, and belong?

A balance of calming spaces and active spaces is important. A cafeteria with different seating options so that all students can feel like they fill a table.

Indoor spaces for indoor recess

Varied/quiet space and seating for lunch Varied outdoor playground experiences Space for indoor recess activities

9

Part 4 – Strategic Plan in Action (Revisited)

In Part 4, groups revisited the strategic priority charts to link learning environments to priorities, considering how spaces would look, feel, and sound in supporting desired student outcomes.

The responses from the Strategic Plan priority charts are documented below.

STRATEGIC PRIORITY 1:
Establish and foster an authentic PreK-12 learning environment

In Essex Today	*In Action 2028*	*How Spaces Support*

• Project-based learning
  ○ Now tied to specific problem or service learning
• Natural social skill building
  ○ Problem solving
  ○ Conflict resolution
• STEM challenges
• Community field trips
• Providing the why and relevance of what students are learning
• Portfolio of learnings
  ○ Students choose work samples
	• We will have a developed scope & sequence at each grade level
	• **Specific authentic activities tied directly to standards**
	• **Organized units of study around inquiry-based questions**
	  • Student guided, ideally student led
	• Artifacts built over time, demonstrations of learning / projects
	• More opportunities to use natural environment
		• **Break out spaces support collaboration**
		• **Having a shared space allows for flexibility and choice (student & teacher)**
		• Flexible seating learning environment
		• Includes sinks at proper height
		• Space to set up projects / experiments and keep them up for a few days
		• Connection to outdoor spaces for learning
		• Display space for student work

MLP INTEGRATED DESIGN JCJARCHITECTURE

STRATEGIC PRIORITY 2:
Integrate social-emotional learning into all aspects of the school day

In Essex Today

- Greet by name at door
- **Morning meetings / school meeting**
- RULER tools:
  - Chart how we want to feel
  - Mood meter
- **Calming spaces in class / school**
- Access to school adjustment counselor
- Multi-year personal relationships, personal connection
- Integrate students' interests in learning
- **Responsive Classroom routines**
- Birthday shout-outs
- After-school clubs – connecting after school with different adults
- Consistent expectations of routines, behavior (model & practice, role-playing)
- Logical consequences
- Student Leadership Council

In Action 2028

- **Consistent vertical scope of skills / practices**
- **Integrating purposeful movement / activators**
- **Integrate SEL assessments and intervention into MTSS model**
- **SEL component on report card**
- Integrate SEL in all academics / specials
- Small group space (close to classroom – visible to have private conversations)
- Peer leaders for conflict resolution
- Accessible spaces to meet SEL needs
- Large group spaces for collaboration

How Spaces Support

- Calming / self-regulation sensory spaces
- Outdoor connections
- **Options for students to choose based on interest**
- **Café with tables of different sizes, booths**
- Collaboration:
  - Classroom – classroom
  - Students – students
  - Teachers
- **Large spaces to fit whole school plus families / community**

MLP INTEGRATED DESIGN JCJARCHITECTURE

STRATEGIC PRIORITY 3:
Celebrate and nurture an inclusive and diverse school culture through UDL

In Essex Today

- **Differentiation**:
  - Small group
  - Manipulatives
  - Type / amount for showing learning
  - MTSS (support for students in inclusive setting)
  - Title 1
  - Flexible seating
- Choice
  - Groupings
  - Order of completion
  - How to show work
  - Choice in assignment

In Action 2028

- Know the routines and expectations:
  - Group work
  - Partner work
  - Materials
- Small group spaces next to classrooms for support:
  - Minimize travel times
- Playground closer to lunch room = more time to play
- Flexible use of spaces
- Variety of spaces to meet students' needs (i.e. sensory)
- Programs / classes in the building with diverse learners:
  - SWING / RISE, PreK
  - World language classes
- Children are not stressed / anxious, better self-regulation

How Spaces Support

- Break out spaces
- Porch
- **Different lunch room options, table sizes**
- Upper grade play space
- Lower grade play space
- Space for all movement
- Student / cultural representation (town artifacts)
- Flexible size options for furniture

MLP INTEGRATED DESIGN JCJARCHITECTURE

Part 5 – Closing Reflection

The session concluded with a reflection prompt asking participants: *"After everything we explored* during these past two sessions*, what's still sitting on your mind — a thought, question, or hope you're leaving with?"*

The thoughts and lingering questions from participants are documented below.

- Not all classrooms need to have the same things
- Bathrooms – kids and adults
- Handwashing stations in the cafeteria

Sign In Sheets

Launch and Priority Mapping – 09.16.25

Kimberly Provost	Principal	provostk@mersd.org
Christina Dell Angelo	OPM Project Director	cdellangelo@doreandwhittier.com
Jacob Greco	Dore and Whittier APM	jgreco@doreandwhittier.com
Pam Beaudoin	Superintendent	beaudoinp@mersd.org
Heather Leonard	Director of Curriculum	leonardh@mersd.org
John Albright	OPM Dore+Whittier	jalbright@doreandwhittier.com
James LaPosta	JCJ Architect	jlaposta@jcj.com
Mike Pirollo	Educational Planner	mike@mlpid.com

Visioning 1 Session – 09.22.25

Emily Dwyer	Grade 1 teacher	dwyere@mersd.org
Gillian Mackay-Smith	Parent	gmackaysmith@gmail.com
Danielle Denetri	Grade 5 Teacher	demetrid@mersd.org
Kim Field	Grade 4 Teacher	fieldk@mersd.org
Taylor Clary	Grade 4 Teacher	claryt@mersd.org
Kimberly Provost	Principal	provostk@mersd.org
Maggie Safrine	EES Administrative Assistant	safrinem@mersd.org
Rachelle Russo	Kindergarten Teacher	russor@mersd.org
Patty Roundy	Kindergarten TA	roundyp@mersd.org
Jake Foster	School Committee	jfoster@mersd.org
Jeff Elliott	JCJ Architecture	jelliott@JCJ.com
Heather Leonard	Director of Curriculum	leonardh@mersd.org
Pam Beaudoin	Superintendent	beaudoinp@mersd.org
James LaPosta	JCJ Architect	jlaposta@jcj.com
Mike Pirollo	Educational Planner	mike@mlpid.com
Paul White	Educational Consultant	paul@mlpid.com

Visioning 2 Session – 10.22.25

Emily Dwyer	Grade 1 teacher	dwyere@mersd.org
Danielle Denetri	Grade 5 Teacher	demetrid@mersd.org
Kim Field	Grade 4 Teacher	fieldk@mersd.org
Taylor Clary	Grade 4 Teacher	claryt@mersd.org
Kimberly Provost	Principal	provostk@mersd.org
Maggie Safrine	EES Administrative Assistant	safrinem@mersd.org
Rachelle Russo	Kindergarten Teacher	russor@mersd.org
Patty Roundy	Kindergarten TA	roundyp@mersd.org
Jake Foster	School Committee	jfoster@mersd.org
Jeff Elliott	JCJ Architecture	jelliott@JCJ.com
Heather Leonard	Director of Curriculum	leonardh@mersd.org
Nicole Grasso-Correnti	Nurse	grasso-correnti@mersd.org
Pam Beaudoin	Superintendent	beaudoinp@mersd.org
James LaPosta	JCJ Architect	jlaposta@jcj.com
John Albright	OPM Dore+Whittier	jalbright@doreandwhittier.com
Mike Pirollo	Educational Planner	mike@mlpid.com
Paul White	Educational Consultant	paul@mlpid.com

Program Workshop 1 Session – 09.29.25

Heather Leonard	Director of Curriculum	leonardh@mersd.org
Kimberly Provost	Principal	provostk@mersd.org
Pam Beaudoin	Superintendent	beaudoinp@mersd.org
Jeff Elliott	JCJ Architect	jelliott@jcj.com
Mike Pirollo	Educational Planner	mike@mlpid.com

Program Workshop 2 Session – 10.08.25

Heather Leonard	Director of Curriculum	leonardh@mersd.org
Kimberly Provost	Principal	provostk@mersd.org
Pam Beaudoin	Superintendent	beaudoinp@mersd.org
James LaPosta	JCJ Architect	jlaposta@jcj.com
Jeff Elliott	JCJ Architect	jelliott@jcj.com
Mike Pirollo	Educational Planner	mike@mlpid.com

MHC PROJECT NOTIFICATION FORM

SECTION 3.1.8.8

APPENDIX A

MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD
BOSTON, MASS. 02125
617-727-8470, FAX: 617-727-5128

PROJECT NOTIFICATION FORM

Project Name: Essex Elementary School

Location / Address: 12 Story Street

City / Town: Essex, Ma 01929

Project Proponent

Name: JCJ Architecture c/o Fawn Walton Pellegrini, Associate Principal / Senior Project Manager

Address: 120 Huyshope Avenue, Suite 400

City/Town/Zip/Telephone: Hartford, CT 06106 - 860.240.9310

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name	Type of License or funding (specify)
Massachusetts School Building Authority	

Project Description (narrative):

New construction or Addition/ Renovations of the existing Essex Elementary School in Essex Massachusetts. The existing single story school constructed in 1958 with an additions in 1975

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

If the new construction option is selected, the existing building in its entirety will be demolished. If the addition/renovation option is selected, limited portions of the existing building may be demolished. Design options need to be developed to determine the extent of demolition.

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation.

If the new construction option is selected, the existing building will not be rehabilitated. If the addition/renovation option is selected, portions of the existing building may be substantially renovated and rehabilitated to bring the building up to current accessibly, building/structural and fire protection codes, and reconfigured to comply with the Educational Program.

Does the project include new construction? If so, describe (attach plans and elevations if necessary).

If the new construction option is selected, the entire project will consist of a new school located on the existing site. If the addition/renovation option is selected, a new addition(s) of unspecified area and program will be constructed adjacent to the existing school. The area and number of stories for either of the options are dependent up on completion of the Educational Program and associated preferred design program.

APPENDIX A (continued)

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

No

.

What is the total acreage of the project area?

Woodland	acres	Productive Resources:	
Wetland	acres	Agriculture	acres
Floodplain	acres	Forestry	acres
Open space	+/- 6.75 acres	Mining/Extraction	acres
Developed	+/- 3 acres	Total Project Acreage	9.75 acres

What is the acreage of the proposed new construction? +/- 3 acres

What is the present land use of the project area?

Public School

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

See Attached

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of Person submitting this form: _____ Date: _____

Name: Fawn Walton Pellegrini, AIA

Address: 120 Huyshope Avenue, Suite 400

City/Town/Zip: Hartford, Ct 06106

Telephone: 860.240.9310

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.

Essex, MA

12 story

<search results

Next >

Parcel # : 129-005-000-000-0000

Documents

CAI Property Card

Patriot Final FY Property Card

Assessment

ID	1196
PropertyAddress	12 STORY ST
PropertyStreet	STORY ST
MapSheet	12
OwnerName	TOWN OF ESSEX ELEMENTARY
CoOwnerName	
OwnerAddress	ESSEX TOWN HALL
OwnerAddress2	
OwnerCity	ESSEX
OwnerState	MA
OwnerZip	01929
ParcelNumber	129-005-000
GisFullNumber	129-005-000-000
CamaFullNumber	129-005-000-000-0000
PID	129-5
PROP_ID	129-5
BLDG_VAL	3873400
LAND_VAL	662400
OTHER_VAL	22400
TOTAL_VAL	4558200
FY	2026
LOT_SIZE	975
LS_DATE	19000101
LS_PRICE	0
USE_CODE	934
SITE_ADDR	12 STORY ST
ADDR_NUM	12
FULL_STR	STORY ST
LOCATION	
CITY	Essex
ZIP	
OWNER1	TOWN OF ESSEX ELEMENTARY



The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

December 2, 2025

Fawn Walton Pellegrini
Associate Principal/Senior Project Manager
JCJ Architecture
120 Huyshope Avenue, Suite 400
Hartford, CT 06106

RE: Essex Elementary School, 12 Story Street, Essex, MA; MHC# RC.77636

Dear Ms. Pellegrini:

Thank you for submitting a Project Notification Form (PNF) for the project referenced above, which was received at this office on November 24, 2025. Staff of the Massachusetts Historical Commission (MHC) has reviewed the information submitted and has the following comments.

The proposed project consists of either the renovation-addition of the existing Essex Elementary School at 12 Story Street in Essex or the demolition of the existing school and construction of a new school building at the same location. The information provided indicates that the project will use state funding from the Massachusetts School Building Authority (MSBA).

Review of the MHC's *Inventory of Historic and Archaeological Assets of the Commonwealth* indicates that the existing Essex Elementary School is neither included in the Inventory nor listed in the National and State Registers of Historic Places. No further review by the MHC is required for the MSBA-funded project.

These comments are offered to assist in compliance with Massachusetts General Laws, Chapter 9, Sections 26-27C (950 CMR 71.00). Please do not hesitate to contact me if you have any questions.

Sincerely,

Joshua Dorin
Preservation Planner
Massachusetts Historical Commission

xc: MSBA

220 Morrissey Boulevard, Boston, Massachusetts 02125
(617) 727-8470 • Fax: (617) 727-5128
www.sec.state.ma.us/mhc

PROPERTY LEASES

SECTION 3.1.8.9

Amended effective October 14, 2003 and May 10, 2007

AGREEMENT BETWEEN THE TOWNS OF ESSEX AND MANCHESTER-BY-THE-SEA, MASSACHUSETTS WITH RESPECT TO THE FORMATION OF A REGIONAL SCHOOL DISTRICT RESTATING THE PROVISIONS OF SAID AGREEMENT, AS AMENDED

This Agreement is entered into pursuant to Chapter 71 of the General Laws of the Commonwealth of Massachusetts, as amended, between the towns of Essex and Manchester-by-the-Sea ("MANCHESTER"), hereinafter sometimes referred to as member towns. In consideration of the mutual promises herein contained, it is hereby agreed as follows:

SECTION 1. THE REGIONAL SCHOOL COMMITTEE

(a) Composition

The powers and duties of the Regional School District shall be vested in and exercised by a Regional School Committee, hereinafter called the "Committee", which shall consist of seven (7) members, four (4) of whom shall be residents of Manchester and three (3) of whom shall be residents of Essex. All members shall serve until their respective successors are elected and qualified.

(b) Interim Committee

All members of the present Essex School Committee and the Manchester School Committee, acting jointly, shall serve as an Interim Committee until the next annual town elections held in the year following the year in which this Agreement is accepted by the member towns.

(c) Election of Members

Members of the Committee shall be elected by the voters of the member towns at each member town's annual town election.

At the next succeeding annual town elections of the member towns to be held in the year following the year in which this Agreement is accepted by the member towns, there shall be

elected seven (7) members of the Committee, four (4) of whom shall be residents of and elected by Manchester and three (3) of whom shall be residents of and elected by Essex, as follows:

(1) One (1) member who is a resident of and elected by Manchester and one member who is a resident of and elected by Essex, for a term of one (1) year;

(2) One (1) member who is a resident of and elected by Manchester and one member who is a resident of and elected by Essex, for a term of two (2) years;

(3) Two (2) residents who are residents of and elected by Manchester and one member who is a resident of and elected by Essex, for a term of three (3) years.

A candidate for membership on the Committee shall file nomination papers for the particular Committee position with the term such candidate is seeking as set forth in subparagraphs (i), (ii) or (iii) set forth above with the Town Clerk of the member town in which such candidate resides within the time allowed by the General Laws relating to filing nomination papers for town elections. Following the expiration of the original terms set forth in subparagraphs (i), (ii) and (iii) above, all members will be elected for a term of three (3) years at all succeeding elections.

Any registered voter of any member town may be a candidate and the method of his or her nomination shall be the same as if he or she were a candidate for elected town office in the member town in which he or she is a registered voter.

Promptly after their election, members of the Committee shall be sworn to the faithful discharge of their duties by the Town Clerk of the town in which they reside and a record of such oath shall be made and kept by the Town Clerk and a copy thereof delivered to the Secretary of the Committee.

Notwithstanding any other provision of this Agreement to the contrary, on February first immediately following the official publication of the most recently conducted state or federal census, the Committee shall determine, on the basis of such census figures, the total population of each member town and the total population of the District. (For the purposes of this provision, "official publication" means publication by the Secretary of the Commonwealth in the case of the state census and transmittal to Congress by the President in the case of the federal census.) Membership on the Committee shall be adjusted at that time, as hereinafter provided, so that the

town having the larger population as indicated in the official publication will have four (4) members on the Committee.

If a member town is entitled to an additional member of the Committee, as hereinabove provided, such additional member from such town shall be elected to the Committee at the annual town election next following the February first on which the determination of population must be made. If the population of a member town shall at any time cause its membership on the Committee to be reduced by one (1) member, such town shall at its next annual town election elect one less than the number of members of the Committee from that town whose terms expire.

The term of office of members of the Committee shall commence on the day following their election.

If there is a failure to nominate or a failure to elect a candidate, then the Board of Selectmen of the member town in which such failure to nominate or elect occurs shall appoint a member as though there were a vacancy under the provisions of subsection 1(e) of this Agreement.

(d) Organization

At the first regular meeting of the Committee following the acceptance of this Agreement by the member towns, and, thereafter at the first regular meeting of the Committee following the latter of the annual town elections of the member towns in each year, the Committee shall organize and choose by ballot a chairperson and vice-chairperson from its own membership. At the same meeting or at any other meeting, the Committee shall appoint a treasurer and a secretary who may be the same person but who need not be members of the Committee.

(e) Vacancies

If a vacancy occurs on the Committee, such vacancy shall be filled by a roll call vote of the Board of Selectmen and the remaining members of the Committee of the member town in which the member vacating office resided at the time of his or her election. The person so appointed shall be a resident of the town from which the vacancy occurred, and shall serve until the next town annual election, at which election a successor shall be elected to serve the balance of the unexpired term, if any.

(f) Quorum

A majority of the Committee shall constitute a quorum, at least one (1) of whom shall represent each member town.

(g) Powers and Duties

The Committee shall have all of the powers and duties conferred and imposed upon regional school district committees by law and by this Agreement and any amendment or additions thereto or as may be conferred and imposed upon it by any applicable general or special law.

SECTION 2. TYPE OF REGIONAL SCHOOL DISTRICT

The Regional School District shall include all grades, kindergarten through twelve (12). The Committee may establish and maintain vocational educational courses, acting as trustees therefore, in accordance with the provisions of Chapter 74 of the General Laws and any amendments or additions thereto.

SECTION 3. LOCATION AND LEASING OF SCHOOL FACILITIES

(a) Location

Any facility constructed to accommodate pupils in one or more grades from both member towns shall be located within the geographical limits of the District. The District shall at all times maintain at least one (1) elementary school facility in each member town. For purposes of this Agreement, an "elementary school facility" shall mean a facility used for elementary school grades as set forth in Section 13 below.

(b) Leasing

The Town of Essex is hereby authorized to lease to the Regional School District all the premises and buildings presently known as the

Essex Elementary and Middle School.

The Town of Manchester is hereby authorized to lease to the Regional School District all the premises and buildings presently known as the

Manchester Memorial School

Manchester Junior Senior High School

Each of the leases authorized above shall be for a term of twenty (20) years and the term shall commence on the date when the Committee assumes jurisdiction of the pupils in the grades served by said schools. Each of the leases shall contain a provision for the extension of the term thereof for a renewal term not in excess of twenty (20) years, renewable at any time during the term, at the option of the Committee. Each such lease shall automatically terminate, and the use of the building so leased shall revert back to the town from which it was leased in the event that the Committee decides that such building is no longer needed for the education program of the District. Each of the leases shall contain provisions authorizing the District to insure, repair, improve, alter or remodel any of the leased buildings. No rental shall be charged to the District by any of the member towns. Each lease shall contain identical warranties from the respective member towns warranting that the buildings shall be in good condition at the time of leasing to the District, on the terms as set forth in the leases. Each lease involving a member town shall be on such other terms and conditions as may be determined by the Selectmen thereof and the Committee, who shall execute the lease for the member town and the District, respectively.

The unpaid balance on the outstanding bonds (school bonds authorized for the purpose of constructing or improving the above-reference facilities) at the time of leasing of said buildings and facilities shall remain the obligation of the member town.

SECTION 4. APPORTIONMENT AND PAYMENT OF COSTS

(a) Definition of Costs

For the purpose of apportioning assessments levied by the District against the member towns, costs shall be divided into three (3) categories, as follows:

(1) Capital costs, which shall consist of the costs of: acquiring land and constructing, reconstructing, adding to, and equipping a school building or buildings; remodeling and making extraordinary repairs to a school building or buildings; constructing sewerage systems and sewerage treatment and disposal facilities; purchasing or using such sewerage systems with municipalities; leasing, with an option to purchase, equipment for educational purposes; any other projects or acquisitions of a capital nature which the District is or may be authorized to finance by borrowing; and debt service on bonds or notes of the District issued to finance capital costs.

(2) Special operating costs, which shall consist of the cost of evening, graduate, and extension courses or any other types of courses, including vocational educational programs but excluding summer school programs, that are offered by the District to persons other than pupils attending a regular District comprehensive school program in any of the grades kindergarten through twelve, inclusive.

(3) Operating costs, which shall consist of all costs of the District other than capital costs and special operating costs. Operating costs shall consist of "instructional costs" and "non-instructional costs", and the categorization of all operating costs into these two sub-categories shall be determined by the Regional District School Committee in accordance with any definitions that may be promulgated from time to time by the Massachusetts Department of Education.

(b) Apportionment of Capital Costs

Capital costs shall be apportioned as follows:

(1) Fifty percent (50%) on the basis that the equalized valuation of each member town pursuant to the latest equalized valuation of such town, as set forth in Chapter 559 of the Acts of 1945 entitled "An Act Establishing the Basis of Apportionment of State and County Taxes" ("Chapter 559"), or any later equalized valuations as may be enacted by the Commonwealth next preceding each bond issue, bears to the sum of all such equalized valuations of all member towns; and

(2) Fifty percent (50%) on the basis that the respective populations of each member town based on the most recent decennial U.S. Census (or any official census prepared by the U.S. Census bureau that calculates the populations of each member town, such census being referred to herein as the “Federal Census”) bears to the total combined populations of all member towns in that same Federal Census.

(c) Apportionment of Special Operating Costs

Special operating costs shall be apportioned to the member towns on the basis that the enrollment of pupil hours of residents of each member town in courses described in paragraph 2 of subsection 4 (a) above for the fiscal year next preceding the fiscal year for which the apportionment is determined bears to the total enrollment of pupil hours in such courses from

residents of both member towns on such date. Enrollment in such courses shall be determined on the basis of those pupils enrolled in each of said courses as of the first Tuesday after the first Monday of the week that said courses commence.

(d) Apportionment of Operating Costs

Operating costs shall be expressed as "instructional costs" and "non-instructional costs", and the categorization of costs into either of these sub-categories are to be determined by the Regional District School Committee, in accordance with any definitions that may be promulgated from time to time by the Massachusetts Department of Education.

.(1) Non-instructional operating costs shall be apportioned to the member towns as follows:

(i) Twenty-five percent (25%) on the basis that the "Average Equalized Valuation" (as defined below) of each member town bears to the "Total Equalized Valuation" (as defined below) of all member towns; and

(ii) Seventy-five percent (75%) on the basis that the population of each member town according to the most recent Federal Census bears to the combined populations of all member towns according to the same Federal Census.

(2) Instructional operating costs shall be apportioned to the member towns as follows:

(i) Twenty-five percent (25%) on the basis that the Average Equalized Valuation of each member town bears to the Total Equalized Valuation of all member towns; and

(ii) Seventy-five percent (75%) on the basis that the "Average Respective Pupil Enrollments" (as defined below) of each member town in all Regional School District schools bears to the "Total Pupil Enrollment" (as defined below).

(3) For purposes of this Agreement:

(i) the Average Equalized Valuation of each member town for fiscal year 2008 shall mean the "Latest Equalized Valuation of such Member Town" (as defined below);

(ii) the Average Equalized Valuation of each member town for fiscal year 2009 shall mean the arithmetic average of the Latest Equalized Valuation of such Member Town for fiscal year 2008 and fiscal year 2009;

(iii) the Average Equalized Valuation of each member town for fiscal year 2010 and each fiscal year thereafter shall mean the arithmetic average of the Latest Equalized Valuation of such Member Town for such fiscal year and the two immediately preceding fiscal years;

(iv) the Latest Equalized Valuation of such Member Town shall mean, with respect to any fiscal year, the equalized valuation of such member town as set forth in Chapter 559 most recently made publicly available prior to the beginning of such fiscal year;

(v) the Total Equalized Valuation of the member towns for any fiscal year shall mean the sum of the Latest Equalized Valuations of all member towns used in computing the Average Equalized Valuation for any member town for such fiscal year;

(vi) the Average Respective Pupil Enrollment of each member town for fiscal year 2008 shall mean such member town's pupil enrollment in the Regional School District on October 1, 2006;

(vii) the Average Respective Pupil Enrollment of each member town for fiscal year 2009 shall mean the arithmetic average of such member town's pupil enrollment in the Regional School District on October 1, 2007 and October 1, 2006;

(viii) the Average Respective Pupil Enrollment of each member town for fiscal year 2010 and each fiscal year thereafter shall mean the arithmetic average of such member town's pupil enrollment in the Regional School District on October 1 within each of the three (3) most recently ended fiscal years immediately prior to the fiscal year for which the determination is to be made; and

(ix) the Total Pupil Enrollment for any fiscal year shall mean the sum of the total pupil enrollments in the Regional School District on each October 1 used in computing the Average Respective Pupil Enrollment for any member town for such fiscal year.

(e) Times of Payments of Apportioned Costs

(1) Capital costs. At least fifteen (15) days prior to the date on which any indebtedness (consisting of interest or principal and interest on bonds and notes) incurred by the District to finance capital costs is payable, each member town shall pay to the District its respective share of the amount that is so payable by the District on said date. All other capital costs incurred by the District not consisting of payments on account of indebtedness as aforesaid shall be paid in the same manner as operating costs.

(2) Special Operating Costs and Operating Costs. Each member town shall pay to the District in each fiscal year its proportionate share, determined as provided in subsections 4 (c) and 4(d) above, of the special operating costs and operating costs. The annual share of each member town shall be paid in twelve (12) equal installments at such times that each installment except the first shall be paid on or before the first day of each month of the fiscal year, and the first such installment shall be paid on or before the fifteenth (15th) day of the first month of the first fiscal year.

SECTION 5. TRANSPORTATION

School transportation shall be provided by the District and the cost thereof shall be apportioned to the member towns as an operating cost.

SECTION 6. AMENDMENTS

This Agreement may be amended from time to time in the manner hereinafter provided, but no amendment shall be made that shall substantially impair the rights of the holders of the bonds or notes or other evidence of indebtedness of the District then outstanding, or the rights of the District to procure the means for payment thereof, provided nothing in this provision shall prevent the admission of a new town or towns to the District and the reapportionment accordingly of capital costs of the District represented by bonds or notes of the District then outstanding and of interest thereon.

Any proposal for amendment, except for a proposal for amendment providing for the withdrawal of a member town (which shall be acted upon as provided in Section 8), may be initiated by a majority vote of the Committee or by a petition signed by ten percent (10%) of the registered voters in said town according to the most recent voting list and the number of signatures on the petition which appear to be the names of registered voters of said town and said petition

shall be presented to the Secretary of the Committee. In either case, the Secretary shall mail a notice in writing to the Board of Selectmen of each member town that a proposal to amend this Agreement has been made and shall enclose a copy of such proposal (without the signatures in the case of a proposal by petition). The Selectmen of each member town shall include in the warrant for the next annual town meeting or a special town meeting called for the purpose an article stating the proposal or the substance thereof. Such amendment shall take effect upon its acceptance by each of the member towns, acceptance by each member town to be by a majority vote at a town meeting as aforesaid.

SECTION 7. ADMISSION OF ADDITIONAL TOWNS

By an amendment to this Agreement adopted under and in accordance with Section 6 above, any other town or towns may be admitted to the District upon adoption as therein provided of such amendment and upon acceptance by the town or towns seeking admission of the Agreement as so amended and also upon compliance with such provisions of law as may be applicable and upon such terms as may be set forth in such amendment.

SECTION 8. WITHDRAWAL

The withdrawal of a member town from the District may be affected by an amendment to this agreement in the manner hereinafter provided by this section. Any member seeking to withdraw shall, by vote at an annual or special town meeting, request the Committee to draw up an amendment to this Agreement setting forth the terms by which such town may withdraw from the District, provided:

(a) that the town seeking to withdraw shall remain liable for any unpaid operating costs which have been certified by the District treasurer to the treasurer of the withdrawing town, including the full amount so certified for the fiscal year in which such withdrawal takes effect; and

(b) that said town shall remain liable to the District for its share of the indebtedness, other than temporary debt in anticipation of revenue, of the District outstanding at the time of such withdrawal, and for interest thereon, to the same extent and in the same manner as though the town had not withdrawn from the District, except that such liability shall be reduced by any amount that such town has paid over at the time of withdrawal and which has been applied to the payment of indebtedness. The clerk of the town seeking to withdraw shall notify in writing the Committee that

such town has voted to request the Committee to draw up an amendment to the Agreement (enclosing a certified copy of such vote). Thereupon, the Committee shall draw up an amendment to the Agreement setting forth such terms of withdrawal as it deems advisable, subject to the limitations contained in the first paragraph of Section 6. The Secretary shall mail or deliver a notice in writing to the Board of Selectmen of each member town that the Committee has proposed an amendment (enclosing a copy of the proposed amendment). The Selectmen of each member town shall include in the warrant for the next annual town meeting or a special town meeting called for the purpose, an article stating the amendment or the substance thereof. Such amendment shall take effect upon its acceptance by all of the member towns, acceptance by each member town to be a majority vote at a town meeting as aforesaid. The withdrawing town's annual share of any future installment of principal and interest on bonds or notes outstanding on the effective date of its withdrawal shall be fixed at the percentage prevailing for such town at the last annual apportionment made next prior to the effective date of withdrawal. Upon the effective date of withdrawal, the terms of office of all members serving on the Committee who reside in the withdrawing town shall terminate.

(c) Money received by the District from the withdrawing town for payment of funded indebtedness or interest thereon shall be used only for such purpose and until so used shall be deposited in trust in the name of the District in the manner provided by law for the deposit of funds of regional school districts.

SECTION 9. AUTHORIZATION OF DEBT

The incurring of indebtedness, except temporary indebtedness in anticipation of revenue, by the District, shall be subject to disapproval by the registered voters in the member towns pursuant to the provisions of clause (d) of Section sixteen of chapter seventy-one of the General Law, as from time to time it may be amended. No such debt shall be incurred unless written notice of the amount of the debt and the general purpose for which it was authorized shall be given to the Board of Selectmen of each member town, nor until the expiration of sixty (60) days from the date on which the Committee votes to authorize said debt. Notwithstanding any provision of applicable law, it shall be the Regional School District's practice that such debt shall not actually be incurred until the amount of the proposed debt has been specifically approved by a two-thirds vote at the

next annual or special town meeting of each member town, to be held within the sixty (60) day notice period set forth in this provision.

SECTION 10. BUDGET

(a) Tentative Budget

No less than fifteen (15) days prior to the date on which the Committee adopts, or is required to adopt, whichever event occurs first, its final budget for the ensuing fiscal year, the Committee shall prepare a tentative operating and maintenance budget including therein provision for any installment of principal or interest to become due in such fiscal year on any bonds, notes or other evidence of indebtedness of the District. Said budget shall be in reasonable detail, including the amounts payable under the classification of expenses recommended by the Massachusetts Department of Education. Copies of such tentative budget shall be mailed to the Chairperson of the Finance Committee and the Board of Selectmen of each member town.

No less than seven (7) or more than fifteen (15) days following the date on which copies of the tentative budget are mailed to the Chairperson of the Finance Committee and the Board of Selectmen of the member towns as aforesaid, the Committee shall hold a public hearing within the District, after posting in at least two (2) public places in each member town at least seven (7) days in advance of the hearing, a notice stating the time, place, and purpose of the hearing, and giving such further notice as may be required by law. At such hearing, the Committee shall present the tentative budget and shall answer any reasonable inquiries with respect thereto.

Nothing in this Section 10 shall limit the ability of the Committee from preparing, reviewing or revising, alone or together with the one or more members of the Boards of Selectmen or Finance Committees of any member town, any preliminary budget in such form as the Committee may deem appropriate.

(b) Annual Budget

The Committee shall adopt an annual operating and maintenance budget on or before the latest date permitted by law therefore. Said budget shall include debt and interest charges as a separate item, and the Committee shall apportion the amount necessary to be raised in order to meet said budget in accordance with the provisions of subsections 4(b), (c) and (d). The amount so apportioned to each member town shall, not later than thirty (30) days following the adoption of the

final annual budget, be certified by the district treasurer to the treasurer of each member town, and each member town shall, at its next annual town meeting, appropriate the amounts so certified to it.

(c) Annual Report

The Committee shall, on or before October 1 of each year, submit an annual report to the Chair of the Board of Selectmen and Finance Committee in each of the member towns, containing a detailed financial statement, and a statement showing the method of computing the annual charges assessed against each member town, together with such additional information relating to the operation and maintenance of the District as may be deemed necessary by the Committee or the selectmen of any member town.

SECTION 11. EMPLOYMENT OF TEACHERS

Any teacher who has professional teacher status or other rights under Chapter 71, Section 41, whose position is superseded by reason of the establishment and operation of the District shall be employed with the same status by the Committee. Any teacher without status in a city or town in the district whose position is superseded by reason of the establishment and operation of the District shall be elected to serve in such District by the Committee; provided, however, that there is an available position which such person is certified to fill. All teachers employed by the District will be entitled to all of the rights set forth in Chapter 71, Section 42B.

SECTION 12. DISPUTE RESOLUTION

Any dispute by a member town or among member towns regarding the provisions of this Agreement or the performance of any member town under this Agreement shall be resolved as follows:

(a) Such dispute shall initially be submitted to the Committee in writing, specifying the dispute.

(b) If the Committee is unable to resolve the dispute within thirty (30) days of the receipt of the written referral to it, the dispute shall be referred to a committee comprised of the Chairs of the Committee and the Boards of Selectmen of each member town.

(c) If this committee is unable to resolve the dispute by unanimous action within fifteen (15) days of the submission of the dispute to it, the dispute shall be referred to a committee comprised of one (1) member of the Board of Selectmen and one (1) member of the Finance

Committee of each member town designated by the respective Board of Selectmen of each member town and a non-voting facilitator, chosen by the Committee, who will chair such committee.

(d) If this committee is unable to resolve the dispute by majority action within sixty (60) days of the submission of the dispute to it, the member towns shall submit such dispute to formal mediation with a professional mediator mutually agreeable to the Board of Selectmen of each member town; provided that if such mutual agreement is not obtained within thirty (30) days of the date the dispute is required to be submitted to formal mediation, the mediator shall be supplied by the nearest office of JAMS (www.jamsadr.com) or any successor organization upon the request of the Board of Selectmen of any member town or the Committee.

(e) The member towns agree not to initiate any litigation relating to a dispute prior to seeking resolution pursuant to the foregoing provisions. Written or oral statements or offers of settlement made in the course of this dispute resolution process will not be offered into evidence or used for any purpose other than this dispute resolution process and shall not constitute any admission or waiver of rights.

SECTION 13. ASSIGNMENT OF PUPILS

All pupils in grades designated by the Committee as elementary school grades, which shall at least be grades Kindergarten through Four (4) in both member towns, shall be guaranteed the opportunity to receive their education in facilities that are located in the respective towns in which the pupils reside, except that in the case of children with special needs, the Committee may provide for appropriate arrangements. For the purposes of this provision, the term "children with special needs" shall have the same meaning as the term "school-age child with special needs" as defined in section one of chapter seventy-one B of the General Laws. Any pupil who has been accepted to attend a public school in either member town other than the one in which he resides pursuant to Chapter 76, Section 12, as of the date that the Regional School District is formed shall be permitted to remain in the District until his high school graduation.

SECTION 14. EFFECTIVE DATE AND JURISDICTION

This Agreement shall take effect upon its acceptance by each of the Towns of Essex and Manchester.

SECTION 15. SEVERABILITY OF SECTIONS

According to Chapter 71. Section 16 (I), in the event that any provision of this Regional School District Agreement is held invalid in any circumstance, such invalidity shall not affect any other provisions or circumstances.

<<<<<<<< END OF DOCUMENT >>>>>>>>

LEASE AMENDMENT NUMBER 2

TO

LEASE AGREEMENT BY AND BETWEEN

THE TOWN OF MANCHESTER-BY-THE-SEA

AND

THE MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT

WITH JOINDER BY THE TOWN OF ESSEX

FOR ARTICLE 6(f) AND 6(g)

FOR THE PREMISES KNOWN AS

MANCHESTER MEMORIAL SCHOOL AND THE MANCHESTER MIDDLE AND HIGH SCHOOL

THIS LEASE AMENDMENT Number 2 ("Amendment or Amendment Number 2") is made this 16th day of August, 2021, by and between the Town of Manchester-by-the-Sea ("Lessor"), the Town of Essex and the Manchester Essex Regional School District ("Lessee") (collectively, the "Parties").

RECITALS

WHEREAS the Town of Manchester-by-the-Sea (Manchester) ("Lessor") and the Manchester Essex Regional School District (District) ("Lessee") as of July 1, 2000 entered into a lease whereby Manchester leased to the District the Premises known as the Manchester Memorial School and the Manchester Middle and High School ("Lease") and Essex signed on as a Joinder to Article 6((f) and 6(g), a copy of which is attached to this amendment as Exhibit A; and

WHEREAS said Lease was for a term of twenty (20) years, running from July 1, 2000 through June 30, 2020; and

WHEREAS said Lease provided that it shall be automatically extended pursuant to Article 3(b) under the same terms and conditions unless the Parties agree otherwise; and

WHEREAS the Parties desired in 2020 to not have the Lease automatically extend, so that they could review the terms of the Lease with a view towards entering into a new lease with each other; and

WHEREAS the Parties desired to extend the terms and conditions of the current Lease for a one year period, except for the Lease's automatic extension provision pursuant to Article 3(b), while they seek to negotiate a new lease; and

WHEREAS the parties entered into a Lease Amendment (being Lease Amendment Number 1) dated June 29, 2020, a copy of which is attached to this Amendment as Exhibit B, by which the automatic renewal clause under Article 3(b) was stricken and the Lease extended as amended through June 30, 2021; and

WHEREAS the parties, having met and discussed the renewal of the lease and have decided to extend the lease for another twenty year term and add back in Article 3(b);

NOW, THEREFORE, in exercise of the Parties' power to modify the Lease pursuant to Article 19 of the Lease, in consideration of the matters described above, the mutual benefits and obligations set forth in this amendment, and the Parties agreeing to add back in Article 3(b) and to extend the Lease for twenty years and for other good and valuable consideration, the receipt and adequacy of which is acknowledged, the Parties agree as follows:

1. Original Article 3(b), a provision regarding an automatic extension is added back into the lease.

2. The amended Lease is extended for a period of twenty (20) years, from July 1, 2021 through June 30, 2041 under the same terms and conditions of the Lease incorporated into this Amendment Number 2, and are by this Amendment Number 2 modified or supplemented to

conform with this Amendment Number 2 except as otherwise altered by this Amendment.

Executed as a sealed instrument.

Lessor:

Town of Essex

S/
Name: Ruth R. Pereen
Duly authorized
Date: 5 / 17 /2021

Town of Manchester-by-the Sea

S/
Name: Jeffrey H. Bodmer-Turner
Duly authorized
Date: 8 / 16 /2021

Lessee:

Manchester Essex Regional School District

S/
Name: Pamela Beaudein
Duly authorized
Date: 8 / 16 /2021

Note: Agreement executed 8/16/21 by the Town of Manchester. Due to clerical error, the document was not actually countersigned by the District until 6/11/25. Signature date represents acknowledgement of the start date of agreement and comports with the intent of the District at that time.

LEASE AGREEMENT

BY AND BETWEEN THE TOWN OF ESSEX

AND

THE MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT

FOR THE PREMISES

KNOWN AS ESSEX ELEMENTARY AND MIDDLE SCHOOL

DATED as of July 1, 2000

TABLE OF CONTENTS

ARTICLE 1 ..... Basic Lease Information, Page 1

ARTICLE 2 ..... Demise, Page 2

ARTICLE 3 ..... Term, Page 2

ARTICLE 4 ..... Rent and Utilities, Page 3

ARTICLE 5 ..... Use of the Premises, Page 3

ARTICLE 6 ..... Maintenance and Repairs, Page 4

ARTICLE 7 ..... Access, Page 7

ARTICLE 8 ..... Insurance, Page 8

ARTICLE 9 ..... Damage or Destruction by Em. Domain, Fire or Casualty, Page 10

ARTICLE 10 ..... Assignment and Subletting, Page 11

ARTICLE 11 ..... No Liability of Landlord, Page 12

ARTICLE 12 ..... Surrender of the Premises, Page 12

ARTICLE 13 ..... Removal of Improvements, Page 12

ARTICLE 14 ..... Severability, Page 12

ARTICLE 15 ..... Notice, Page 13

ARTICLE 16 ..... Authority, Page 13

ARTICLE 17 ..... Waiver, Page 13

ARTICLE 18 ..... Damages, Page 14

ARTICLE 19 ..... Entire Agreement, Page 14

ARTICLE 20 ..... Captions, Page 14

ARTICLE 21 ..... Recording, Page 15

ARTICLE 22 ..... Force Majeure, Page 15

ARTICLE 23 ..... Default, Page 15

ARTICLE 24 ..... Hazardous Substances, Page 16

Exhibit A ..... Description of the Leased Premises, Page 20

Exhibit B ..... Repairs and Other Works by Landlord, Page 22

LEASE AGREEMENT

This Lease is made as of the 1st day of July, 2000, by and between the Town of Essex and the Manchester Essex Regional School District. In consideration for the mutual covenants herein set forth, the parties agree as follows.

ARTICLE 1. Basic Lease Information

The following terms are referred to in other provisions of the Lease. Each such reference shall incorporate the applicable Basic Lease Information. In the event of any conflict between the Basic Lease Information and the provisions of the Lease, the latter shall control.

Landlord shall refer to the Town of Essex, a municipality located within the Commonwealth of Massachusetts.

Tenant shall refer to the Manchester Essex Regional School District, a regional school district created by the Town of Manchester-by-the-Sea and the Town of Essex, pursuant to Chapter 71 of the Massachusetts General Laws and by agreement between such towns dated May 15, 2000 (the "Regionalization Agreement").

Premises shall refer to the land, buildings and other improvements known as the Essex Elementary and Middle School, located on Western Avenue and Story Street, Essex County of Essex, Commonwealth of Massachusetts, as more particularly described in Exhibit A, attached hereto.

Commencement Date shall refer to July 1, 2000, the date on which Tenant assumed jurisdiction of the pupils served by the public schools of the Town of Essex and the Town of Manchester-by-the-Sea pursuant to the Regionalization Agreement.

Term shall refer to the term of this Lease, as the same may be extended or terminated pursuant to Article 3 hereof.

School Building shall refer to school building now or hereafter located on the Premises and "School Buildings" shall refer collectively to the school buildings or any other structure, permanent or portable, that is used for school purposes that is or may be located on the premises now or hereafter located on the premises, as they may require.

Execution Date: July 1, 2004

ARTICLE 2. Demise

Landlord hereby leases the Premises to Tenant and Tenant hereby agrees to lease the Premises from the Landlord, subject to and with the benefit of the terms, covenants, conditions and provisions of this Lease. The Premises are leased, together with the buildings and improvements thereon and all rights and easements appurtenant thereto.

ARTICLE 3. Term

a. Initial Lease Term. The initial Term of the Lease shall be for a period of twenty (20) years, beginning on the Commencement Date.

b. Extension. The term of this Lease shall automatically be extended for subsequent extension periods of twenty years each, in accordance with the Regionalization Agreement, unless either the Regionalization Agreement shall be terminated or unless this Lease shall be terminated in accordance with the provisions of this Lease. For any extension period or term of this Lease, such extension period or term shall be upon the same terms and conditions as in this Lease now contained unless the parties otherwise agree.

c. Tenant's Termination. Tenant shall have the right to terminate this Lease by ninety (90) calendar days advance written notice (i) in the event of substantial damage to the school building thereon by casualty or other Acts of God or war, provided that Landlord and Tenant shall jointly agree and determine that the school building shall not be rebuilt and that the parties have agreed to construct a new substitute building for the school building on the Premises on other premises or (ii) Tenant decides that the Premises are no longer necessary for the educational program of Tenant as stated in the Regionalization Agreement.

d. Landlord's Termination. Landlord shall have the right to terminate this Lease (i) upon Landlord's withdrawal from the District in accordance with the provisions of the Regionalization Agreement or (ii) upon ninety (90) days written notice to Tenant, if the Premises are not being used for the permitted uses and it is not contemplated that the Premises will be used for any permitted use within ninety (90) days. Landlord may terminate the Lease as to a portion of the Premises if a portion thereof is not being used for the permitted uses and it is not contemplated that the portion will be used for any permitted use within ninety (90) days.

e. Mutual Agreement. Landlord and Tenant may terminate this Lease by written agreement at any time duly authorized by the Tenant and the Landlord..

f. Effect. Upon the effective date of any such termination, this Lease shall terminate and be of no further force or effect and the Premises shall revert to Landlord.

ARTICLE 4. Rent and Utilities

a. Rent. Tenant shall pay rent in the amount of $1.00 to Landlord for the Initial Lease Term and for any extended Lease Term in connection with the letting of the Premises pursuant to this Lease. All other costs to be paid by the Tenant hereunder shall be deemed additional rent hereunder.

Tenant shall use best efforts to cause appropriations to be made for all of the Rent and additional rent under this Lease, including, without limitation, construction, maintenance, repairs, Future Renovations (defined below) and reimbursement of Landlord for the exercise of its right to self help pursuant to this Lease.

b. Utilities. The term "utility" or "utilities" as used in this Article shall include, without limitation, gas, electricity, oil, water (including, without limitation water for fire protection service), sewer (both sanitary and storm) and septic, cable, internet, telephone and other communications costs. Tenant shall pay all charges for the consumption of all utilities and trash removal at the Premises from and after the Commencement Date, as separately metered to the Premises or otherwise billed. Should Tenant at any time require additional utility service, Landlord agrees to cooperate with Tenant and to execute those documents necessary to obtain same, but all costs in connection therewith shall be paid for by Tenant, except as specifically provided herein to the contrary. Tenant shall be responsible for complying with any applicable governmental or Landlord's regulations pertaining to recycling of garbage or waste from the Premises.

ARTICLE 5. Use of the Premises

a. Use of the Premises for Educational Purposes. Tenant shall have the right to use the Premises for (i) the operation of a school system for children in grades pre-kindergarten through twelve and all related functions, including without limitation, a day care facility, pre-school and post-school activities, athletic fields, tennis courts, and other facilities typical for a school facility, and (ii) for other education related purposes, such as the operation of evening, graduate, extension and vocational classes.

b. Alterations. Subject to the provisions of this Lease governing alterations, structural changes, improvements and renovations, Tenant shall make alterations and structural changes to the Premises which Tenant believes are reasonably necessary for the operation of the school facility within the Premises and are consistent with the permitted uses of the Premises. For all Future Renovations (as that term is defined in Article 6(b) below), improvements, alterations, and structural changes, either exterior, structural or interior (collectively, "Changes" and individually "Change"), (i) Prior to the commencement of such changes, Tenant shall obtain all necessary permits, approvals, consents and orders with respect to such Changes and deliver copies of same to Landlord; (ii) Tenant shall agree to obtain and maintain, all insurances and performance bonds in the amounts as required by State Statute and shall name the Town as an "also insured" on all coverages; (iii) the Tenant shall have required all such contractors and subcontractors to work in harmony with other workers in the Premises; (iv) Tenant shall indemnify the Landlord from and for all liens of mechanics and materialmen on the Premises (v) Tenant shall

commence such Changes and complete all Changes commenced in a good and workmanlike manner, using all due diligence to complete same promptly after commencement of same and shall pay all costs for the Changes, direct and indirect, contemplated and uncontemplated, including, without limitation, legal costs and reasonable legal fees. Tenant shall comply with all governmental and insurance impositions in connection with the operations of the Premises hereunder and its work hereunder, whether under this Article 5(b), Article 6 or otherwise.

c. Quiet Enjoyment. Landlord hereby covenants and agrees that if Tenant shall perform all the covenants and other provisions herein stipulated to be performed or observed on Tenant's part, Tenant shall at all times during the continuance hereof have peaceable and quiet enjoyment and possession of the Premises without any manner of hindrance from Landlord or any person or persons lawfully claiming under Landlord, subject, however, to the terms of this Lease, including without limitation the rights reserved to the Landlord in Article 7 and any instruments having a prior lien. The rights granted by this Paragraph are in lieu of any other rights Tenant may have by statute or law.

ARTICLE 6. Maintenance and Repairs

a. Landlord's Limited Warranties.

(i) Landlord warrants on the terms set forth in this Lease, that at the Commencement Date, the School Building was in good condition, and required no substantial work other than as set forth in Exhibit B attached hereto. Landlord's timely compliance with the requirements of Article 6(b) below, shall satisfy any obligation of Landlord as to the warranty in this Article 6(a)(i). However, in the event that funding constraints hamper Landlord's timely compliance, Landlord shall agree to complete all work listed under Exhibit B beyond the warranty period, and appropriate funds in future budget cycles until such time that all work is completed.

(ii) Landlord hereby warrants that, except for the findings and determinations in the report prepared by Flansburgh & Associates prepared in 2001, a copy of which has been delivered to Tenant, and any other items listed in Exhibit B attached hereto, (A) it is not aware of other material defects in the School Building as of the date hereof, and (B) it is not aware of other material defects in the School Building upon the date of the execution of this Lease, the parties hereby acknowledging and agreeing that this Lease is being executed on June 21, 2004.

(iii) As used herein, the term "substantial work" shall mean work that is presently necessary to correct existing conditions that reflect substantial under-capacity, present substantial life safety or handicap accessibility issues or pose a significant danger to the integrity of the existing School Buildings. All such substantial work is identified in Exhibit B attached hereto.

b. Landlord's Repairs and Other Work. Landlord and Tenant acknowledge that Tenant shall during the term of this Lease and from time to time perform substantial renovations, maintenance, improvements, alterations and repairs to the School Building

to accomplish Tenant's education purposes (collectively, the "Future Renovations" and each individually, a "Future Renovation"). Tenant shall be fully responsible for the payment of all expenses connected with the Future Renovations, including, without limitation, any studies, analysis or planning that may be required. Any work hereunder shall be in compliance with any and all applicable regulations, subject to any permits, licenses, approvals and orders which shall be required pursuant to governmental or insurance company impositions.

During the period from the date of this Lease through June 30, 2005, Landlord will, subject to voter approval of appropriations, provided that Landlord shall use reasonable best efforts to cause any appropriations to be made which shall be necessary for the funding of the Future Renovations, be responsible for funding and performing the repairs or other work as provided in Exhibit B and for the funding of all Future Renovations as described in the previous grammatical paragraph. In determining the appropriateness and timing of such repairs or other work, Landlord and Tenant shall take into account any substantial renovation, demolition or other changes to the Premises anticipated to be made by Tenant as part of the Future Renovations, and, in any event, the parties shall use good faith efforts to coordinate their work schedules, and cooperate with any work to be performed, so that the work to be performed by Landlord pursuant to Exhibit B and the Future Renovations shall be performed as efficiently and economically as possible. Landlord shall not be required to undertake any repairs to the School Building or any of its components or systems that will be repaired or otherwise cured as part of Tenant's Future Renovations other than as required in Exhibit B, but Landlord may do so at its sole discretion in accordance with Article 6(d) hereinbelow. Landlord shall make repairs or do any other work to the Premises as required in Exhibit B until such time that all work is completed. Tenant shall not be responsible for any loss, cost (including, without limitation, reasonable legal fees and costs) or claim of same in connection with compliance with the handicap access requirements, and Landlord shall indemnify, hold harmless and defend Tenant with respect thereto. Notwithstanding anything to the contrary in this Lease, failure by the Landlord to make repairs or do any other work to the Premises as required in Exhibit B shall not be a default by Landlord under this Lease, so long as Landlord shall be continuing to use reasonable best efforts to cause any such necessary appropriations to be made, or Landlord, having appropriated such funding, shall be making diligent efforts to complete such work.

Landlord and Tenant agree that any dispute or claim arising out of or relating to the repair and other work items identified in Exhibit B or Future Renovations, including, without limitation, any dispute regarding the appropriateness or timeliness of the repairs, Future Renovations, Exhibit B or other work, shall prior to submission to any other forum for resolution, be submitted to mandatory mediation by the Commonwealth of Massachusetts mediation program for public disputes. Shall mandatory mediation fail, said dispute shall be submitted to binding arbitration under the auspices of the American Arbitration Association in Boston, Massachusetts.

c. Tenant's Maintenance, Repairs and Improvements. Except as provided in Article 6(b), through the term of this Lease Agreement, Landlord shall have no obligation or responsibility for the maintenance, repair or improvement of the Premises and Tenant

shall be responsible, at Tenant's sole cost and expense, to maintain, repair and improve the Premises, including, without limitation, snow and ice removal and control, lawn and field maintenance, pavement and sidewalk sweeping and all other similar work as would be required to be performed to maintain the School Buildings and the Premises in a first class condition as if the Tenant were the owner thereof, and to perform the Future Renovations, keeping the Premises at all times in good, safe, clean and well maintained condition. Tenant shall use reasonable best efforts to cause any appropriations to be made which shall be necessary for the funding of the Future Renovations and the maintenance and repair of the Premises.

d. Reimbursement of Landlord for Certain Maintenance, Repairs and Improvements Related Expenses. In the event Landlord determines that Tenant has failed to undertake or perform necessary maintenance, repairs or improvements, including, without limitation, Future Renovations, that Tenant is obligated to undertake or perform pursuant to this Lease, Landlord shall give notice to Tenant, informing Tenant of the nature of its failure, and affording Tenant a reasonable time under the circumstances within which to cure this failure. For instance, there shall be a shorter notice period with respect to immediate threat to health, safety or welfare. In the event Tenant fails to cure the failure within such reasonable period of time, Landlord may but shall have no obligation to undertake or perform the maintenance, repairs or improvements. In such event, Landlord shall account to Tenant for the cost of maintenance or repairs completed by Landlord and Tenant shall be obligated to reimburse Landlord for such costs. Notwithstanding the foregoing, Landlord shall not be obligated to undertake or perform any maintenance, repairs or improvements, except as provided in Article 6(b).

e. Reimbursement of Tenant for Certain Maintenance, Repairs and Improvements Related Expenses. In the event Tenant determines that Landlord has failed to undertake or perform necessary repairs or other work that Landlord is obligated to undertake or perform pursuant to this Lease pursuant to Article 6(b), provided, however, that no failure shall be deemed to have occurred if Landlord shall be continuing to use reasonable best efforts to cause any necessary appropriations to be made or Landlord, having appropriated such funding, shall be making diligent efforts to complete such work. Tenant shall give notice to Landlord, informing Landlord of the nature of its failure, and affording Landlord a reasonable time under the circumstances within which to cure this failure. In the event Landlord fails to cure the failure within a reasonable period of time, Tenant may but shall have no obligation to undertake or perform the repairs or other work. In such event, Tenant shall account to Landlord for the cost of repairs or other work completed by Tenant and Landlord shall be obligated to reimburse Tenant for such costs. Notwithstanding the foregoing, Tenant shall not be obligated to undertake or perform any repairs or other work which is the responsibility of Landlord as provided in Article 6(b) or Article 6(c).

f. Landlord's Retained Rights to Make Future Renovations. Landlord shall have the right, at its sole option, with the approval of Tenant, which approval shall not be unreasonably withheld, conditioned or delayed, to make Future Renovations to the Essex Elementary and Middle School if Landlord believes such Future Renovations are reasonably necessary for the operation of the school facility within the Premises and are necessary or

desirable for the permitted uses of the Premises (an "Essex Renovation"). For all such Essex Renovations (i) Prior to commencement of such Essex Renovation, Landlord shall obtain all necessary permits, approvals, consents and orders with respect to such Essex Renovation; (ii) Landlord shall throughout the term of the construction of the Essex Renovation carry builders risk, liability insurance coverage, workers compensation, payment and performance bonds and such other insurance coverages as are reasonably necessary to protect the interest of Tenant, provided in such amounts as shall be reasonably necessary consistent with amounts and coverages customarily provided in Massachusetts for similar school construction projects; (iii) Landlord shall indemnify Tenant from and for all liens of mechanics and materialmen on the Premises; and (iv) Landlord shall commence and complete any Essex Renovation undertaken by Landlord in a good and workmanlike manner, using all due diligence to complete same promptly and shall pay all costs for the Essex Renovation, direct and indirect, contemplated and not contemplated, including, without limitation, legal costs and reasonable legal fees. Such renovation shall not unreasonably interfere with Tenant operation.

g. Landlord's Costs of an Essex Renovation. In the event that Landlord shall elect, at its sole option, to proceed to make an Essex Renovation to the Premises as herein provided, Landlord shall do so at its sole cost and expense without reimbursement from Tenant, except to the extent that superceding law, rule or regulation, or opinion or advice from bond counsel shall require that the Tenant be the borrower for any funds necessary to complete the Essex Renovation. In such an event, Landlord shall indemnify and hold the Tenant harmless from, and reimburse any loss, cost or damage in connection with such borrowing or expenditures.

ARTICLE 7. Access

Landlord shall have access to the Premises from 6 a.m. to 10 p.m. on weekdays and at other times when school buildings are generally open in Essex County, Massachusetts and at all reasonable times and upon reasonable notice (and in case of emergency at any time without notice) for the purpose of examining the same or undertaking or performing such maintenance, repairs or improvements to the Premises as the Landlord may deem necessary or appropriate, including any maintenance, repairs and improvements that the Landlord is obligated or permitted to undertake or perform pursuant to Article 6, provided that in no event shall Landlord be required to perform any maintenance, repairs or improvements, except as provided in Exhibit B.

Landlord will comply with Tenant's policy with respect to student and staff safety by following the guidelines for all visitors during the hours of 6 a.m. to 10 p.m. on weekdays. Tenant shall use the system in place from time to time in a consistent manner in connection with the reservation and assignment of facilities of the Premises for various activities by the Landlord or other parties, provided that the parties acknowledge and agree that the Tenant shall retain priority to itself for activities in connection with the Tenant's own educational activities permitted under this Lease.

Furthermore, Landlord reserves the right, to the extent that the Premises are not used for school purposes or other purposes permitted hereunder, to use the Premises for such usual and customary purposes as school buildings are generally used in Essex County, Massachusetts. Landlord agrees to provide Tenant with primacy of use. Landlord agrees

to use reasonable efforts to ensure that any activities permitted by Landlord hereunder shall not unreasonably interfere with the Tenant's use of the Premises for the purposes permitted in this Lease.

No forcible entry shall be made by Landlord unless such entry shall be reasonably necessary to prevent injury, loss or damage to persons or property or otherwise for Landlord to exercise its rights under this Lease. Landlord shall repair any damage to the Premises caused by or resulting from Landlord's undertaking or performance of maintenance, repairs, or improvements, and Landlord's entry onto the Premises for such purposes, excepting any damage caused by or resulting from actions taken by Landlord in the case of an emergency, a default by Tenant hereunder, and the negligence, fault or willful misconduct of Tenant or anyone claiming by or through Tenant. No action of Landlord pursuant to this Article shall be deemed an eviction or disturbance of Tenant, nor shall Tenant be allowed damages for any injury or inconvenience occasioned thereby.

ARTICLE 8. Insurance

a. General Liability Insurance. During the Term, and for as long as Tenant shall occupy the Premises, Tenant shall keep in full force and effect, at its own expense, a general liability insurance policy, in occurrence form, covering bodily injury or death to persons and damage to or destruction of property, with coverage limits as Landlord shall reasonably request consistent with coverages carried by other schools and municipalities in Essex County, Massachusetts.

b. Fire and Casualty Insurance. During the Term, and for as long as Tenant shall occupy the Premises, Tenant shall keep in full force and effect, at its own expense, a fire and casualty insurance policy on the Premises, with the usual extended coverage endorsements, which shall insure against perils normally covered by a so-called all risk policy, including, without limitation, differences in conditions, costs of demolition, vandalism, malicious mischief, collapse and increased costs of construction, and which shall be written on the replacement cost basis (with a so-called replacement cost endorsement), noncontributory as to all parties, in amounts not less than one hundred percent (100%) of the full replacement cost thereof above foundation walls, with only such commercially reasonable deductibles as the Landlord reasonably approves. Such insurance shall also insure Landlord's interest in the Premises. Such insurance shall also insure Landlord's interest in the Premises.

c. Worker's Compensation Insurance. Tenant shall carry workers' compensation insurance as required by state and/or federal law.

d. Terrorism Insurance. Tenant shall carry terrorism insurance with such coverages and in such amounts as Landlord shall reasonably request form time to time but not less than coverages and amounts carried by other schools and municipalities in Essex County, Massachusetts.

e. Other Insurance. Tenant shall carry such other insurance in such coverages and in such amounts as Landlord shall reasonably request from time to time consistent with

coverages and amounts carried by other schools and municipalities in Essex County, Massachusetts.

f. Additional Insurance Requirements. All insurance policies required under this Lease shall (i) name Landlord as an insured party; (ii) be issued by insurers having a minimum policy holders rating of "A" VIII per the latest rating publication Property and Casualty Insurers by A.M. Best Company (or who are otherwise approved by Landlord) and who are lawfully doing business in the Commonwealth of Massachusetts; (iii) provide that the coverage maintained thereunder may not be canceled without at least thirty (30) days' prior notice to Landlord, and that any notice to Tenant that such coverage will not be renewed shall also be given simultaneously to Landlord; and (iv) contain a waiver by the insurer of any rights of subrogation to any cause of action (including, without limitation, negligent acts) against the Tenant or Landlord (as the case may be). Further, Landlord and Tenant hereby waive any claim or cause of action against the other party hereto arising from any loss or damage to the property which is covered or could be covered by such insurance, but only insofar as such party is compensated by such insurance for such loss or damage, except that they do not waive claims or causes of action for deductibles , uninsured casualties or self-insured losses.

g. Blanket Insurance Policies. Tenant shall have the right to provide the coverages required herein under blanket policies of insurance, provided that the coverage afforded Landlord shall not be diminished by reason thereof.

h. Review of Insurance Coverage. Upon notice from Landlord from time to time, Tenant shall deliver to Landlord evidence of the coverage required herein from Tenant at any time and from time to time. Landlord shall have the right to review these insurance requirements at any time and from time to time and to require changes in the amounts of insurance or the types of insurance, or both, as it deems reasonably necessary in order to adequately protect its interests. If Tenant shall fail, refuse or neglect to obtain or maintain any insurance required to be carried by Tenant under this Lease, Landlord shall have the right, but not the obligation, at Landlord's option, to purchase such insurance and to pay the premiums thereon immediately upon notice (oral or written) to Tenant. All such payments made by Landlord shall be recoverable by Landlord from Tenant on demand as additional rent hereunder. If Tenant shall fail, refuse or neglect to obtain and maintain the insurance required pursuant to this Lease, and if Landlord does not acquire the insurance which Tenant has failed, refused or neglected to obtain and maintain as aforesaid, and the Premises sustains a loss which was not, but was required to be, covered by the insurance provided for in this Lease, then in that event Tenant shall be responsible for all reasonable costs and expenses incurred by Landlord in restoring and repairing the Premises and all related improvements to the condition that existed prior to the casualty.

i. Waiver of Recovery. Neither Landlord nor Tenant shall be liable to the other or to any insurance company (by way of subrogation or otherwise) insuring the other party for any loss or damage to any structure, building or other tangible property, or any resulting loss of income, or losses under worker's compensation laws and benefits, even though such damage or loss might have been occasioned by the negligence of Landlord or Tenant or

any of their agents or employees, to the extent that any such loss or damage is covered by insurance benefiting the party suffering such loss or damage.

j. Indemnity. Except if and to the extent Tenant has been released from liability pursuant to the provisions of Article 8(h) hereinabove, Tenant does hereby assume liability for, and does hereby agree to indemnify, protect, reimburse, defend, save and hold harmless Landlord from and against any and all liabilities, obligations, claims, actions, demands, fines, suits, judgments, penalties, damages and losses (including, without limitation, all of the costs, fees and expenses connected therewith or incident thereto, including, without limitation, reasonable legal fees and costs) for the death of or injury to any person whomsoever and for loss of, damage to, or destruction of any property whatsoever (including, without limitation, loss of use thereof) arising out of the negligent or willful act or omission of Tenant, its officers, employees, agents, contractors or invitees as they related to Tenant's use, occupancy of the Premises and/or maintenance, alteration or improvement thereof.

k. Tenant shall not occupy or use, or permit any portion of the Premises to be occupied or used for any business or purpose which is extra hazardous, or permit anything to be done which will in any way increase the rate of insurance on the Premises and/or its contents.

l. To the extent permitted by law, and except as otherwise provided under Article 11, Tenant shall occupy the Premises at its sole risk, and Landlord shall not be liable for any damages, direct or indirect, consequential or otherwise for any act or negligence by Landlord under this lease.

ARTICLE 9. Damage or Destruction by Eminent Domain, Fire or Casualty

a. Taking by Eminent Domain. In the event the Premises, or any material part thereof, shall be taken by any public authority or for any public use, and as a result of such taking, Tenant's ability to operate a school thereon is substantially impaired or prohibited, then any net damage award recovered shall be payable to the Tenant in escrow for the purposes of restoring the Premises, as if the Premises were affected by casualty, and such restoration shall be made and funds disbursed in accordance with Article 9(b) hereinbelow. For purposes of this provision, net damage award shall refer to the gross damage award recovered by Landlord, less reasonable expenses, attorneys' fees and costs incurred by Landlord in the collection of the same, and in the event that the Premises or any material part thereof are taken by any public authority or for any public use, but such taking does not substantially impair or prohibit Tenant's operation of a school on the Premises, then any damage award recovered may be retained by Landlord, without further obligation to Tenant.

b. Damage by Fire or Casualty. If the Premises are damaged or destroyed by fire or other casualty insured against, then the net insurance proceeds recovered shall be placed in an escrow account for the restoration of the Premises or otherwise as provided in this Article 9, and the Tenant shall place the deductible and/or the amount uninsured into such escrow account, and Landlord shall have an obligation to use such funds, to repair or restore the Premises to their original condition, provided that in no event shall the

Landlord be obligated to spend in excess of the funds in such escrow account for such restoration. For purposes of this provision, net insurance proceeds shall refer to the gross insurance proceeds received by Landlord, less reasonable expenses, attorneys' fees and costs incurred by Landlord in connection with the collection of such proceeds. Such funds shall be made available either for the restoration of the Premises or construction of such new school building, in accordance with a construction schedule agreed to by the parties, subject to approval by the parties of plans, specifications and budget, contractors and subcontractors therefor, appropriation of funds for such alterations; obtaining of all necessary permits, approvals, consents and orders with respect thereto; throughout the term of the construction carrying builders risk, liability insurance coverage, workers compensation payment and completion bonds and such other insurance coverages as are required by Landlord, in such amounts as shall be deemed appropriate by the parties, provided that such amounts and coverages shall be customary in Massachusetts for similar school construction projects; all such contractors and subcontractors to work in harmony with other workers in the Premises; payment for all liens of mechanics and materialmen on the Premises; and commencement of such work and completion thereof in a good and workmanlike manner, using all due diligence to complete same promptly after commencement of same and payment of all costs for the Changes, direct and indirect, contemplated and uncontemplated, including, without limitation, legal costs and reasonable legal fees. Notwithstanding the foregoing, if the Premises are completely or substantially destroyed by fire or casualty, and the parties elect not to restore the School Building, or construct a substitute School Building on the Premises, then Landlord shall be entitled to any portion of the insurance proceeds allocable to the demolition of the Premises and site clean up, and the remainder, plus the deductible and any uninsured amount shall be made available from such escrow fund for the construction of a school building on an alternative site. The escrow fund shall be held by the Tenant ("Escrowee") and shall be subject to such reasonable requirements as the parties, including, without limitation, the Escrowee, shall reasonably require, and the parties shall use best efforts to agree to such the terms of such escrow arrangement

ARTICLE 10. Assignment and Subletting

Tenant shall have the right to sublet or license the Premises, or a portion thereof, in accordance with Chapter 71, Massachusetts General Laws, Sections 71 and 16(r) and any other governmental impositions regarding leasing of schools, as the same may be amended from time to time, including, without limitation, related regulations and policies adopted by the Tenant thereunder, including, without limitation, the then effective applicable policy regarding "Community Use of School Facilities" adopted by the Tenant, non-discriminatorily applied. No assignment or subletting shall relieve Tenant of its liabilities and obligations hereunder.

Tenant shall deliver to Landlord written monthly reports regarding any subleasing and licensing for any subleasing or licensing not later than the fifteenth day of the calendar month following the calendar month of such subleasing or licensing.

ARTICLE 11. No Liability of Landlord

Unless caused by or due to the negligence of Landlord, Landlord shall not be liable for any personal injury or property damage suffered by Tenant or of other occupants of the Premises, including but not limited to any injury or damage resulting from fire, explosion, falling plaster, steam, gas, electricity, rain, snow or other of the elements, water, or leaks.

ARTICLE 12. Surrender of the Premises

Upon termination or expiration of this Lease, Tenant shall quit and surrender the Premises, leaving the Premises in good order and condition, excepting ordinary wear and tear, damage by fire or other casualty, the elements, and any cause beyond Tenant's control. Upon termination or expiration of this Lease, Tenant shall remove all of its property from the Premises, except as provided otherwise herein. In the event that Tenant shall hold over after the termination or expiration of the Term of this Lease, Tenant shall reimburse Landlord for its loss, costs, including, without limitation, reasonable legal fees and costs, which Landlord may incur, directly or indirectly, consequential or otherwise, due to Tenant's failure to vacate the Premises.

ARTICLE 13. Removal of Improvements

Any fixtures, equipment, improvements, and signs installed or permanently affixed on the Premises by Tenant during the Term shall remain on the Premises and become property of Landlord upon the expiration of the Lease or earlier termination thereof. In the event that the Regionalization Agreement shall be terminated, all personal property shall remain at the Premises. In the event that the Premises shall cease being used as a school and a new school shall be constructed to replace same, all personal property shall be moved to such new school, provided that in the event that such personal property shall not be used at such new school, it shall remain or be moved back to the Premises. In any event, removal of fixtures, equipment and personal property shall be subject to Tenant's obligation to maintain the Premises and to deliver the Premises to the Landlord at the end of the term hereof in good condition, normal wear and tear and damage by casualty loss excepted, and to repair any damage caused by their removal.

ARTICLE 14. Severability

It is agreed that if any provision of this Lease shall be determined to be void by any court of competent jurisdiction, then such determination shall not affect any other provisions of this Lease, all of which other provisions shall remain in full force and effect, except to the extent the context requires otherwise; and it is the intention of the parties that if a provision of this Lease is capable of two constructions, one of which would render the provision void and the other of which would render the provision valid, then the provision shall have the meaning which renders it valid.

ARTICLE 15. Notice

Any notice, demand, consent or approval ("Notice") required by this Lease shall be in writing and shall be given by delivery by a nationally recognized overnight delivery service that routinely issues delivery receipts, or by mailing such Notice by registered or certified mail, return receipt requested, postage prepaid, to the following:

In the case of Landlord to:

Town Administrator

Town of Essex

Town Hall, 30 Martin Street

Essex, Massachusetts 01929

In the case of Tenant to:

Superintendent of Schools

Manchester Essex Regional School District

36 Lincoln Street

Manchester-by-the-Sea, MA 01944

Each party may add or change its address, for the purpose of receiving Notice hereunder, by providing the other party with at least ten (10) days prior Notice of such change of address. Notices so given shall be deemed to be given and effective at the time they are delivered, tendered for delivery, or refused, at the address set forth above.

ARTICLE 16. Authority

Tenant warrants and represents that it is duly formed, organized and existing, that this Lease is within the scope of its powers, and that the Lease has been duly authorized and approved by the School Committee of the Tenant. Landlord warrants and represents that the Premises are in the custody of the Town of Essex, that by action of the Board of Selectmen of the Landlord, the Landlord has been authorized (i) to enter into the Regionalization Agreement and (ii) to execute and deliver the herein Lease.

ARTICLE 17. Waiver

The failure of either party to seek redress for violation of, or to insist upon the strict performance of any covenant or condition of this Lease shall not prevent a subsequent act which would have originally constituted a violation from having all the force and effect of an original violation. No provision in this Lease shall be deemed to have been waived by either party, unless such waiver be in writing. No act by Landlord or its agent shall be deemed an acceptance of surrender of the Premises or an agreement to accept such

surrender unless in writing and signed by Landlord. The delivery of keys shall not operate as a termination of this Lease or surrender of the Premises.

ARTICLE 18. Damages

Except as may be provided otherwise herein, Landlord shall not be liable for any consequential, special, punitive or indirect loss or damage which Tenant may incur or suffer in connection with this Lease or any services to be performed or provided pursuant thereto. Any net insurance proceeds recovered shall be payable to Tenant and Landlord shall have no obligation to repair or restore the Premises to their original condition. For the purposes of this provision, net insurance proceeds shall refer to the gross insurance proceeds received by Landlord, less reasonable expenses, attorney's fees and costs incurred by Landlord in connection with the collection of such proceeds. Notwithstanding the foregoing, if the Premises are completely or substantially destroyed by fire or casualty, and tenant elects not to restore the School Building on the Premises, then Landlord shall be entitled to retain any portion of the insurance proceeds allocable to the demolition of the Premises and site clean up.

Notwithstanding anything to the contrary in this Lease, in the event that the School Building shall not be restored and the construction of substitute School Building shall not have been completed at the expiration of the term of this Lease, the net insurance proceeds shall be paid to the Landlord.

ARTICLE 19. Entire Agreement

This Lease and the exhibits annexed hereto contain the entire agreement between Landlord and Tenant, and all prior negotiations and agreements between the parties are merged into this Lease. No agreement hereafter made between Landlord and Tenant shall be effective to modify any provision of this Lease unless such agreement is in writing and signed by both parties. This Lease shall be binding upon, and inure to the benefit of, the parties hereto and their respective legal representatives, successors and assigns. This Lease shall run with the land.

Notwithstanding any other provision of this Agreement to the contrary, if there is any conflict between the provisions of this Agreement and the Regionalization Agreement, the provisions of the Regionalization Agreement shall prevail. In the event that the Regionalization Agreement is amended, such amendment by the voters of the member towns shall be deemed to modify the terms of this Lease Agreement to be consistent with the modified Regionalization Agreement.

ARTICLE 20. Captions

The captions and headings used in this Lease are for the purpose of convenience only and shall not be construed to limit or extend the meaning of any part of this Lease.

ARTICLE 21. Recording

Landlord and Tenant agree that this Lease may not be recorded. Each party agrees, promptly after request of the other, to execute, acknowledge and deliver a notice of lease in accordance with Chapter 183, Massachusetts General Laws, Section 4. Such notice of lease shall not include any of the financial terms in this Lease contained. The requesting party shall pay any and all recording costs and shall deliver a copy of the recorded notice of lease to the other party upon receipt from the Essex South District Registry of Deeds.

ARTICLE 22. Force Majeure

Each of Landlord and Tenant shall be excused for the period of any delay in the performance of any obligation hereunder, other than Tenant's obligation to pay Rent or additional rent or to carry insurance as provided in this Lease, when such delay is occasioned by the other party, or by fire or other casualty, Acts of God, unusually severe weather conditions which would not reasonably be predicted and would not normally be factored into construction schedules in Essex County, Massachusetts area, strikes or work stoppages, shortages or unavailability of equipment or material, actions or failure to act of other governmental agencies or entities, war, invasions or hostility, civil disturbances or riots or environmental conditions on the Premises requiring further investigation and/or remediation which are discovered and reported to the other party within six months after the date of this Lease. Any party, if utilizing this provisions to suspend its obligations, shall give prompt notice to the other party, describing such condition and its anticipated effect, and it shall use commercially practicable best efforts to eliminate or reduce the effect of such conditions.

ARTICLE 23. Default

It shall be an event of default ("Event of Default") under this Lease if Tenant shall:

Default in the timely payment of Rent or additional rent or shall not maintain the insurance required to be maintained by Tenant hereunder, and such default shall not have been cured within five (5) business days after notice to Tenant; or

Default in the observance or performance of any of Tenant's other covenants herein and such default shall not have been cured within twenty days after notice, provided that if the default complained of shall be of such a nature that the same cannot be completely remedied or cured within such twenty day period, then such default shall not be an enforceable default against Tenant for the purposes of this Article, if Tenant shall have commenced curing such default within such twenty-day period and shall proceed with reasonable diligence and in good faith to cure such default within thirty days; or

Be adjudicated bankrupt or insolvent, or have a receiver or trustee appointed for all or substantially all of its assets on the grounds of Tenant's insolvency or suffer an order to be entered approving a petition filed against Tenant seeking reorganization of Tenant under the Federal Bankruptcy Laws or any other applicable law or statute of the United States or any State thereof, or if execution is issued against it, or if the interest of Tenant in this Lease passes by operation of law to any person other than Tenant; or

Institute any Chapter 11 or any other voluntary bankruptcy proceedings, or fail to have any involuntary proceedings instituted by anyone else to adjudge Tenant a bankrupt or to have a fiduciary appointed over the assets of Tenant dismissed within thirty days; or

Make an assignment for the benefit of its creditors, or file a voluntary petition in bankruptcy or a petition or answer seeking reorganization or arrangement under the Federal Bankruptcy Laws or any other applicable law or statute of the United States or any State thereof, or shall file a petition to take advantage of any insolvency act or shall consent to the appointment of a receiver or trustee of all or a substantial part of its business and property; or

Vacate the Premises and fail to (i) continue its maintenance obligations hereunder, (ii) provide adequate insurance on the Premises, including, without limitation, the improvements thereon, or (iii) provide adequate security for the Premises as a vacant building;

then upon the happening of any one or more of such Events of Default and the expiration of the period of time, if any allowed for curing same, Landlord may exercise any and all of its rights under the Regionalization Agreement.

ARTICLE 24. Hazardous Substances

(a) Tenant shall have the right to conduct its own environmental assessment of the Premises provided that (i) in doing so it shall not unduly interfere with any construction or remedial activities being then conducted on the Premises by Landlord and (ii) Tenant shall disclose the results of any such assessment to Landlord. Landlord shall be required to promptly remediate any condition which presents an immediate threat to health or safety or which requires immediate attention under applicable Environmental Laws, and shall promptly remove any Hazardous Substance that may be encountered in the course of work required by the Landlord's Limited Warranties. Landlord shall not be responsible to remediate any Hazardous Substances that do not present immediate threat to health or safety and do not require immediate removal under present Environmental Laws. Tenant shall be responsible for the removal of all remaining Hazardous Substances either during any Tenant Renovations or otherwise as required by Environmental Laws.

As used herein, "Hazardous Substances' means any substance which is toxic, ignitable, reactive, or corrosive or which is regulated by "Environmental Laws". The term "Environmental Laws" means federal, state and local laws and regulations, judgments, ordinances, orders and permits governing the protection of the environment,, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq. as amended (CERCLA); the Resource Conservation and Recovery Act, as amended, 42 U.S.C. 6901 et seq.; the Federal Water Pollution Control Act *(33* U.S.C.A. Section 1151 et seq.); the Clean Water Act, 33 U.S.C. 1251 et seq.; the Clean Air Act, 42 U.S.C. 7401 et seq.; the Toxic Substance Control Act, 15 U.S.C. 2601 et seq.; the Safe Drinking Water Act, 42 U.S.C. 300f through 300j; and the regulations promulgated thereunder. "Hazardous Substances" includes any and all material or substances that are defined as "hazardous waste", "extremely hazardous waste" or a "hazardous substance" pursuant to state, federal or local governmental law.

"Hazardous Substances" includes but is not restricted to asbestos, polychlorinated biphenyls ("PCBs") and petroleum products.

(b) Tenant shall not cause or permit any Hazardous Substances to be used, stored, generated or disposed of in, on or about the Premises or the Project by Tenant, its agents, employees, contractors or invitees, except for those Hazardous Substances customarily used by schools and other educational facilities. Any such Hazardous Substances permitted on the Premises as hereinabove provided, and all containers therefore, shall be used, kept, stored and disposed of and shall be removed from the Premises upon the earlier of(i) when it is no longer needed for the purposes permitted hereunder and (ii) the termination of the Lease, in a manner that complies with all federal, state and local laws or regulations applicable to any such Hazardous Substances. Tenant further agrees that it shall, at its sole cost and expense (or at the expense of third parties other than Landlord), remove any Hazardous Substances which pose a threat to health, safety or the environment and which are required to be removed pursuant to any Environmental Laws and/or administrative determinations thereunder and which result from the acts of Tenant, its agents, employees and/or contractors. Tenant shall indemnify, defend and hold harmless the Landlord from and against any and all claims, damages, fines, judgments, penalties, costs, expenses or liabilities (including, without limitation, any and all sums paid for settlement of claims, reasonable attorneys' fees, consultant and expert fees) arising under Environmental Laws or the common law, during or after the Term of this Lease, from or in connection with the use, storage, generation or disposal of Hazardous Substances in, on or about the Premises by Tenant, Tenant's agents, employees, contractors or invitees and/or arising from or caused by Tenant's breach of the foregoing representations and/or the foregoing agreement to remove such Hazardous Substances.

(c) The indemnification contained in subsection (b) above shall expressly include, without limitation, any and all costs incurred due to any investigation of the site or any cleanup, removal and restoration mandated by a federal, state or local agency or political subdivision, or any party acting on their behalf tinder any "Citizen Suit" provision or otherwise.

[The balance of this page is intentionally blank]

TOWN OF ESSEX

By its Board of Selectmen:

Rolf P. Madsen, Chair — Date 07/01/04

Jeffrey D. Jones, Selectman — Date 7/1/04

Mark Lynch, Selectman — Date 7/1/04

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT

By its School Committee:

Susan Beckmann, Chair — Date

Alfred Dente, Vice-Chair — Date 7/1/04

Karen Gaudiano — Date 7/1/04

James J. Barrett, Jr. — Date 7/1/04

Sarah Hammond Creighton — Date 7/1/04

Ann Harrison — Date 7/1/04

John Kiley — Date

JOINDER

Manchester By The Sea

The Town of ~~Essex~~ does hereby join and subscribe to this Lease Agreement solely for the purpose of recognizing and agreeing to the provisions of Article 6(f) and 6(g).

TOWN OF MANCHESTER-BY-THE-SEA

By its Board of Selectmen:

Daniel Senecal, Chair — 7/1/04 Date

Susan Thorne, Vice-Chair — 07/01/04 Date

Dawn Grohs, Selectman — 07/01/04 Date

John H. Shea, Jr., Selectman — 07/01/04 Date

Bryan Gubbins, Selectman — 07/01/04 Date

EXHIBIT A

Legal Description

LOT 1

The land in Essex, in the County of Essex on the Northerly side of Western Avenue and the Southerly side of Story Street, bounded and described as follows:

Beginning at a point on the Western Avenue which is the Southwesterly corner of the granted premises; thence running Northwesterly by land now or former of William R. Noyes, Jr. and Eleanor A. Noyes, b a wall, two hundred sixteen (216) feet to a corner; thence turning and running Northwesterly by a wall by said Noyes land, one hundred twenty-nine (129) feet to a corner in the wall; thence turning and running Northeasterly by a wall by said Noyes land and by land now or formerly of Frederick S. O'Keiff et ux, three hundred twenty-two (322) feet to a corner; thence turning and running b y a wall by said O'Keiff land, eighty-six (86) feet to a corner; thence turning and running Northeasterly by a wall by said O'Keiff land, seventy (70) feet Story Street; thence turning and running Southeasterly by said Story Street, four hundred twelve (412) feet to land formerly of Aurelia A. Story; thence turning and running Southwesterly by a wall by said Story land, three hundred ten (310) feet to a corner by land now or formerly of Karl P. Stephany et ux; thence turning and running Northwesterly by a wall by said Stephany land, one hundred sixteen and 82/100 (116.82) feet to a corner; thence turning and running Southwesterly by a wall by said Stephany land; one hundred sixty-one and 70/100 (161.70) feet to a corner; thence turning and running Southeasterly by a wall by said Stephany land, seventy-five and 90/100 (75.90) feet to Western Avenue; thence turning and running Southwesterly by said Western Avenue, ninety-two (92) feet to the point begun at. Containing 4.1 acres, as shown on plan to recorded with Essex South District Registry of Deeds in Plan Book 86, Plan 88, entitled "Plan of Land in Essex, Mass. Between Western Avenue and Story Street, Scale: 1 in =40 ft., January 20, 1955, George E. Hodsdon, Surveyor."

The foregoing conveyance is subject to an easement for the benefit of said Karl P. Stephany and Leonora A. Stephany referred to in deed to them from Francelia S. Soule and Mary E. Sawyer, dated April 30, 1943 and recorded in Essex South District Registry of Deeds, Book 3403, Page 489.

For title reference, see deed of Francelia S. Soule dated September 6, 1955 recorded with said Deeds in Book 4203, Page 399.

LOT 2

The land in said Essex on the Northerly side of Western Avenue, bounded and described as follows:

Beginning at a point on the Northerly side of Western Avenue which is the Southeasterly corner of the granted premises and which is the Southwesterly corner of land formerly of Francelia S. Soule, now of the Inhabitants of the Town of Essex; thence running Northwesterly, two hundred sixteen (216) feet to a corner; thence turning and running again Northwesterly, one hundred twenty-nine (129) feet to a corner; thence turning and running Northeasterly, two hundred forty-seven (247) feet to a corner, the here courses just described being by a wall by said land formerly of Francelia S. Soule, now of the Inhabitants of the Town of Essex; thence turning and running Northwesterly by a wall by land now or formerly of Frederick S. O'Keiff et ux, of Wilson, of Millet, of Meader, of Doucette, and of Lothrop, four hundred fifty-two (452) feet to a corner; thence turning and running again Northwesterly by a wall by said land of Lothrop, eighteen (18) feet; thence turning and running Southwesterly but nearly Westerly by a wall by land now or formerly of Rideout, eighty (80) feet to a corner; thence turning and running Southeasterly in a straight line by other land of said William R. Noyes, Jr. and Eleanor A. Noyes, nine hundred sixteen (916) feet to a drill hole in a stone on Western Avenue at the end of a wall; thence turning and running Northeasterly by said Western Avenue, three hundred forty-six (346) feet to the point begun at. Being said to contain 5.9 acres, as shown on plan entitled "Plan of Land in Essex, Mass. Between Western Avenue and Story Street, Scale 1 in.+40 ft., January 20, 1955, George E. Hodsdon, Surveyor" and recorded with deed of Francelia S. Soule to the Inhabitants of the Town of Essex, dated September 6, 1955, in the Essex South District Registry of Deeds in Plan Book 86, Page 88.

For title reference see deed of William R. Noyes, Jr. and Eleanor A. Noyes dated October 20, 1955 recorded with said Deeds in Book 4216, Page 501.

EXHIBIT B TO LEASE BETWEEN TOWN OF ESSEX

AND MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT

Repairs and Other Works by Landlord

(To be Completed by June 30, 2005)

ITEM	COMMENT	ESTIMATED COST*
Ensure that boilers operate through warranty period	Repairs complete to date. Town will monitor system	$0 (at present)
Provide hookup to sewer system	Will be completed as part of Essex sewer project	$0 (already covered)
Make some toilets HCAP accessible	Proceed	$125,000
Add/repair exit and emergency lights	Proceed	$40,000
Improve exterior lighting at entrances	Proceed	$2,000
Improve railings at side drive and concrete repairs	Proceed	$60,000 - $160,400
Make exterior doors/stage HCAP accessible	Proceed	$15,000 - $128,400
Evaluate boiler drain issue	Drain will be hooked to new sewer line	$15,000 for interior work
Paint exterior window components related to cafetorium	Proceed	$2,500
Install smoke detectors in all classrooms and hallways.	Proceed	TBD

Repair Roof Exhaust fans including electrical components	Proceed	TBD
Address foundation, ramp, and drainage repairs related to basement ramp drainage problem	Proceed	TBD
Address roof leaks currently existing in various areas	Proceed	TBD

*Numbers are only estimates. Actual costs may be different. Town is committing to the work, but not the numbers.

ALL RIGHTS RESERVED

LEASE AGREEMENT

BY AND BETWEEN

THE TOWN OF MANCHESTER-BY-THE-SEA

AND

THE MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT

FOR THE PREMISES

KNOWN AS THE MANCHESTER ESSEX JUNIOR-SENIOR HIGH SCHOOL

AND

THE MANCHESTER MEMORIAL SCHOOL

TABLE OF CONTENTS

ARTICLE 1 Basic Lease Information	4
ARTICLE 2 Demise	5
ARTICLE 3 Term	5
ARTICLE 4 Rent	5
ARTICLE 5 Use of the Premises	6
ARTICLE 6 Maintenance and Repairs	7
ARTICLE 7 Access	9
ARTICLE 8 Insurance	10
ARTICLE 9 Damage or Destruction by Fire or Casualty	12
ARTICLE 10 Assignment and Subletting	12
ARTICLE 11 No Liability of Landlord	13
ARTICLE 12 Surrender of the Premises	13
ARTICLE 13 Removal of Improvements	13
ARTICLE 14 Severability	13
ARTICLE 15 Notice	13
ARTICLE 16 Authority	14
ARTICLE 17 Waiver	14
ARTICLE 18 Captions	14
ARTICLE 19 Damages	14
ARTICLE 20 Entire Agreement	15
ARTICLE 21 Recording	15
ARTICLE 22 Force Majeure	15
ARTICLE 23 Default	15
ARTICLE 24 Hazardous Substances	16
EXHIBITS	

Exhibit A: Description of the Leased Premises

Exhibit A-1: Valuation Survey showing Parcels II and 18

Exhibit A-2: Sketch Plan showing area North of Lincoln Street leased to Tenant

Exhibit A-3: Valuation Survey showing Parcels 4, 5, and 6

Exhibit B-l: Landlord's Repairs and Other Work -Memorial School

Exhibit B-2: Landlord's Repairs and Other Work -Junior- Senior High School

Exhibit C: Services Provided by Landlord

Exhibit D: Sketch Plan of Approximate Area of Water Department Facilities

LEASE AGREEMENT

This Lease is made as of the 1st day of July, 2000, by and between the Town of Manchester-by-the-Sea and the Manchester Essex Regional School District. In consideration of the mutual covenants herein set forth, the parties agree as follows.

ARTICLE 1. Basic Lease Information

The following terms are referred to in other provisions of the Lease. Each such reference shall incorporate the applicable Basic Lease Information. In the event of any conflict between the Basic Lease Information and the provisions of the Lease, the latter shall control.

Landlord	shall refer to the Town of Manchester-by-the-Sea, a municipality located within the Commonwealth of Massachusetts.
Tenant	shall refer to the Manchester Essex Regional School District, a regional school district created by the Town of Manchester-by-the-Sea and the Town of Essex, pursuant to Chapter 71 of the Massachusetts General Laws and by agreement between such towns dated May 15, 2000 (the "Regionalization Agreement").
Premises	shall refer to the land, buildings and other improvements known as the Manchester Essex Junior-Senior High School, the Manchester Memorial School, located on Lincoln Street, and the pedestrian bridge that crosses over Lincoln Street between the Junior-Senior High School and Memorial School campuses, Manchester-by-the-Sea, Essex County, Commonwealth of Massachusetts, as more particularly described in Exhibit A, attached hereto, including without limitation any buildings, playing fields, tennis courts, parking area, sidewalks, curbing, flagpoles, fences, signs, exterior lighting, trees, plantings, or structures thereon.
Commencement Date	shall refer to July 1, 2000, the date on which Tenant assumed jurisdiction of the pupils served by the public schools of the Town of Essex and the Town of Manchester-by-the-Sea pursuant to the Regionalization Agreement.
Term	shall refer to the term of this Lease, as the same may be extended or terminated pursuant to Article 3 hereof.
School Building	shall refer to a school building now or hereafter located on the Premises and "School Buildings" shall refer collectively to the school buildings or any other structure, permanent or portable, that is used for school purposes that is or may be located on the premises now or hereafter located on the Premises, as they may require.
Execution Date	July 1, 2004

ARTICLE 2. Demise

Landlord hereby leases the Premises to Tenant and Tenant hereby agrees to lease the Premises from the Landlord, subject to and with the benefit of the terms, covenants, conditions and provisions of this Lease. The Premises are leased, together with the buildings and improvements thereon and all rights and easements appurtenant thereto.

ARTICLE 3. Term

a. Initial Lease Term. The initial Term of the Lease shall be for a period of twenty (20) years, beginning on the Commencement Date.

b. Extension. The term of this Lease shall automatically be extended for subsequent extension periods of twenty years each, in accordance with the Regionalization Agreement, unless either the Regionalization Agreement shall be terminated or this Lease shall be terminated in accordance with the provisions of this Lease. For any extension period or term of this Lease, such extension period or term shall be upon the same terms and conditions as in this Lease now contained, unless the parties otherwise agree.

c. Tenant's Termination. Tenant shall have the right to terminate this Lease by ninety (90) calendar days advance written notice (i) in the event of substantial damage to the school building thereon by casualty or other Acts of God or war, provided that Landlord and Tenant shall jointly agree and determine that the school building shall not be rebuilt and that the parties have agreed to construct a new substitute building for the school building on the Premises or other premises or (ii) Tenant decides that the Premises are no longer necessary for the educational program of Tenant.

Further, Tenant shall have the right to terminate this Lease as to a portion, but not all of the Premises, in the event of a determination of the occurrence of(i) or (ii) as to a portion of the Premises.

d. Landlord's Termination. Landlord shall have the right to terminate this Lease (i) upon Landlord's withdrawal from the District in accordance with the provisions of the Regionalization Agreement or (ii) upon ninety (90) days written notice to Tenant, if the Premises are not being used for the permitted uses and it is not contemplated that the Premises will be used for any permitted use within ninety (90) days. Landlord may terminate the Lease as to a portion of the Premises if a portion thereof is not being used for the permitted uses and it is not contemplated that the portion will be used for any permitted use within ninety (90) days.

e. Mutual Agreement. Landlord and Tenant may terminate this Lease by written agreement at any time duly authorized by the Tenant and the Landlord.

f. Effect. Upon the effective date of any such termination, this Lease shall terminate and be of no further force or effect, except to the extent that Articles 12 and 13 are intended to be complied with after said termination, and the Premises shall revert to Landlord.

ARTICLE 4. Rent

Tenant shall pay rent in the amount of $1.00 to Landlord for the Initial Lease Term and for any extended Lease Term in connection with the letting of the Premises pursuant to this Lease. All other costs to be paid by the Tenant hereunder shall be deemed additional rent hereunder.

The term "utility" or "utilities" as used in this Article shall include, without limitation, gas, electricity, oil, water (including, without limitation water for fire protection service), sewer (both sanitary

and storm) and septic, cable, internet, telephone and other communications costs. Tenant shall pay all charges for the consumption of all utilities and trash and recycling removal at the premises whether separately metered to the Premises or otherwise. Landlord has heretofore provided water and sewer to Tenant without charge. Landlord notifies Tenant that Landlord will regularly bill Tenant for water and Sewer after June 30, 2003.

Tenant shall use best efforts to cause appropriations to be made for all of the Rent and additional rent under this Lease, including, without limitation, construction, maintenance, repairs, Future Renovations and reimbursement of Landlord for the exercise of its right to self help pursuant to this Lease.

ARTICLE *5.* Use of the Premises

a. Use of the Premises for Educational Purposes. Tenant shall have the right to use the Premises for (i) the operation of a school system for children in grades pre-kindergarten through twelve and all related functions, including without limitation, a day care facility, pre-school and post-school activities, athletic fields, tennis courts, and other facilities typical for a school facility, and (ii) for other education related purposes, such as the operation of evening, graduate, extension and vocational classes.

b. Alterations. Subject to the provisions of this Lease governing alterations, structural changes, improvements and renovations, Tenant shall make alterations and structural changes to the Premises which Tenant believes are reasonably necessary for the operation of the school facility within the Premises and are consistent with the permitted uses of the Premises. For all Future Renovations (as that term is defined in Article 6(b) below), improvements, alterations, and structural changes, either exterior, structural or interior (collectively, "Changes" and individually "Change"), (i) Prior to commencement of such Changes, Tenant shall obtain all necessary permits, approvals, consents and orders with respect to such Changes and deliver copies of same to Landlord; (ii) Tenant shall throughout the term of the construction of the Changes carry builders risk, liability insurance coverage, workers compensation, payment and performance bonds and such other insurance coverages as are required by Landlord, provided in such amounts as shall be required by Landlord, provided that such amounts and coverages shall be customary in Massachusetts for similar school construction projects; (iii) Tenant shall indemnify the Landlord from and for all liens of mechanics and materialmen on the Premises; and (iv) Tenant shall commence such Changes and complete all Changes commenced in a good and workmanlike manner, using all due diligence to complete same promptly after commencement of same and shall pay all costs for the Changes, direct and indirect, contemplated and uncontemplated, including, without limitation, legal costs and reasonable legal fees. Tenant shall comply with all governmental and insurance impositions in connection with the operations of the Premises hereunder and its work hereunder, whether under this Article 5(b), Article 6 or otherwise.

c. Quiet Enjoyment. Landlord hereby covenants and agrees that if Tenant shall perform all the covenants and other provisions herein stipulated to be performed or observed on Tenant's part, Tenant shall at all times during the continuance hereof have peaceable and quiet enjoyment and possession of the Premises without any manner of hindrance from Landlord or any person or persons lawfully claiming under Landlord, subject, however, to the terms of this Lease, including without limitation the rights reserved to the Landlord in Article 7. The rights granted by this Paragraph are in lieu of any other rights Tenant may have by statute or law.

ARTICLE 6. Maintenance and Repairs

a. Landlord's Limited Warranties. Exhibits B-1 and B-2, attached hereto, describe repairs and other work that Landlord and Tenant have identified as being presently necessary to correct existing conditions that reflect substantial under-capacity, present substantial life safety or handicap accessibility issues or pose a significant danger to the integrity of the existing School Buildings (collectively, "Substantial Defects" and each individually a "Substantial Defect"), together with information as to appropriateness, timing, and where available, anticipated cost. Exhibits B-1 and B-2 also identify repairs or other work completed by Landlord since the Commencement Date. Landlord warrants, on the terms set forth in this Lease, that at the Commencement Date, the School Buildings were in good condition, and contained no Substantial Defect other than as set forth in Exhibits B-1 or B-2 or in the findings and determinations in the 2000 report prepared by Ammondson Architects, a copy of which has been delivered to Tenant. Landlord's timely compliance with the requirements of Article 6(b) below, shall satisfy any obligation of Landlord as to the warranty in this Article 6(a).

b. Landlord's Repairs and Other Work. Landlord and Tenant acknowledge that Tenant shall during the term of this Lease and from time to time perform substantial renovations, maintenance, improvements, alterations and repairs to the School Buildings, which may include demolition, in part or in whole and reconstruction thereof, to accomplish Tenant's education purposes (collectively, the "Future Renovations" and each individually, a "Future Renovation"). Tenant shall be fully responsible for the payment of all expenses connected with the Future Renovations, including, without limitation, any studies, analysis or planning that may be required. Any work hereunder shall be in compliance with any and all applicable regulations, subject to any permits, licenses, approvals and orders which shall be required pursuant to governmental or insurance company impositions.

During the period from the Commencement Date through June 30, 2005, Landlord will, subject to voter approval of appropriations, which Landlord shall use reasonable best efforts to obtain, be responsible for funding and performing the repairs or other work as provided in Exhibits B-1 and B-2. In determining the appropriateness and timing of such repairs or other work, Landlord and Tenant shall take into account any substantial renovation, demolition or other changes to the Premises anticipated to be made by Tenant as part of the Future Renovations, and, in any event, the parties shall use good faith efforts to coordinate their work schedules, and cooperate with any work to be performed, so that the work to be performed by Landlord pursuant to Exhibits B-1 and B-2 and the Future Renovations shall be performed as efficiently and economically as possible. Landlord shall not be required to undertake any repairs to the School Buildings or any of their components or systems that will be repaired or otherwise cured as part of Tenant's Future Renovations, or is required to be repaired or cured by Tenant under Article 6(c), other than as required in Exhibits B-1 and B-2, but Landlord may do so at its sole discretion in accordance with Article 6(d) herein below. Landlord has made repairs to the Premises as required in Exhibits B-1 and B-2 and will continue to do so on an as-needed basis as shown in Exhibits B-1 and B-2 through June 30, 2005. In no event shall Landlord be obligated to make any repairs or do any other work to the Premises after June 30, 2005,

a) except to complete work in progress on that date, and/or
b) except work shown in Exhibits B-1 and B-2 that has not commenced as of June 30, 2005, but has been identified as needing repair by the Landlord and Tenant jointly in writing subsequent to the execution of the Lease Agreement but prior to June 30, 2005. Only those items acknowledged by the Landlord and Tenant prior to June 30, 2005 in writing shall be repaired by the Landlord.

Landlord and Tenant agree that any dispute or claim arising out of or relating to the repair and other work items identified in Exhibits B-1 or B-2 or Future Renovations, including, without limitation, any dispute regarding the appropriateness or timeliness of the repairs, Future Renovations, Exhibits B-1 or B-2 or other work, shall prior to submission to any other forum for resolution, be submitted to binding arbitration under the auspices of the American Arbitration Association in Boston, Massachusetts.

c. Tenant's Maintenance, Repairs and Improvements. Except as provided in Article 6(b), through the term of this Lease Agreement, Landlord shall have no obligation or responsibility for the maintenance, repair or improvement of the Premises and Tenant shall be responsible, at Tenant's sole cost and expense, to maintain, repair and improve the Premises, including, without limitation, snow and ice removal and control, lawn and field maintenance, pavement and sidewalk sweeping and all other similar work as would be required to be performed to maintain the School Buildings and the Premises in a first class condition as if the Tenant were the owner thereof, and to perform the Future Renovations, keeping the Premises at all times in good, safe, clean and well maintained condition. Tenant shall use reasonable best efforts to cause any appropriations to be made which shall be necessary for the funding of the Future Renovations and the maintenance and repair of the Premises.

Attached hereto as Exhibit C is a list of services that Landlord has been providing to or for the benefit of Tenant since the Commencement Date, which would otherwise be the responsibility of Tenant under the provisions of this Lease. Landlord hereby notifies Tenant that it will no longer provide these services after June 30, 2004, except pursuant to agreement between Landlord and Tenant or pursuant to Landlord's rights in Article 6(d).

d. Reimbursement of Landlord for Certain Maintenance, Repairs and Improvements Related Expenses. In the event Landlord determines that Tenant has failed to undertake or perform necessary maintenance, repairs or improvements, including, without limitation, Future Renovations, that Tenant is obligated to undertake or perform pursuant to this Lease, Landlord shall give notice to Tenant, informing Tenant of the nature of its failure, and affording Tenant a reasonable time under the circumstances within which to cure this failure. For instance, there shall be a shorter notice period with respect to immediate threat to health, safety or welfare. In the event Tenant fails to cure the failure within such reasonable period of time, Landlord may but shall have no obligation to undertake or perform the maintenance, repairs or improvements. In such event, Landlord shall account to Tenant for the cost of maintenance or repairs completed by Landlord and Tenant shall be obligated to reimburse Landlord for such costs. Notwithstanding the foregoing, Landlord shall not be obligated to undertake or perform any maintenance, repairs or improvements, except as provided in Article 6(b).

e. Reimbursement of Tenant for Certain Maintenance, Repairs and Improvements Related Expenses. In the event Tenant determines that Landlord has failed to undertake or perform necessary repairs or other work that Landlord is obligated to undertake or perform pursuant to Article 6(b), provided however, that no failure shall be deemed to have occurred if Landlord shall be continuing to use reasonable best efforts to cause any necessary appropriations to be made or Landlord, having appropriated such funding, shall be making diligent efforts to complete such work. Tenant shall give notice to Landlord, informing Landlord of the nature of its failure, and affording Landlord a reasonable time under the circumstances within which to cure this failure. In the event Landlord fails to cure the failure within a reasonable period of time, Tenant may but shall have no obligation to undertake or perform the repairs or other work. In such event, Tenant shall account to Landlord for the cost of repairs or other work completed by Tenant and Landlord shall be obligated to reimburse Tenant for such costs. Notwithstanding the foregoing, Tenant shall not be obligated to undertake or perform any repairs or other work that is the responsibility of Landlord as provided in Article 6(b) or Article 6(c).

f. Landlord's Retained Rights to Make Future Renovations. Landlord shall have the right, with the approval of Tenant, which approval shall not be unreasonably withheld, conditioned or delayed, to make Future Renovations to the Memorial School portion of the Premises if Landlord believes such Future Renovations are reasonably necessary for the operation of the school facility within the Premises and are necessary or desirable for the permitted uses of the Premises (a "Manchester Renovation"). For all such Manchester Renovations (i) Prior to commencement of such Manchester Renovation, Landlord shall obtain all necessary permits, approvals, consents and orders with respect to such Manchester Renovation; (ii) Landlord shall throughout the term of the construction of the Manchester Renovation carry builders risk, liability insurance coverage, workers compensation, payment and performance bonds and such other insurance coverages as are reasonably necessary to protect the interest of Tenant, provided in such amounts as shall be reasonably necessary consistent with amounts and coverages customarily provided in Massachusetts for similar school construction projects; (iii) Landlord shall indemnify Tenant from and for all liens of mechanics and materialmen on the Premises; and (iv) Landlord shall commence and complete any Manchester Renovation undertaken by Landlord in a good and workmanlike manner, using all due diligence to complete same promptly and shall pay all costs for the Manchester Renovation, direct and indirect, contemplated and not contemplated, including, without limitation, legal costs and reasonable legal fees. Such renovation shall not unreasonably interfere with Tenant operation.

g. Landlord's Costs of a Manchester Renovation. In the event that Landlord shall elect to proceed to make a Manchester Renovation to the Premises as herein provided, Landlord shall do so at its sole cost and expense without reimbursement from Tenant, except to the extent that superceding law, rule or regulation, or opinion or advice from bond counsel shall require that the Tenant be the borrower for any funds necessary to complete the Manchester Renovation. In such an event, Landlord shall indemnify and hold the Tenant harmless from, and reimburse any loss, cost or damage in connection with such borrowing or expenditures.

ARTICLE 7. Access

a. General. Landlord shall have access to the Premises at all times when school buildings and their grounds are generally open or available in Essex County, Massachusetts and at all reasonable times and upon reasonable notice (and in case of emergency at any time without notice) for (i) the purpose of examining the same or undertaking or performing such maintenance, repairs or improvements to the Premises as the Landlord may deem necessary or appropriate, including any maintenance, repairs and improvements that the Landlord is obligated or permitted to undertake or perform pursuant to Article 6, provided that in no event shall Landlord be required to perform any maintenance, repairs or improvements, except as provided in Exhibits B-1 and B-2 or (ii) for the purposes for which use is reserved to the Landlord pursuant to subsection b), below. Landlord agrees to use reasonable efforts to ensure that any activities permitted by Landlord hereunder shall not unreasonably interfere with the Tenant's use of the Premises for the purposes permitted in this Lease.

b. Other. Landlord reserves the right, to the extent that the it does not materially interfere with Tenant's use of the Premises for school purposes or other purposes permitted hereunder, to use the Premises, without fee or charge, for such usual and customary purposes as school buildings are generally used in Essex County, Massachusetts including without limitation, town meetings, elections, emergency shelters and other governmental and recreational activities. Landlord agrees to use reasonable efforts to ensure that any activities permitted by Landlord hereunder shall not unreasonably interfere with the Tenant's use of the Premises for the purposes permitted in this Lease. No forcible entry shall be made by Landlord unless such entry shall be reasonably necessary to prevent injury, loss or damage to persons or property or otherwise for Landlord to exercise its rights under this Lease. Landlord shall promptly repair any damage to the Premises caused by or resulting from Landlord's undertaking or performance of maintenance, repairs, or improvements, and Landlord's entry onto the Premises for such purposes, excepting any damage caused by or resulting from actions taken by Landlord in the case of an emergency, a default by

Tenant hereunder, and the negligence, fault or willful misconduct of Tenant or anyone claiming by or through Tenant. No action of Landlord pursuant to this Article shall be deemed an eviction or disturbance of Tenant, nor shall Tenant be allowed damages for any injury or inconvenience occasioned thereby.

c. Shared Facilities. Landlord reserves the primary right to use, without cost or charge, the Coach Ed Field Playground, the Brook Street tennis courts and the parking lot and memorial site at the corner of Brook Street and Norwood Avenue (each a "Shared Facility and collectively, "Shared Facilities") to and for the Landlord and the residents of the Town of Manchester-by-the-Sea. The area of the Shared Facilities is Parcels 4 and *5* on the Valuation Survey dated June 1926, prepared by Raymond C. Allen, Civil Engineer, as amended, a copy of a potion of which is attached hereto as Exhibit A-3. Unless the parties agree otherwise in writing, (i) each may use a Shared Facility only to an extent and in a manner consistent with the practice of the parties at the date of execution of this Lease Agreement, (ii) a Shared Facility may not be materially altered without both parties' written concurrence and (iii) Landlord shall be responsible for maintenance, repair and up-keep of the Shared Facilities and shall indemnify Tenant against loss, cost (including, without limitation, reasonable attorney's fees) or damage arising from failure of Landlord to carry out this obligation.

d. Water Department Facilities. The land, buildings and facilities located on the Premises (the "Water Department Facilities"), which are now used by the Town of Manchester-by-the-Sea Water Department and which are approximately depicted on Exhibit D, attached hereto, shall remain temporarily under the custody, management and control of the Water Department until such time as the Town shall have provided replacement land, buildings and facilities in accordance with Article *4* of the June 24, 1959 Town Meeting. Landlord shall be responsible for maintenance, repair and up-keep of the Water Department Facilities and shall indemnify Tenant against loss, cost (including, without limitation, reasonable attorney's fees) or damage arising from failure of Landlord to carry out this obligation. Landlord shall have a right, by foot and by vehicle, of access to and egress from the Water Department Facilities in common with the Tenant over the walks and drives now or hereafter located on the Premises.

ARTICLE 8. Insurance

a. General Liability Insurance. During the Term, and for as long as Tenant shall occupy the Premises, Tenant shall keep in full force and effect, at its own expense, a general liability insurance policy, in occurrence form, covering bodily injury or death to persons and damage to or destruction of property, with coverage limits as Landlord shall reasonably request consistent with coverages carried by other schools and municipalities in Essex County, Massachusetts.

b. Fire and Casualty Insurance. During the Term, and for as long as Tenant shall occupy the Premises, Tenant shall keep in full force and effect, at its own expense, a fire and casualty insurance policy on the Premises, and all contents thereof with the usual extended coverage endorsements, which shall insure against perils normally covered by a so-called all risk policy, including, without limitation, differences in conditions, costs of demolition, vandalism, malicious mischief, collapse and increased costs of construction, and which shall be written on the replacement cost basis (with a so-called replacement cost endorsement), noncontributory as to all parties, in amounts not less than one hundred percent (100%) of the full replacement cost thereof above foundation walls, with only such commercially reasonable deductibles as the Landlord reasonably approves.

c. Worker's Compensation Insurance. Tenant shall carry workers' compensation insurance as required by state and/or federal law.

d. Terrorism Insurance. Tenant shall carry terrorism insurance with such coverages and in such amounts as Landlord shall reasonably request from time to time but not less than coverages and amounts carried by other schools and municipalities in Essex County, Massachusetts.

e. Other Insurance. Tenant shall carry such other insurance with such coverages and in such amounts as Landlord shall reasonably request from time to time but not less than coverages and amounts carried by other schools and municipalities in Essex County, Massachusetts.

f. Additional Insurance Requirements. All insurance policies required under this Lease shall (i) name Landlord as an additional insured party; (ii) be issued by insurers having a minimum policy holders rating of"A" VIII per the latest rating publication Property and Casualty Insurers by A.M. Best Company (or which are otherwise approved by Landlord) and which are lawfully doing business in the Commonwealth of Massachusetts; and (iii) provide that the coverage maintained thereunder may not be canceled without at least thirty (30) days' prior notice to Landlord, and that any notice to Tenant that such coverage will not be renewed shall also be given simultaneously to Landlord.

g. Blanket Insurance Policies. Tenant shall have the right to provide the coverages required herein under blanket policies of insurance, provided that the coverage afforded Landlord shall not be diminished by reason thereof.

h. Review of Insurance Coverage. Upon notice from Landlord from time to time, Tenant shall deliver to Landlord evidence of the coverage required herein. Landlord shall have the right to review these insurance requirements at any time and from time to time and to require changes in the amounts of insurance or the types of insurance, or both, as it deems reasonably necessary in order to adequately protect its interests, but not more frequently than annually. If Tenant shall fail, refuse or neglect to obtain or maintain any insurance required to be carried by Tenant under this Lease, Landlord shall have the right, but not the obligation, at Landlord's option, to purchase such insurance and to pay the premiums thereon immediately upon notice (oral or written) to Tenant. All such payments made by Landlord shall be recoverable by Landlord from Tenant on demand as additional rent hereunder. If Tenant shall fail, refuse or neglect to obtain and maintain the insurance required pursuant to this Lease, and if Landlord does not acquire the insurance which Tenant has failed, refused or neglected to obtain and maintain as aforesaid, and the Premises sustains a loss which was not, but was required to be, covered by the insurance provided for in this Lease, then in that event Tenant shall be responsible for all reasonable costs and expenses incurred by Landlord in restoring and repairing the Premises and all related improvements to the condition that existed prior to the casualty.

i. Waiver of Recovery. Neither Landlord nor Tenant shall be liable to the other or to any insurance company (by way of subrogation or otherwise) insuring the other party for any loss or damage to any structure, building or other tangible property, or any resulting loss of income, or losses under workers' compensation laws and benefits, even though such damage or loss might have been occasioned by the negligence of Landlord or Tenant or any of their agents or employees, to the extent that any such loss or damage is covered by insurance benefiting the party suffering such loss or damage.

j. Indemnity Except if and to the extent Tenant has been released from liability pursuant to the provisions of Article 8(i) hereinabove, Tenant does hereby assume liability for, and does hereby agree to indemnify, protect, reimburse, defend, save and hold harmless Landlord from and against any and all liabilities, obligations, claims, actions, demands, fines, suits, judgments, penalties, damages and losses (including, without limitation, all of the costs, fees and expenses connected therewith or incident thereto, including, without limitation, reasonable legal fees and costs) for the death of or injury to any person whomsoever

and for loss of, damage to, or destruction of any property whatsoever (including, without limitation, loss of use thereof) arising out of the negligent or willful act or omission of Tenant, its officers, employees, agents, contractors or invitees as they relate to Tenant's use, occupancy of the Premises and/or maintenance, alteration or improvement thereof.

k. To the extent permitted by law, and except as otherwise provided under Article 11, Tenant shall occupy the Premises at its sole risk, and Landlord shall not be liable for any damages, direct or indirect, consequential or otherwise for any act or negligence by Landlord under this lease.

ARTICLE 9. Damage or Destruction by Eminent Domain, Fire or Casualty

a. Taking by Eminent Domain. In the event the Premises, or any material part thereof, shall be taken by any public authority or for any public use, and as a result of such taking, Tenant's ability to operate a school thereon is substantially impaired or prohibited, then any net damage award recovered shall be payable to Tenant in escrow for the purposes of restoring the Premises, as if the Premises were affected by casualty, and such restoration shall be made and funds disbursed in accordance with Article 9(b) hereinbelow. For purposes of this provision, net damage award shall refer to the gross damage award recovered by Landlord, less reasonable expenses, attorneys' fees and costs incurred by Landlord in the collection of the same, and in the event that the Premises or any material part thereof are taken by any public authority or for any public use, but such taking does not substantially impair or prohibit Tenant's operation of a school on the Premises, then any damage award recovered may be retained by Landlord, without further obligation to Tenant.

b. Damage by Fire or Casualty. If the Premises are damaged or destroyed by fire or other casualty insured against, then the net insurance proceeds recovered shall be placed in an escrow account for the restoration of the Premises or otherwise as provided in this Article 9, and the Tenant shall place the deductible and/or the amount uninsured into such escrow account, and Landlord shall have an obligation to use such funds, to repair or restore the Premises to their original condition, provided that in no event shall the Landlord be obligated to spend in excess of the funds in such escrow account for such restoration. For purposes of this provision, net insurance proceeds shall refer to the gross insurance proceeds received by Landlord, less reasonable expenses, attorney's fees and costs incurred by Landlord in connection with the collection of such proceeds. Such funds shall be made available either for the restoration of the Premises or construction of such new school building. Notwithstanding the foregoing, if the Premises are completely or substantially destroyed by fire or casualty, and the parties elect not to restore the School Building, or construct a substitute School Building on the Premises, then Landlord shall be entitled to any portion of the insurance proceeds allocable to the demolition of the Premises and site cleanup, and the remainder, plus the deductible and any uninsured amount shall be made available from such escrow fund for the construction of a school building on an alternative site. The escrow fund shall be held by the Tenant (Escrowee) and shall be subject to such reasonable requirements as the parties, including, without limitation, the Escrowee, shall reasonably require, and the parties shall use best efforts to agree to such terms of such escrow arrangement.

ARTICLE 10. Assignment and Subletting

Tenant shall have the right to sublet or license the Premises, or a portion thereof, in accordance with Chapter 71, Massachusetts General Laws, Sections 71 and 16(r) and any other governmental impositions regarding leasing of schools, as the same may be amended from time to time, including, without limitation, related regulations and policies adopted by the Tenant thereunder, including, without limitation, the then effective applicable policy regarding "Community Use of School Facilities" adopted by the Tenant, non-discriminatorily applied. No assignment or subletting shall relieve Tenant of its liabilities and obligations hereunder.

Tenant shall deliver to Landlord written monthly reports regarding any subleasing and licensing for any subleasing or licensing not later than the fifteenth day of the calendar month following the calendar month of such subleasing or licensing.

ARTICLE 11. No Liability of Landlord

Unless caused by or due to the negligence of Landlord, Landlord shall not be liable for any personal injury or property damage suffered by Tenant or of other occupants of the Premises.

ARTICLE 12. Surrender of the Premises

Upon termination or expiration of this Lease, Tenant shall quit and surrender the Premises, leaving the Premises in good order and condition, excepting ordinary wear and tear, damage by fire or other casualty, the elements, and any cause beyond Tenant's control. Upon termination or expiration of this Lease, Tenant shall remove all of its property from the Premises, except as provided otherwise herein. In the event that Tenant shall hold over after the termination or expiration of the Term of this Lease, Tenant shall reimburse Landlord for its loss, costs, including, without limitation, reasonable legal fees and costs, which Landlord may incur, directly or indirectly, consequential or otherwise, due to Tenant's failure to vacate the Premises.

ARTICLE 13. Removal of Improvements

Any fixtures, equipment, improvements, and signs installed or permanently affixed on the Premises by Tenant during the Term shall remain on the Premises and become property of Landlord upon the expiration of the Lease or earlier termination thereof. In the event that the Regionalization Agreement shall be terminated, all personal property shall remain at the Premises. In the event that a School Building shall cease being used as a school and a new school shall be constructed to replace same, all personal property shall be moved to such new school, provided that in the event that such personal property shall not be used at such new school, it shall remain or be moved back to the Premises, or disposed of as Landlord may direct, without cost or expense to the Landlord and with the Landlord to receive any proceeds. In any event, removal of fixtures, equipment and personal property shall be subject to Tenant's obligation to maintain the Premises and to deliver the Premises to the Landlord at the end of the term hereof in good condition, normal wear and tear and damage by casualty loss excepted, and to repair any damage caused by their removal.

ARTICLE 14. Severability

It is agreed that if any provision of this Lease shall be determined to be void by any court of competent jurisdiction, then such determination shall not affect any other provisions of this Lease, all of which other provisions shall remain in full force and effect, except to the extent the context requires otherwise; and it is the intention of the parties that if a provision of this Lease is capable of two constructions, one of which would render the provision void and the other of which would render the provision valid, then the provision shall have the meaning which renders it valid.

ARTICLE 15. Notice

Any notice, demand, consent or approval ("Notice") required by this Lease shall be in writing and shall be given by delivery by a nationally recognized overnight delivery service that routinely issues delivery receipts, or by mailing such Notice by registered or certified mail, return receipt requested, postage prepaid, to the following:

In the case of Landlord to:

Town Administrator
Town of Manchester-by-the-Sea
Town Hall, 10 Central Street
Manchester-by-the-Sea, Massachusetts 01944

In the case of Tenant to:

Superintendent of Schools
Manchester Essex Regional School District
36 Lincoln Street
Manchester-by-the-Sea, MA 01944

Each party may add or change its address, for the purpose of receiving Notice hereunder, by providing the other party with at least ten (10) days prior Notice of such change of address. Notices so given shall be deemed to be given and effective at the time they are delivered, tendered for delivery, or refused, at the address set forth above.

ARTICLE 16. Authority

Tenant warrants and represents that it is duly formed, organized and existing, that this Lease Agreement is within the scope of its powers and has been duly authorized and approved by the School Committee of Tenant. Landlord warrants and represents that (a) at the Commencement Date, the Premises were in the custody of Landlord, (b) pursuant to Town Meeting authorizations, Landlord entered into the Regionalization Agreement and (c) pursuant to authorization of the Board of Selectmen of Landlord, Landlord has executed and delivered this Lease Agreement.

ARTICLE 17. Waiver

The failure of either party to seek redress for violation of, or to insist upon the strict performance of any covenant or condition of this Lease shall not prevent a subsequent act which would have originally constituted a violation from having all the force and effect of an original violation. No provision in this Lease shall be deemed to have been waived by either party, unless such waiver be in writing. No act by Landlord or its agent shall be deemed an acceptance of surrender of the Premises or an agreement to accept such surrender unless in writing and signed by Landlord. The delivery of keys shall not operate as a termination of this Lease or surrender of the Premises.

ARTICLE 18. Captions

The captions of paragraphs in this Lease are inserted only as a matter of convenience, and shall in no way define, limit or describe the scope of this Lease or the intent of any provision hereof.

ARTICLE 19. Damages

Except as may be provided otherwise herein, Landlord shall not be liable for any consequential, special, punitive or indirect loss or damage which Tenant may incur or suffer in connection with this Lease or any services to be performed or provided pursuant thereto.

ARTICLE 20. Entire Agreement

This Lease and the exhibits annexed hereto contain the entire agreement between Landlord and Tenant, and all prior negotiations and agreements between the parties are merged into this Lease. No agreement hereafter made between Landlord and Tenant shall be effective to modify any provision of this Lease unless such agreement is in writing and signed by both parties. This Lease shall be binding upon, and inure to the benefit of, the parties hereto and their respective legal representatives, successors and assigns. This Lease shall run with the land.

Notwithstanding any other provision of this Agreement to the contrary, if there is any conflict between the provisions of this Agreement and the Regionalization Agreement, the provisions of the Regionalization Agreement shall prevail. In the event that the Regionalization Agreement is amended, such amendment by the voters of the member towns shall be deemed to modify the terms of this Lease Agreement to be consistent with the modified Regionalization Agreement.

ARTICLE 21. Recording.

Landlord and Tenant agree that this Lease will be recorded with the Essex South District Registry of Deeds in accordance with Chapter 183, Massachusetts General Laws, Section 4.

ARTICLE 22. Force Majeure.

Each of Landlord and Tenant shall be excused for the period of any delay in the performance of any obligation hereunder, other than Tenant's obligation to pay Rent or additional rent or to carry insurance as provided in this Lease, when such delay is occasioned by the other party, or by fire or other casualty, Acts of God, unusually severe weather conditions which would not reasonably be predicted and would not normally be factored into construction schedules in Essex County, Massachusetts area, strikes or work stoppages, shortages or unavailability of equipment or material, actions or failure to act of other governmental agencies or entities, war, invasions or hostility, civil disturbances or riots or environmental conditions on the Premises requiring further investigation and/or remediation. Any party, if utilizing this provision to suspend its obligations, shall give prompt notice to the other party, describing such condition and its anticipated effect, and it shall use commercially practicable best efforts to eliminate or reduce the effect of such conditions.

ARTICLE 23. Default

It shall be an event of default ("Event of Default") under this Lease if Tenant shall:

Default in the timely payment of Rent or additional rent or shall not maintain the insurance required to be maintained by Tenant hereunder, and such default shall not have been cured within five (5) days after notice to Tenant; or

Default in the observance or performance of any of Tenant's other covenants herein and such default shall not have been cured within twenty days after notice, provided that if the default complained of shall be of such a nature that the same cannot be completely remedied or cured within such twenty day period, then such default shall not be an enforceable default against Tenant for the purposes of this Article, if Tenant shall have commenced curing such default within such twenty-day period and shall proceed with reasonable diligence and in good faith to cure such default within thirty days; or

Be adjudicated bankrupt or insolvent, or have a receiver or trustee appointed for all or substantially all of its assets on the grounds of Tenant's insolvency or stiffer an order to be entered approving a petition filed against Tenant seeking reorganization of Tenant under the Federal Bankruptcy Laws or any other applicable law or statute of the United States or any State thereof, or if execution is issued against it, or if the interest of Tenant in this Lease passes by operation of law to any person other than Tenant; or

Institute any Chapter 11 or any other voluntary bankruptcy proceedings, or fail to have any involuntary proceedings instituted by anyone else to adjudge Tenant a bankrupt or to have a fiduciary appointed over the assets of Tenant dismissed within thirty days; or

Make an assignment for the benefit of its creditors, or file a voluntary petition in bankruptcy or a petition or answer seeking reorganization or arrangement under the Federal Bankruptcy Laws or any other applicable law or statute of the United States or any State thereof, or shall file a petition to take advantage of any insolvency act or shall consent to the appointment of a receiver or trustee of all or a substantial part of its business and property; or

Vacate the Premises and fail to (i) continue its maintenance obligations hereunder, (ii) provide adequate insurance on the Premises, including, without limitation, the improvements thereon, or (iii) provide adequate security for the Premises as a vacant building;

then upon the happening of any one or more of such Events of Default and the expiration of the period of time, if any allowed for curing same, Landlord may exercise any and all of its rights under this Lease Agreement, the Regionalization Agreement or otherwise.

ARTICLE 24. Hazardous Substances

(a)Tenant shall have the right to conduct its own environmental assessment of the Premises provided that (i) in doing so it shall not unduly interfere with any construction or remedial activities being then conducted on the Premises by Landlord and (ii) Tenant shall disclose the results of any such assessment to Landlord. Landlord shall be required to promptly remediate any condition which presents an immediate threat to health or safety or which requires immediate attention under applicable Environmental Laws, and shall promptly remove any Hazardous Substances that may be encountered in the course of work required by the Landlord's Limited Warranties. Landlord shall not be responsible to remediate any Hazardous Substances that do not present immediate threat to health or safety and do not require immediate removal under present Environmental Laws. Tenant shall be responsible for the removal of all remaining Hazardous Substances either during any Tenant Renovations or otherwise as required by Environmental Laws.

As used herein, "Hazardous Substances' means any substance which is toxic, ignitable, reactive, or corrosive or which is regulated by "Environmental Laws". The term "Environmental Laws" means federal, state and local laws and regulations, judgments, ordinances, orders and permits governing the protection of the environment,, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq. as amended (CERCLA); the Resource Conservation and Recovery Act, as amended, 42 U.S.C. 6901 et seq.; the Federal Water Pollution Control Act *(33* U.S.C.A. Section 1151 et seq.); the Clean Water Act, 33 U.S.C. 1251 et seq.; the Clean Air Act, 42 U.S.C. 7401 et seq.; the Toxic Substance Control Act, 15 U.S.C. 2601 et seq.; the Safe Drinking Water Act, 42 U.S.C. 300f through 300j; and the regulations promulgated thereunder. "Hazardous Substances" includes any and all material or substances that are defined as "hazardous waste", "extremely hazardous waste" or a "hazardous substance" pursuant to state, federal or local governmental law. "Hazardous Substances" includes but is not restricted to asbestos, polychlorinated biphenyls ("PCBs") and petroleum products.

(b)Tenant shall not cause or permit any Hazardous Substances to be used, stored, generated or disposed of in, on or about the Premises or the Project by Tenant, its agents, employees, contractors or invitees, except for those Hazardous Substances customarily used by schools and other educational facilities. Any such Hazardous Substances permitted on the Premises as hereinabove provided, and all containers therefore, shall be used, kept, stored and disposed of and shall be removed from the Premises upon the earlier of (i) when it is no longer needed for the purposes permitted hereunder and (ii) the termination of the Lease, in a manner that complies with all federal, state and local laws or regulations applicable to any such Hazardous Substances. Tenant further agrees that it shall, at its sole cost and expense (or at the expense of third parties other than Landlord), remove any Hazardous Substances which pose a threat to health, safety or the environment and which are required to be removed pursuant to any Environmental Laws and/or administrative determinations thereunder and which result from the acts of Tenant, its agents, employees and/or contractors. Tenant shall indemnify and hold harmless the Landlord from any and all claims, damages, fines, judgments, penalties, costs, expenses or liabilities (including, without limitation, any and all sums paid for settlement of claims, reasonable attorneys' fees, consultant and expert fees) arising under Environmental Laws or the common law, during or after the Term of this Lease, from or in connection with the use, storage, generation or disposal of Hazardous Substances in, on or about the Premises by Tenant, Tenant's agents, employees, contractors or invitees and/or arising from or caused by Tenant's breach of the foregoing representations and/or the foregoing agreement to remove such Hazardous Substances.

(c) The indemnification contained in subsection (b) above shall expressly include, without limitation, any and all costs incurred due to any investigation of the site or any cleanup, removal and restoration mandated by a federal, state or local agency or political subdivision, or any party acting on their behalf tinder any "Citizen Suit" provision or otherwise.

[The balance of this page is intentionally blank]

TOWN OF MANCHESTER-BY-THE-SEA

By its Board of Selectmen

Daniel Senecal, Chairman Date 7/1/04

Susan Thorne, Vice-Chairman Date 07/01/04

Dawn Grohs, Selectman Date 7/1/04

John H. Shea Jr., Selectman Date 07/01/04

Bryan Gubbins, Selectman Date 07/01/04

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT

Susan Beckmann, Chairman Date

Alfred Dente, Vice-Chairman Date 7/1/04

James J. Barrett, Jr. Date 7/1/04

Sarah Hammond Creighton Date 7/1/04

Karen Gaudiano Date 7/1/04

Ann W. Harrison Date 1 Jul 04

John Kiley Date

Robert Shaps, Superintendent Date 7/1/04

JOINDER

The Town of Essex does hereby join and subscribe to this Lease Agreement solely for the purpose of recognizing and agreeing to the provisions of Article 6f and 6g.

TOWN OF ESSEX

By its Board of Selectmen

7/01/04

Rolf P. Madsen, Chairman Date

7/1/04

Jeffery D. Jones, Selectman Date

Mark Lynch, Selectman Date

Lease Amendment as voted by the MERSD school committee April 4, 2007

Ms Harrison moved to approve an amendment to Article 7 Section C of the lease agreement between the Town of Manchester-by-the-Sea and the Manchester Essex Regional School district to read as follows:

> "Article 7. Access
> c. Coach Field Playground and Shared Facilities. Landlord reserves the primary right to use the Coach Ed Field Playground ("Coach Field Playground"), and the Brook Street tennis courts and the parking lot and memorial site at the corner of Brook Street and Norwood Avenue (each a "Shared Facility" and collectively, "Shared Facilities") to and for the Landlord and the residents of the Town of Manchester-by-the-Sea. The area of the Coach Field Playground and Shared Facilities is Parcels 4 and 5 on the Valuation Survey dated June 1926, prepared by Raymond C. Allen, Civil Engineer, as amended, a copy of a portion of which is attached hereto as Exhibit A-3. Unless the parties agree otherwise in writing, (i) the Landlord may use the Shared Facilities without cost or charge, (ii) each may use a Shared Facility or Coach Field Playground only to an extent and in a manner consistent with the practice of the parties at the date of execution of this Lease Agreement, (iii) neither the Coach Field Playground nor a Shared Facility may be materially altered without both parties' written concurrence, (iv) Landlord shall be responsible for maintenance, repair, and up-keep of the Shared Facilities and shall indemnify Tenant against loss, cost (including, without limitation, reasonable attorney's fees) or damages arising from failure of Landlord to carry out this obligation, (v) Tenant shall be responsible for maintenance, repair, and up-keep of the Coach Field Playground and shall indemnify Landlord against loss, cost (including, without limitation, reasonable attorney's fees) or damages arising from failure of Tenant to carry out this obligation, and (vi) Tenant may assess Landlord for a share of the cost of maintenance, repair, and up-keep of the Coach Field Playground proportionate the extent of Landlord's use of the playground."

Ms Cameron seconded Ms Harrison's motion and it passed unanimously.

SIDE LETTER OF AGREEMENT TO ADDRESS ARTICLE 7. c. (iii) OF THE AMENDED SCHOOL LEASE AGREEMENT BETWEEN THE TOWN OF MANCHESTER-BY-THE-SEA AND THE MANCHESTER ESSEX REGIONAL SCHOOL COMMITTEE

The Board of Selectmen of Manchester-by-the-Sea and the Manchester Essex School Committee both hereby agree to a "material" alteration of Coach Field playground, specifically the installation of synthetic turf on that portion of coach field presently used as a soccer field. The specifications related to this installation to be substantially coincident with those described in Volume I, Section 02540 of the Project Manual for the Manchester-Essex Middle High School.

TOWN OF MANCHESTER-BY-THE-SEA
By its Board of Selectmen

Susan W. Thorne, Chair — Date 4/30/07

John H. Shea, Vice-Chair — Date 4/30/07

Dawn H. Grohs — Date 4/30/07

Bryan Gubbins — Date 4/30/07

Thomas Kehoe — Date 4/30/07

MANCHESTER ESSEX REGIONAL SCHOOL COMMITTEE

Susan M. Beckmann, Chair — Date 4.10.07

Karen Gaudiano, Vice-Chair — Date 4-10-07

Annie Cameron — Date 4/10/07

Susan Coviello — Date 4.10.07

Anton Giedt — Date 5/9/2007

Ann W. Harrison — Date

John J. Kiley — Date 4/10/07

SIDE LETTER OF AGREEMENT TO ADDRESS ARTICLE 7. c. (iii) OF THE AMENDED SCHOOL LEASE AGREEMENT BETWEEN THE TOWN OF MANCHESTER-BY-THE-SEA AND THE MANCHESTER ESSEX REGIONAL SCHOOL COMMITTEE

The Board of Selectmen of Manchester-by-the-Sea and the Manchester Essex School Committee both hereby agree to a "material" alteration of Coach Field playground, specifically the installation of synthetic turf on that portion of coach field presently used as a soccer field. The specifications related to this installation to be substantially coincident with those described in Volume 1, Section 02540 of the Project Manual for the Manchester-Essex Middle High School.

TOWN OF MANCHESTER-BY-THE-SEA
By its Board of Selectmen

Susan W. Thorne, Chair — Date 4/30/07

John H. Shea, Vice-Chair — Date 4/30/07

Dawn H. Grohs — Date 4/30/07

Bryan Gubbins — Date 4/30/07

Thomas Kehoe — Date 4/30/07

MANCHESTER ESSEX REGIONAL SCHOOL COMMITTEE

Susan M. Beckmann, Chair — Date 4.10.07

Karen Gaudiano, Vice-Chair — Date 4/10/07

Annie Cameron — Date 4/10/07

Susan Covillo — Date 4.10.07

Anton Chedt — Date

Ann W. Harrison — Date

John J. Kiley — Date 4/10/07

EXHIBIT A

Legal Description

I. Area North of Lincoln Street

That certain parcel of land in the Town of Manchester-by-the-Sea being Parcels II and the Westerly portion of Parcel 18 on the Valuation Survey dated October *23,* 1925, prepared by Raymond C. Allen, Civil Engineer, as amended, a copy of a portion of which is attached hereto as Exhibit A-i. Said parcel contains approximately 12.34 acres of land as depicted on the sketch plan attached hereto as Exhibit A-2, the exact area and dimensions of which shall be determined by a survey to be prepared by Landlord, at Landlord's cost and expense.

Being the premises conveyed to the Town by Deed of Nora T. Flatley dated July 22, 1952 recorded with Essex South District Registry of Deeds in Book 3911, Page 250 and a portion of the premises taken by the Town by an instrument of taking dated September 11, 1891 recorded with said Deeds in Book 1320, Page 451 and *454.* Also see Confirmatory Deeds recorded in Book 1381, page 87 and Deeds recorded in Book 1575,page 262 and Book 1645, page 289.

II. Area South of Lincoln Street

That certain parcel of land in the Town of Manchester-by-the-Sea being Parcels 4, 5 and *6* on the Valuation Survey dated June 1926, prepared by Raymond C. Allen, Civil Engineer, as amended, a copy of a portion of which is attached hereto as Exhibit *A-3.*

Included within said property is a parcel of registered land being Lot A' on Land Court Plan B *5245* to which reference is made for a more particular description. Being the premises conveyed to Landlord by the following Deeds:

Henrietta J Price	May 1, 1900	B 1609, p. 447
Alfred Annable, et al	May 1, 1900	B. 1609, p. 446
Lucy A. Carroll	May *5,* 1905	B. 1776, p. *536*
Morley & Flatley	April *25,* 1905	B. 1776, p. *538*
John J. Wynne	April 12, 1909	B. 1776, p. 540
Clara J. Ayers, Conservator and	February *5,* 1947	B. *3507,* p. 137
Individually	February 5, 1947	B. *3507,* **p.** 138

Excepting and excluding 444 square feet deeded to Samuel Knight by Deed dated August 12, 1907, recorded in Book 1900, page *58.*

III. The Pedestrian Bridge over Lincoln Street connecting Areas I and II

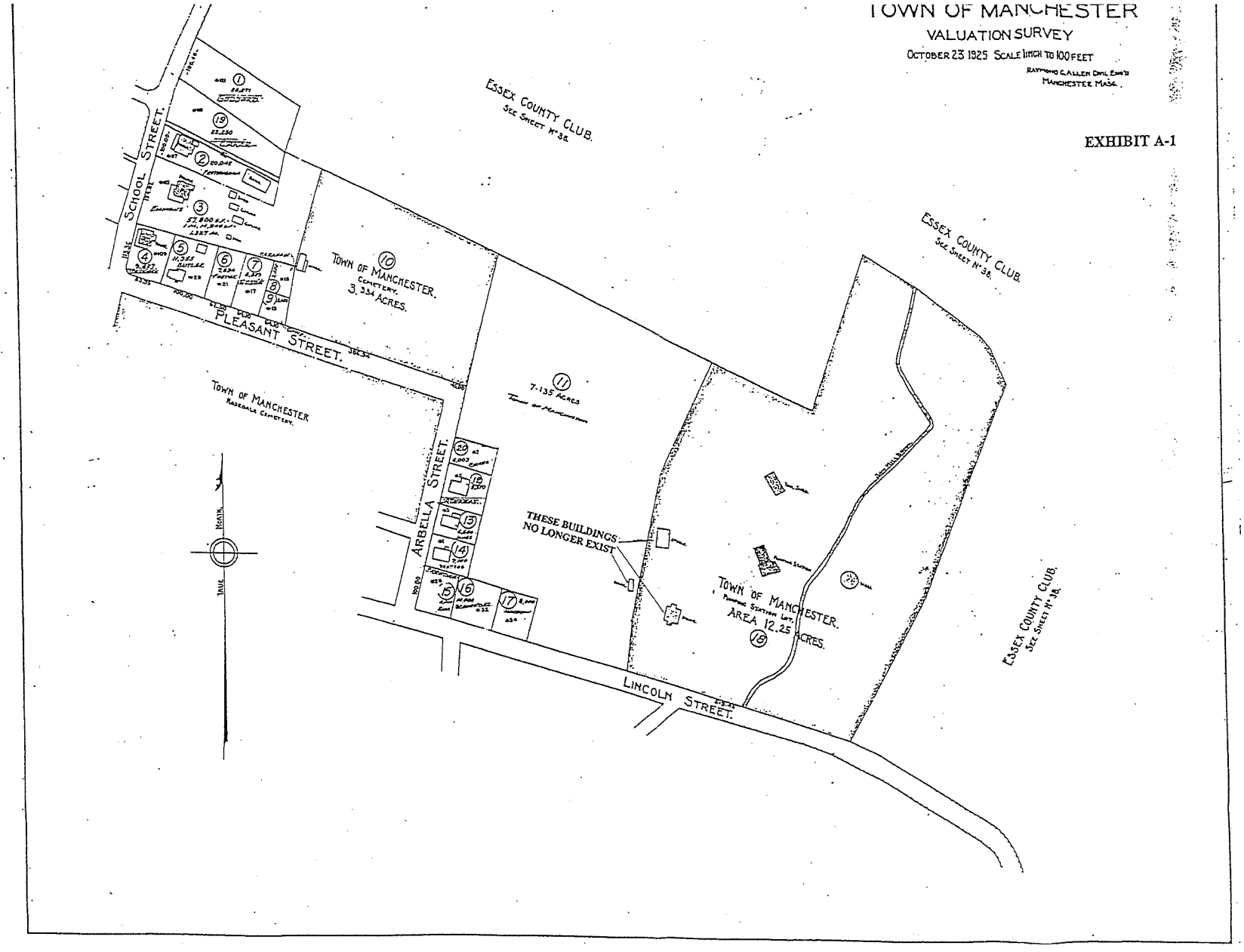
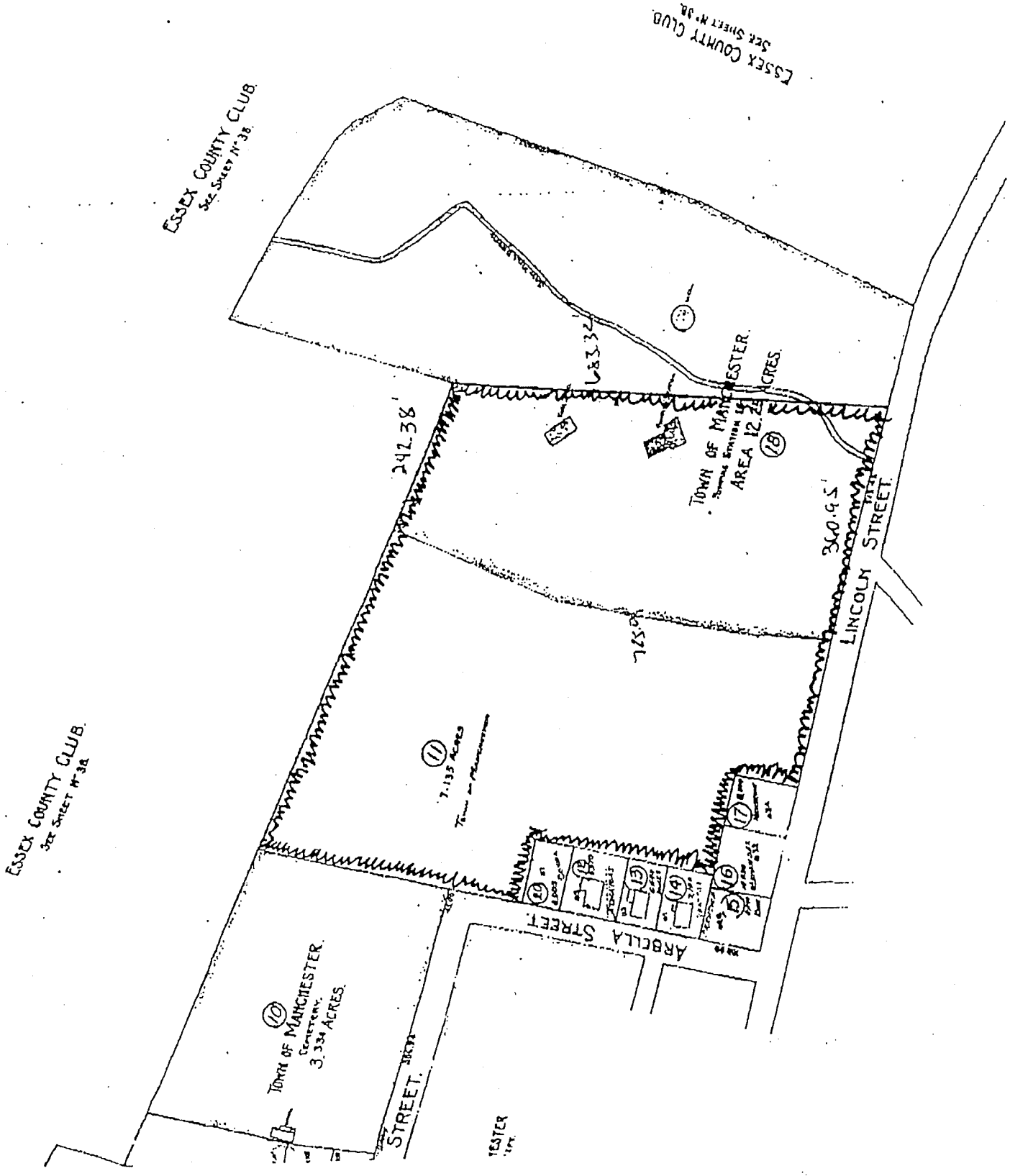

TOWN OF MANCHESTER
VALUATION SURVEY
OCTOBER 23 1925 SCALE 1 INCH TO 100 FEET
RAYMOND C. ALLEN CIVIL ENGR
MANCHESTER MASS.
EXHIBIT A-1
ESSEX COUNTY CLUB.
See Sheet N° 3a.
SCHOOL STREET.
PLEASANT STREET.
TOWN OF MANCHESTER
CEMETERY.
3.334 ACRES.
TOWN OF MANCHESTER
7.135 ACRES
ARBELLA STREET.
THESE BUILDINGS
NO LONGER EXIST
TOWN OF MANCHESTER.
AREA 12.25 ACRES.
LINCOLN STREET.
ESSEX COUNTY CLUB.
See Sheet N° 3a.
ESSEX COUNTY CLUB.
See Sheet N° 3a.
NORTH
TRUE

EXHIBIT A-2


ESSEX COUNTY CLUB
See Sheet N° 38
ESSEX COUNTY CLUB
See Sheet N° 38
ESSEX COUNTY CLUB
See Sheet N° 38
242.38'
L33.34'
TOWN OF MANCHESTER
AREA 12.2 ACRES
18
340.65'
LINCOLN STREET
745.37'
11
7.135 ACRES
17
16
15
14
13
12
ARBELLA STREET
10
TOWN OF MANCHESTER
CEMETERY
3.334 ACRES
STREET
TESTER

TOWN OF MANCHESTER

VALUATION SURVEY

JUNE 1926.

SCALE: 1 INCH TO 60 FEET.

RAYMOND C. ALLEN
CIVIL ENGINEER

EXHIBIT A-3

EXHIBIT B-1

LANDLORD'S REPAIRS AND OTHER WORK
MEMORIAL SCHOOL

Repairs and Other Work Performed by Landlord

During Period July 1, 2000 - March 31, 2004

Item	Cost
Repaired exit and emergency lighting (Memorial and Jr.-Sr. High Schools)	$54,000
Repaired HV AC system (Memorial and Jr.-Sr. High Schools)	$127,000
Miscellaneous repairs (drainage, electrical)	$9,000
Fire alarm upgrade (Memorial and Jr.-Sr. High Schools)	$70,200
Repaired boiler leak	$8,300
Window repairs	$6,507
Repaved walk C Wing	$4,752
Replaced exterior door C Wing	$4,850
Lowered roof drains	See Jr.-Sr. High School reroof labs
Wired boiler flame out alarm to central alarm panel	$1,656

Repairs and Other Work to be Performed by Landlord

During Period April 1. 2004 - June 30, 2005

Item	Comment	Estimated Cost
Upgrade selected electrical components	Proceed as needed	As needed
Ensure that boilers operate through warranty period	Proceed as needed to keep boilers serviceable	As needed
Make C Wing handicapped accessible	Proceed as needed	As needed
Repair roof leaks	Proceed as needed	As needed

EXHIBIT B-2

LANDLORD'S REPAIRS AND OTHER WORK
MANCHESTER ESSEX JUNIOR-SENIOR HIGH SCHOOL

Repairs and Other Work Performed by Landlord

During Period July 1, 2000 - March 31, 2004

Item	Cost
Repaired exit and emergency lighting	See Memorial School
Repaired HV AC system	See Memorial School
Repaired gym corridor roof leaks	$13,560
Fire alarm upgrade	See Memorial School
Re-roof over computer and science labs	$35,000
Minor roof leaks	See Memorial School window repairs
Repaired exhaust fans and ventilation units	$13,900

Repairs and Other Work to be Performed by Landlord

During Period April 1. 2004 - June 30. 2005

Item	Comment	Estimated Cost
Upgrade selected electrical components	Proceed as needed	As needed
Ensure that boilers operate through warranty period	Proceed as needed to keep boilers serviceable	As needed
Repair boiler	Work ongoing	$80,000 estimate
Repair clerestory windows	Proceed as needed	As needed
Repair curtain wall	Proceed as needed	As needed
Repair roof leaks	Proceed as needed	As needed

EXHIBIT C

Services provided by Landlord to or for the benefit of Tenant since the Commencement Date:

Refuse and recyclable collection and disposal

Snow plowing and sanding of all school property

Installing and removing snow fence for football and baseball

Sweeping driveways, parking lots and play areas

Lawn and tree care and maintenance

Athletic field maintenance at Hyland Field

Maintenance and repair of the irrigation system at Hyland Field

Moving football sleds and goal posts

Brush chipping and removal

Moving chairs for graduation related activities

Moving rubber mats for school activities

Repairing water and sewer leaks on school property

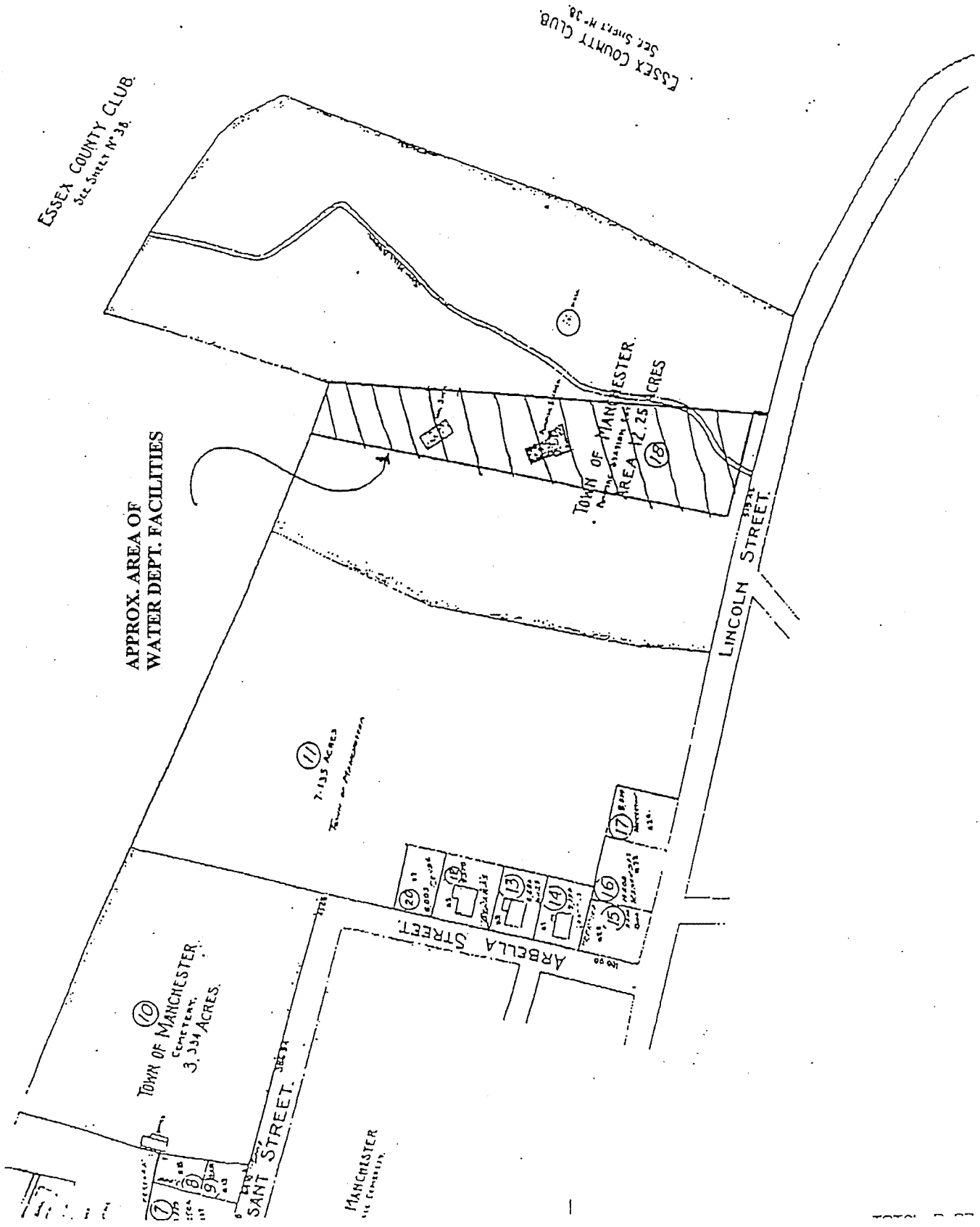
Moving and disposing of large or bulky items at the Transfer Station

Disposal of used electronics (computers)

Bituminous concrete paving of driveways and walks

EXHIBIT D

Sketch of Approximate Area of Water Department Facilities



LOCAL ACTIONS AND APPROVALS

SECTION 3.1.8.10

MEETING AGENDA

Meeting Date:	April 29, 2025
Meeting Time:	6:00PM – 8:00PM
Project Name:	Essex Elementary School
Project Number:	202306980020
Meeting Purpose:	School Building Committee Meeting
Location:	This meeting will be a hybrid meeting (both in-person and remote) at Essex Elementary School Cafeteria
Meeting Link:	https://us06web.zoom.us/j/83451795832

---

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes
3. Designer RFS Review & Approval (Vote Expected)
    - Vote to solicit the Designer RFS based on MSBA Review and Approval
4. Town Owned Land
5. Website
6. Goal Setting
7. Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
10. Public Comment
11. Adjourn

DORE + WHITTIER

Project:	Essex Elementary School	Project No:	
Subject:	School Building Committee Meeting	Meeting Date:	04/29/2025
Location:	Hybrid (Essex Elementary School Cafeteria & Zoom)	Time:	6:00 PM
Distribution:	Attendees, Project File	Prepared By:	Jacob Greco

Present	Name	Affiliation
√	Michelle Cresta	Director of Finance & Operations
√	Pam Beaudoin	Superintendent
√	Kim Provost	Principal
	Jason Waldron	Facilities Manager
√	Theresa Whitman	SBC Co-Chair
√	John Binieris	SBC Co-Chair
√	Ruth Pereen	Essex Board of Selectman Chair
√	Andy Oldeman	Manchester Finance Committee / Director of Engineering (Structural Engineer)
	Charlie Hay	Architect School Building Experience
√	Gordon Brewster	Engineer, Sr. Proj. Manager, Owner's PM, former Member of MERMHS & Memorial building
√	Tyler Virden	Project Executive -Wise Construction / Paren
√	Annie Cameron	Former SC Member and Memorial SBC Member
	Henry Oettinger	Manchester Conservation Committee / Education
	Ariel Fernando Brian	Architect - CBT
√	Jen Hocherman	Architect - Partner SV Design
√	Michael Gerhardt	Civil Engineer / Parent
√	Timonthy McDonald	Architect - Onion Flats
√	David Pereen	Resident / Plumbing & Fire
√	Lisa O'Donnell	Design & Construction / Essex Planning Board
√	Mike Burton	Project Director / Partner - DWMP
√	Christina Dell Angelo	Project Executive - DWMP
√	John Albright	Project Manager - DWMP
√	Rachel Rincon	Assistant Project Manager - DWMP
√	Jacob Greco	Assistant Project Manager - DWMP

DORE + WHITTIER

Item No.	Action Item	Requested by	Ball in Court
1.6/1.7	Send out goal setting and working group survey	N/A	R.Rincon
1.8	Send out calendar invites for upcoming SBC meetings	A.Cameron	J.Greco
1.5	Purchase domain name and launch website	N/A	Dore + Whittier
1.4	Follow up with JCJ to explore the Manchester Memorial expansion possibilities	N/A	Dore + Whittier
1.9	Update the Elementary School Educational Program	Dore + Whittier	P.Beaudoin

- **Please click here for the presentation**
  - **This will be referenced in the meeting minutes with slide numbers called out to refer to.**
- **Below is a summation of key points, please view the recording here for full transcript and chapter summaries.**

<table>
<tr><th>Item No.</th><th></th><th>Description</th><th>Action</th></tr>
<tr><td>1.1</td><td>Call to Order & Intro: Called to order by T.Whitman at 6:02pm, please refer to the attendee list.

• M.Burton introduced the project team that will be working on the Essex Elementary School Project (Slide 3)
• The School Building Committee introduced themselves</td><td>Record</td><td></td></tr>
<tr><td>1.2</td><td>Approval of March 25 - 2025, Meeting Minutes:

Roll Call Vote: A motion to approve the March 25, 2025, Meeting Minutes made by A.Cameron and seconded by P.Beaudoin.

<table>
<tr><td>Name</td><td>Yes/No/Abstain & Absent</td></tr>
<tr><td>Michelle Cresta</td><td>Yes</td></tr>
<tr><td>Pam Beaudoin</td><td>Yes</td></tr>
<tr><td>Kim Provost</td><td>Yes</td></tr>
</table>
</td><td>Record</td><td></td></tr>
</table>

	<table><tr><td>Jason Waldron</td><td>Advisor – No Vote</td></tr><tr><td>Theresa Whitman</td><td>Yes</td></tr><tr><td>John Binieris</td><td>Yes</td></tr><tr><td>Ruth Pereen</td><td>Yes</td></tr><tr><td>Andy Oldeman</td><td>Yes</td></tr><tr><td>Charlie Hay</td><td>Yes</td></tr><tr><td>Gordon Brewster</td><td>Yes</td></tr><tr><td>Tyler Virden</td><td>Yes</td></tr><tr><td>Adam Zaiger</td><td>Yes</td></tr><tr><td>Annie Cameron</td><td>Yes</td></tr><tr><td>Henry Oettinger</td><td>Yes</td></tr><tr><td>Ariel Fernando Brian</td><td>Yes</td></tr><tr><td>Jen Hocherman</td><td>Yes</td></tr><tr><td>Michael Gerhardt</td><td>Yes</td></tr><tr><td>Timonthy McDonald</td><td>Yes</td></tr><tr><td>David Pereen</td><td>Advisor – No Vote</td></tr><tr><td>Lisa O'Donnell</td><td>Advisor – No Vote</td></tr></table>		

1.3	**Designer Request for Services (RFS) Review & Approval (Vote Expected):**
	
	• C.Dell Angelo reviewed the overall project timeline for Massachusetts School Building Authority (MSBA) projects and noted this project is currently in the Design Request for Services (Slide 7)
	• C.Dell Angelo noted that at the next SBC meeting in May the SBC will vote on which members will be part of the Designer Selection Committee (Slide 8)
	  ○ A.Cameron Asked if this is the group that the committee would present their options to?
	  • M.Burton noted that selecting a Designer is a lot different than the OPM as the MSBA is in the driver's seat more so than the committee. The SBC will comprise only 3 voting members for the Design selection out of 18. M.Burton reviewed the general process and noted how the MSBA wants everyone to have an open mind and prefers that the Designer Selection committee members do not rank the options
	  ○ A.Cameron asked if the SBC members votes are weighted as there is only 3 of them?
	  • C.Dell Angelo noted no that is not the case but the MSBA wants to hear from the District and values their opinion
		Record	

- T.Whitman asked what happens if you have worked with firms and not had a positive experience
  - M.Burton noted that it is best to advocate for the positives of the firms and not the negatives
- P.Beaudoin noted that for the Manchester project the MSBA pushed for a new architect to be chosen and the SBC members did a good job of advocating for what the SBC wanted
- G.Brewster asked how do we ensure that there will be enough Designer interest in the project?
  - M.Burton noted he is not sure who will reply to the advertisement but noted he has started talking with the architect side of the Dore + Whittier team to get a sense of the workload of these firms as that is the most important factor that MSBA considers
- G.Brewster asked if there is a "weeding out" process prior to the selection
  - M.Burton noted no there is not but it is okay to have a preferred top half and discussion around the Designers just no formal rankings. This can happen after the proposals are in
- J.Binieris Asked if the workload is only MSBA projects or does it account for all the projects the firms have?
  - M.Burton noted that Karl Brown will start the meeting by sharing how many MSBA projects each firm has

- C.Dell Angelo reviewed the Designer RFS Schedule and noted how the MSBA provides this and they prefer that it is not changed drastically (Slide 9)
  - Submit ad to Central Register: 5/29/25
  - Ad appears in Central Register: 6/4/25
  - Applications due: 7/2/25
    - At least 3 proposals are required to move forward with the process
  - Applications sent to MSBA: 7/10/25
  - Application Reviews: **7/29/25**
  - Interviews: **8/12/25**
- M.Burton noted it is important that for whoever is on the Designer Selection Committee
- A.Cameron Asked when does the full SBC get to review and provide feedback on the proposals
  - C.Dell Angelo noted that the SBC will have two weeks to review and provide feedback to those members who will be voting
- G.Brewster asked if this RFS document is standard?
  - C.Dell Angelo noted that yes it is only the names and dates were changed and some basic information from the statement of interest was added

DORE + WHITTIER

Roll Call Vote: A motion to solicit the Designer RFS based on MSBA Review and Approval was made by Ruth and seconded by Pam

Name	Yes/No/Abstain & Absent
Michelle Cresta	Yes
Pam Beaudoin	Yes
Kim Provost	Yes
Jason Waldron	Advisor – No Vote
Theresa Whitman	Yes
John Binieris	Yes
Ruth Pereen	Yes
Andy Oldeman	Yes
Charlie Hay	Yes
Gordon Brewster	Yes
Tyler Virden	Yes
Adam Zaiger	Yes
Annie Cameron	Yes
Henry Oettinger	Yes
Ariel Fernando Brian	Yes
Jen Hocherman	Yes
Michael Gerhardt	Yes
Timonthy McDonald	Yes
David Pereen	Advisor – No Vote
Lisa O'Donnell	Advisor – No Vote

1.4 **Town Owned Land:**

- C.Dell Angelo reviewed the process of reviewing all possible sites (all town owned feasible land) for the project as is required by the MSBA (Slide 12)
  - MSBA Process required to identify all sites for consideration during Feasibility Phase
  - Once the designer is on board, we will review multiple sites with consultants and SBC
  - Started initial discussion with Essex Town Administrator
  - Some properties identified by Town Administrator and in Habeeb Report, will need to further review

Record

- M.Burton noted that although this does not happen until the PDP it is important to do as much work as possible as we wait for the Designer to join the team
- A.Cameron Asked what the qualifications are for the town owned land to be accepted?
    - M.Burton noted that they start with all town owned land and work through it to eliminate any that do not work given size, wetlands, etc..
- P.Beaudoin Asked when this process can start?
    - M.Burton noted they can start to gather potential sites now but it is really better to dive deep into this once the Designer is on board.
- G.Brewster noted it will be good to go back to the Manchester Memorial project and see what the project team did and if that school can support another school
- ? Asked if the need to explore this information is in the RFS
    - C.Dell Angelo noted yes it is
- ? Asked when Geotech and wetland consultants get involved in the project?
    - C.Dell Angelo noted once they join the project they will bring their consultants but it should be known that if multiple sites want to be reviewed deeply it will cost more money than just one site
- T.Whitman asked if older tests for sites can be used to help evaluate them? She also asked if there is anything the SBC can do to start looking into it?
    - P.Beaudoin noted that the project team will get all the information from the town and they will lay it out for the committee to review and provide feedback on
- M.Burton noted it is important to note that the MSBA only reimburses for costs that are in the property lines, he is not sure if property acquisition falls into that same bucket but the MSBA will not sign a Project Funding Agreement if the property is not 100% owned by the town
- A.Cameron asked if they plan to look at any private property?
    - C.Dell Angelo noted they were only planning on looking into town owned and it is not common for smaller projects like elementary schools
- G.Brewster asked if the Designer will establish a program with size and massing to help fit it into these potential sites?
    - M.Burton noted yes and there is also a MSBA template that uses a formula to spit out a school square footage based on enrollment
    - C.Dell Angelo also noted that the educational program also is an important factor in driving the size of the building
- A.Cameron asked about the Ipswich "Model School"
    - P.Beaudoin noted it is just a citizen petition to ask them to considered it and is not an official MSBA route

	• M.Burton noted it is a great concept but has not seen it work in practice and building code is always changing		
1.5	**Website:** • R.Rincon shared how the project team has developed a new website for the project to use (Slide 14). She also went through a live run through of the website showing the different tabs and the general layout of the website • R.Rincon noted that the site is ready to launch it just needs a domain name to be chosen ○ The committee agreed on: MERSDEssexelementaryproject.com • C.Dell Angelo asked for the committee members to review it when it is live and provide any feedback that they have	Record	

1.6	**Goal Setting:**
	• R.Rincon discussed the use of goal setting (Slide 16) and how they will be asking the community members about what their goals are for the project. She also noted they will have a survey question asking the SBC members about which working groups they would like to participate in.
	• C.Dell Angelo added that this is a great way for the project team to get to know the committee members and shared that working groups have been very useful in the past to work in a smaller setting. When there are larger SBC groups the working groups are especially useful
	• G.Brewster noted how on the Memorial Project they had a Design Working Group and asked if that can be one
	  ○ C.Dell Angelo noted yes it can be and asked for G.Brewster to add it under the "other category" on his survey
	• P.Beaudoin noted they will be adding a faculty member in the fall to the committee and also asked if the Designers still do visioning/programming sessions
	  ○ C.Dell Angelo noted yes that will be one of the first things to be conducted
		Record	

1.7	**Working Groups:** • Please see minutes from section 1.7	Record	
1.8	**Upcoming Meetings:**	Record	

<table>
<tr><td></td><td>

- C.Dell Angelo reviewed the upcoming SBC meetings (Slide 20) but noted that the May 27th meeting may have a conflict so the project team will send out an updated timeline based on discussion.
- C.Dell Angelo noted the May 27th will be removed and the June 24th will still be on with the July 22 meeting on standby
- C.Dell Angelo reviewed a timeline scenario for a new construction of K-5 (Slide 22)
- C.Dell Angelo noted she has already started working with P.Beaudoin on getting the Educational Program ready
  - A.Cameron noted that the program should be on par with the Manchester Memorial Project

</td><td></td><td></td></tr>
<tr><td>1.9</td><td>

Other Topics not Reasonably Anticipated 48 hours prior to the meeting:

- P.Beaudoin noted that the MSBA noted they would need a new signed Regional District Agreement if the District wanted to send Essex Elementary students to Manchester Memorial school
- M.Gerhardt asked how long the feasibility phase can go on
  - C.Dell Angelo noted that the Feasibility Study Agreement lasts for 913 days but extensions can be made
- M.Burton noted that if multiple sites want to be reviewed the Designer's may say more time is needed than the schedule

</td><td>Record</td><td></td></tr>
<tr><td>1.10</td><td>

Public Comment:

- J.Foster shared a thanks to the project team and SBC for undergoing this process

</td><td>Record</td><td></td></tr>
<tr><td>1.11</td><td>

Adjourn:

Roll Call Vote: A motion to adjourn the meeting was made at 7:09pm by A.Cameron and seconded by G.Brewster

Name	Yes/No/Abstain & Absent
Michelle Cresta	Yes
Pam Beaudoin	Yes
Kim Provost	Yes
Jason Waldron	Advisor – No Vote
Theresa Whitman	Yes
John Binieris	Yes
Ruth Pereen	Yes
Andy Oldeman	Yes

</td><td>Record</td><td></td></tr>
</table>

	Charlie Hay	Yes		
	Gordon Brewster	Yes		
	Tyler Virden	Yes		
	Adam Zaiger	Yes		
	Annie Cameron	Yes		
	Henry Oettinger	Yes		
	Ariel Fernando Brian	Yes		
	Jen Hocherman	Yes		
	Michael Gerhardt	Yes		
	Timonthy McDonald	Yes		
	David Pereen	Advisor – No Vote		
	Lisa O'Donnell	Advisor – No Vote		

Sincerely,
DORE + WHITTIER
Jacob Greco
Assistant Project Manager
Cc: Attendees, File
The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes.

Essex Elementary School Project

School Building Committee Meeting #01

April 29, 2025 @ 6:00 PM

DORE + WHITTIER

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes
3. Designer RFS Review & Approval (Vote Expected)
   - Vote to solicit the Designer RFS based on MSBA Review and Approval
4. Town Owned Land
5. Website
6. Goal Setting
7. Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
10. Public Comment
11. Adjourn

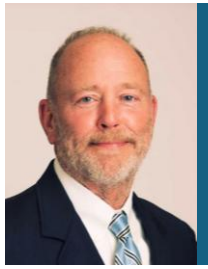
1. Introduction



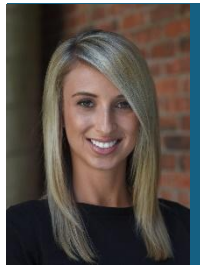
Mike Burton
Project Executive



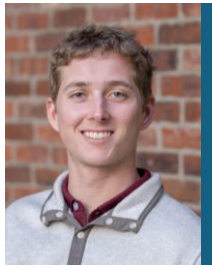
Christina Dell Angelo
Project Director



John Albright
Project Manager



Rachel Rincon
Assistant Project Manager



Jacob Greco
Assistant Project Manager

Dan Wiedeman
On-Site Project Rep



Dave Mentzer
Code & Design Review

Peter Bradley
PM&C
Cost Estimating

Victor Verma
RSV Associates
Structural Peer Review

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes
3. Designer RFS Review & Approval (Vote Expected)
   - Vote to solicit the Designer RFS based on MSBA Review and Approval
4. Town Owned Land
5. Website
6. Goal Setting
7. Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
10. Public Comment
11. Adjourn

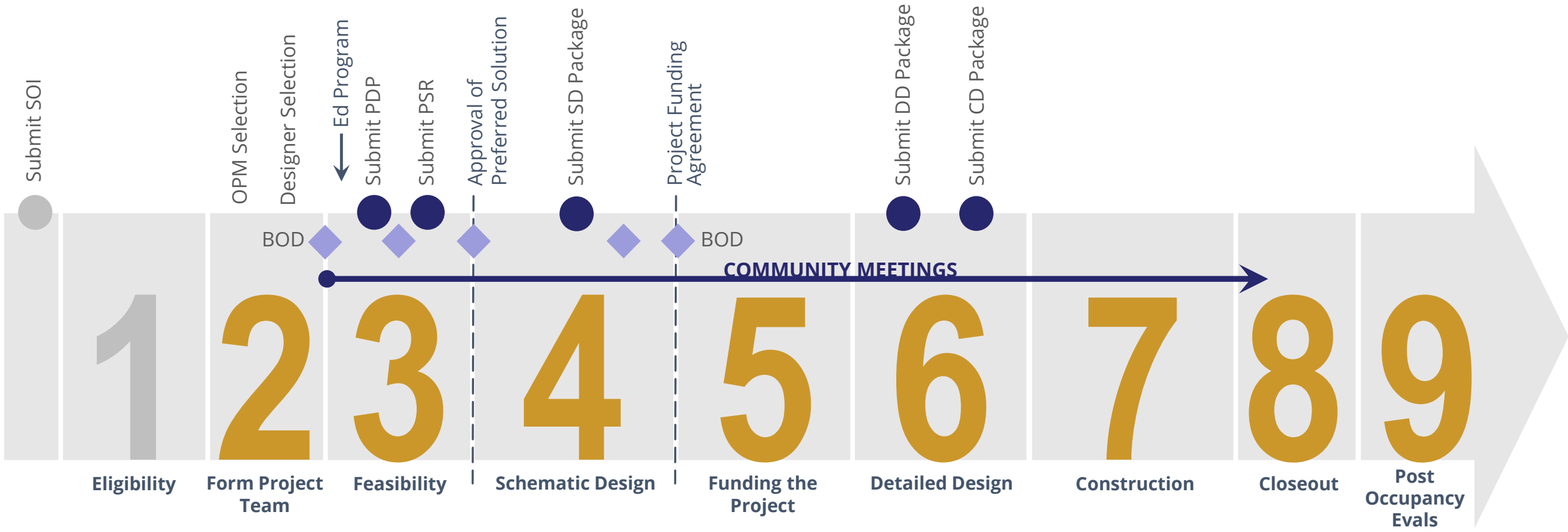
2. Approval of Previous Meeting Minutes

March 25, 2025 Meeting Minutes – approval (vote required)

***Motion to approve EES Previous Meeting Minutes**

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes
3. Designer RFS Review & Approval (Vote Expected)
   - Vote to solicit the Designer RFS based on MSBA Review and Approval
4. Town Owned Land
5. Website
6. Goal Setting
7. Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
10. Public Comment
11. Adjourn

Schedule Timeline



3. Designer RFS Process-Designer Selection Panel

- **TBD – CEO**
- **TBD – Superintendent**
- **TBD – School Committee Designee**
- Christine B. Verbitzki, AIA, MSBA Designee, Registered Architect, Chair
- Beth McDougal, AIA, MSBA Designee, Registered Architect, Vice-Chair
- Russell Bartash, MA Building Trades Council Designee
- Karl Brown, AIA, MSBA Staff, Registered Architect
- Greg Brunell, MSBA Staff
- Veatriki Dagkalakou, MSBA Staff
- David Eisen, FAIA, Boston Society of Architects Designee, Registered Architect
- John S. Ferrante, Associated General Contractors of Massachusetts Designee
- Barbara Hansberry, MSBA Executive Director Designee
- Richard Hudson, MSBA Staff
- Leo F. Peters, FACEC, Professional Engineer
- Rachel E. Shanley, PE, LEED, MSBA Designee, Professional Engineer
- Diane Sullivan, MSBA Staff
- Kenneth Wertz, Public Member
- John F. Jumpe Jr., Professional Engineer, MSBA Staff *

3. Designer RFS Schedule

- Submit ad to Central Register: 5/29/25
- Ad appears in Central Register: 6/4/25
- Applications due: 7/2/25
- Applications sent to MSBA: 7/10/25
- Application Reviews: **7/29/25**
- Interviews: **8/12/25**

3. Designer RFS Review & Approval (Vote Expected)

*Motion to solicit the Designer RFS based on MSBA Review and Approval

REQUEST FOR DESIGNER SERVICES (RFS)

Manchester Essex Regional School District

Essex Elementary School

June 4th, 2025

Invitation: The ***Manchester Essex Regional School District*** ("Owner") is seeking the services of a qualified "Designer" within the meaning of M.G.L. Chapter 7C, Section 44 to provide professional design and construction administration services for the Essex Elementary School in Essex, Massachusetts. Selection of a Designer will be made by the Designer Selection Panel of the Massachusetts School Building Authority ("MSBA") in accordance with the MSBA's Designer Selection Procedures.

The Owner is seeking design services to conduct a Feasibility Study which will include the development and evaluation of potential alternative solutions and continue through the Schematic Design Phase of the preferred alternative initially. Subject to the acceptance of a Project by the MSBA and further subject to adequate funding authorized by the Owner, the contract between the Owner and the Designer may be amended to include continued designer services through design development, construction contract documents, bidding, award of construction contract(s), construction administration, final closeout and warranty period of the potential Project. (**See**: Designer Services Contract Amendment for Design/Bid/Build and Designer Services Contract Amendment for CM-at-Risk). A potential Project may include a renovation of the existing school, a renovation of and addition to the existing school and/or new construction. Upon the completion of a Feasibility Study (Module 3), and if the District's preferred option is determined to be new construction, the District may consider participation in the MSBA Model School Program.

The estimated construction budget for a potential Project may range from ***$66,000,000 to $74,000,000*** depending upon the Preferred Schematic solution that is recommended by the Owner and accepted by the MSBA. The Fee for Basic Services will be negotiated.

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes
3. Designer RFS Review & Approval (Vote Expected)
   - Vote to solicit the Designer RFS based on MSBA Review and Approval
4. Town Owned Land
5. Website
6. Goal Setting
7. Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
10. Public Comment
11. Adjourn

4. Town Owned Land

- MSBA Process required to identify all sites for consideration during Feasibility Phase
- Once the designer is on board, we will review multiple sites with consultants and SBC
- Started initial discussion with Essex Town Administrator
- Some properties identified by Town Administrator and in Habeeb Report, will need to further review

SBC Meeting Agenda – April 29, 2025 @ 7:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes
3. Designer RFS Review & Approval (Vote Expected)
   - Vote to solicit the Designer RFS based on MSBA Review and Approval
4. Town Owned Land
5. Website
6. Goal Setting
7. Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
10. Public Comment
11. Adjourn

5. Project Website



Potential Domain Names:

- MERSDEssexbuildingproject.com
- MERSDEssexelementaryproject.com
- MERSDEssexESbuildingproject.com

SBC Meeting Agenda – April 29, 2025 @ 7:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes
3. Designer RFS Review & Approval (Vote Expected)
   - Vote to solicit the Designer RFS based on MSBA Review and Approval
4. Town Owned Land
5. Website
6. Goal Setting
7. Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
10. Public Comment
11. Adjourn

6. Goal Setting

"Designing/building a school that **meets the needs** of the district and the taxpayers."

"**Cost** efficiency – the Essex Elementary School will be next so both towns have to see that this can be done within a **reasonable** budget and in a way that does not prevent/preclude or substantially delay a future redo of EES."

"**Balance!** I want a good learning environment for students and staff that does not **cost** so much it is called Taj Mahal."

"**Educational program** for students – innovative and current to prepare students for a dynamic and ever-changing world."

"**Design** and **cost** are the two top items of most importance. Because of the constrained site conditions, the building layout and configuration are of paramount concern to assure the **mandates of the ed program** are met."

"Building what we need (not more than we need), on time and on **budget** Ensuring that design **meets educational needs**, Ensuring that we go to the towns knowing that we will get a YES vote for Construction."

"Budget, **sustainability** (maintenance and green construction) and a final product that will be serviceable, both physically and programmatically, for many years."

"To strike a compromise: between **program** and **cost** **energy efficiency** and simplicity; design and pragmatism."

"**21st Century learning** architecture conducive to learning and collaboration, **cost efficiency**, scheduling"

"**Excellence of the overall project**, resolving any political differences between Essex and Manchester regarding cost, keeping the existing auditorium, not reducing size of the existing gymnasium"

"Being proactive on **budget management** and communications. Ensuring **quality construction** Sensitivity to needs of multiple constituencies. Timely follow up from partners (OPM, Designer, Contractor). Detailed record keeping."

"A building designed to support **21st century learning**, a building process that is sensitive to the needs of the current school while in operation, **flexibility** of design (i.e., grade level configurations can change from year to year), traffic flow/patterns, parking, etc."

https://forms.gle/vwcKJWzYUiseCv4G7

SBC Meeting Agenda – April 29, 2025 @ 7:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes
3. Designer RFS Review & Approval (Vote Expected)
   - Vote to solicit the Designer RFS based on MSBA Review and Approval
4. Town Owned Land
5. Website
6. Goal Setting
7. Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
10. Public Comment
11. Adjourn

7. Working Groups

- Community Outreach Working Group
- Sustainability Working Group
- Ed Planning/Learning Technology Working Group
- Facilities Assessment Working Group
- Public Relations/Information Sharing Working Group
- Financial Review Working Group
- Interior Design Working Group
- Exterior Design/Landscaping Working Group
- Site Logistics Working Group

SBC Meeting Agenda – April 29, 2025 @ 7:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes
3. Designer RFS Review & Approval (Vote Expected)
   - Vote to solicit the Designer RFS based on MSBA Review and Approval
4. Town Owned Land
5. Website
6. Goal Setting
7. Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
10. Public Comment
11. Adjourn

13. Upcoming Meetings

- SBC Meeting No. 2 – May 27, 2025 @ 6:00PM
  - Module 3 Review (Preliminary Design Program, Educational Program, Space Summary, Potential Sites, Preferred Schematic Report)

- SBC Meeting No. 3 – June 24, 2025 @ 6:00PM **(TBD)**

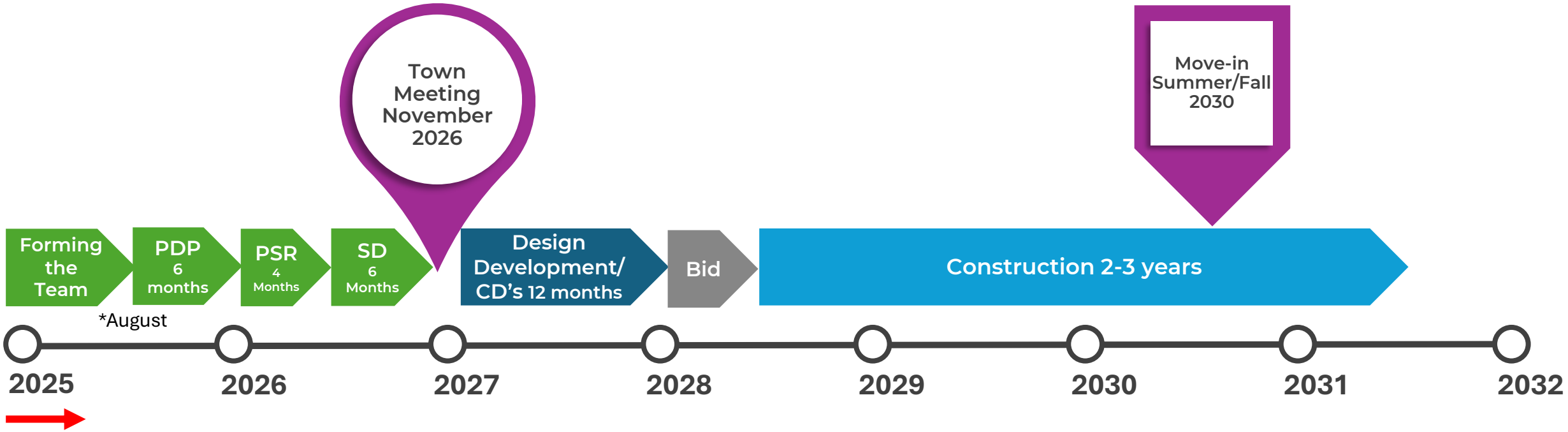
- SBC Meeting No. 4 – July 22, 2025 @ 6:00PM **(TBD)**

- SBC Meeting No. 5 – August 26, 2025 @ 6:00PM
  - Designer Meeting #1

3. Designer RFS Schedule

- Submit ad to Central Register: 5/29/25
- Ad appears in Central Register: 6/4/25
- Applications due: 7/2/25
- Applications sent to MSBA: 7/10/25
- Application Reviews: **7/29/25**
- Interviews: **8/12/25**

Anticipated Project Timeline



We are here

Construction duration is shown to provide a potential range.
Final duration will be determined toward the end of initial design.

SBC Meeting Agenda – April 29, 2025 @ 7:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes
3. Designer RFS Review & Approval (Vote Expected)
   - Vote to solicit the Designer RFS based on MSBA Review and Approval
4. Town Owned Land
5. Website
6. Goal Setting
7. Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
10. Public Comment
11. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes
3. Designer RFS Review & Approval (Vote Expected)
   - Vote to solicit the Designer RFS based on MSBA Review and Approval
4. Town Owned Land
5. Website
6. Goal Setting
7. Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
10. Public Comment
11. Adjourn

SBC Meeting Agenda – April 29, 2025 @ 7:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes
3. Designer RFS Review & Approval (Vote Expected)
   - Vote to solicit the Designer RFS based on MSBA Review and Approval
4. Town Owned Land
5. Website
6. Goal Setting
7. Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
10. Public Comment
11. Adjourn

Cost Effective

Thoughtful

Collaborative

Detailed

Committed

Creative

Experienced

Proactive

DORE + WHITTIER

MEETING AGENDA

Meeting Date: June 24, 2025
Meeting Time: 6:00PM – 8:00PM
Project Name: Essex Elementary School
Project Number: 202306980020
Meeting Purpose: School Building Committee Meeting
Location: This meeting will be a hybrid meeting (both in-person and remote) at Essex Elementary School Cafeteria
Meeting Link: https://us06web.zoom.us/j/85349809336

---

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
3. Invoices & Commitments for Review and Approval (Vote Expected)
4. Designer Selection Process (Vote Expected)
5. Memorial Elementary School Expansion Potential
6. Website
7. Goal Setting
8. Working Groups
9. Upcoming Meetings
10. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
11. Public Comment
12. Adjourn

DORE + WHITTIER

Project:	Essex Elementary School	Project No:	
Subject:	School Building Committee Meeting	Meeting Date:	06/24/2025
Location:	Hybrid (Essex Elementary School Cafeteria & Zoom)	Time:	6:00 PM
Distribution:	Attendees, Project File	Prepared By:	Jacob Greco

Present	Name	Affiliation
√	Michelle Cresta	Director of Finance & Operations
√	Pam Beaudoin	Superintendent
√	Kim Provost	Principal
	Jason Waldron	Facilities Manager
√	Theresa Whitman	SBC Co-Chair
√	John Binieris	SBC Co-Chair
	Ruth Pereen	Essex Board of Selectman Chair
	Andy Oldeman	Manchester Finance Committee / Director of Engineering (Structural Engineer)
√	Charlie Hay	Architect School Building Experience
√	Gordon Brewster	Engineer, Sr. Proj. Manager, Owner's PM, former Member of MERMHS & Memorial building
√	Tyler Virden	Project Executive -Wise Construction / Paren
√	Annie Cameron	Former SC Member and Memorial SBC Member
√	Henry Oettinger	Manchester Conservation Committee / Education
	Ariel Fernando Brian	Architect - CBT
√	Jen Hocherman	Architect - Partner SV Design
√	Michael Gerhardt	Civil Engineer / Parent
	Timonthy McDonald	Architect - Onion Flats
√	David Pereen	Resident / Plumbing & Fire
√	Lisa O'Donnell	Design & Construction / Essex Planning Board
	Mike Burton	Project Director / Partner - DWMP
√	Christina Dell Angelo	Project Executive - DWMP
√	John Albright	Project Manager - DWMP
	Rachel Rincon	Assistant Project Manager - DWMP
√	Jacob Greco	Assistant Project Manager - DWMP

DORE + WHITTIER

Item No.	Action Item	Requested by	Ball in Court

- **Please click here for the presentation**
  - **This will be referenced in the meeting minutes with slide numbers called out to refer to.**
- **Below is a summation of key points, please view the recording here for full transcript and chapter summaries.**

Item No.		Description	Action
2.1	**Call to Order & Intro:** Called to order by T.Whitman at 6:03pm, please refer to the attendee list.	Record	
2.2	**Approval of April 29 - 2025, Meeting Minutes:** **Roll Call Vote:** A motion to approve the April 29, 2025, Meeting Minutes made by Tracy and seconded by tyler . Name / Yes/No/Abstain & Absent Michelle Cresta / Yes Pam Beaudoin / Yes Kim Provost / Yes Jason Waldron / Advisor – No Vote Theresa Whitman / Yes John Binieris / Yes Ruth Pereen / Yes Andy Oldeman / Charlie Hay / Abstain Gordon Brewster / Yes Tyler Virden / Yes Adam Zaiger / Yes Annie Cameron / Yes Henry Oettinger / Yes Ariel Fernando Brian / Jen Hocherman /	Record	

	Michael Gerhardt		
	Timonthy McDonald		
	David Pereen	Advisor – No Vote	
	Lisa O'Donnell	Advisor – No Vote	
2.3	**Invoices & Commitments for Review and Approval (Vote Expected)** **Roll Call Vote:** A motion to approve the DWMP Invoice No. 1 made by Tracy and seconded by henry .		Record
	Name	Yes/No/Abstain & Absent	
	Michelle Cresta	Yes	
	Pam Beaudoin	Yes	
	Kim Provost	Yes	
	Jason Waldron	Advisor – No Vote	
	Theresa Whitman	Yes	
	John Binieris	Yes	
	Ruth Pereen		
	Andy Oldeman		
	Charlie Hay	Yes	
	Gordon Brewster	Yes	
	Tyler Virden	Yes	
	Adam Zaiger	Yes	
	Annie Cameron	Yes	
	Henry Oettinger	Yes	
	Ariel Fernando Brian	Yes	
	Jen Hocherman		
	Michael Gerhardt		
	Timonthy McDonald		
	David Pereen	Advisor – No Vote	
	Lisa O'Donnell		
2.4	**Designer Selection Process (Vote Expected)** • C.Dell Angelo reviewed the Designer Selection Panel and noted how the committee must select three members to join it, the CEO, Superintendent & a School Committee Designee (Slide 6)		Record

- P.Beaudoin noted that she would nominate M.Cresta to take her second position and that a third would have to be voted for
- T.Whitman asked J.Binieres if he would want to take part
    - J.Binieres deferred to someone with more experience
- G.Brewster asked C.Dell Angelo who she recommends, and she noted that G.Brewster may be a good person to take part in this as he has a lot of experience in the industry and has participated in previous panels
- T.Virden noted that J.Hocherman would be a good candidate
    - J.Hocherman asked what the time commitment would be for this.
    - C.Dell Angelo reviewed the designer selection timeline (Slide 7)
- P.Beaudoin asked the group if there should be an Essex representative on the panel
    - C.Hay noted no that does not seem like it should be required, and they are hiring a Designer, and the important part should be being able to advocate for what the District wants
    - G.Brewster agreed that being able to have a strong voice in the meetings with the MSBA is very important
- C.Dell Angelo noted there are a lot of different paths this process can take depending on how many proposals the project receives and how strong they are. She also noted that the whole process is virtual now
- T.Whitman noted she is from Essex and is not concerned if there are no Essex representatives on the panel
- P.Beaudoin noted that last time they were very clear to the MSBA that they had to make a selection at the meeting

Roll Call Vote: A motion to approve the three voting members of the Designer Selection Panel (P.Beaudoin, M.Cresta & G.Brewster) made by C.Hay seconded by A.Cameron.

Name	Yes/No/Abstain & Absent
Michelle Cresta	Yes
Pam Beaudoin	Yes
Kim Provost	Yes
Jason Waldron	Advisor – No Vote
Theresa Whitman	Yes
John Binieris	Yes
Ruth Pereen	

2.5	**Memorial Elementary School Expansion Potential**
	
	• C.Dell Angelo reviewed the potential expansion of the Memorial Elementary School building (Slide 10 - 12)
	  ○ C.Hay asked what the political impact of this would be.
	  ○ A.Cameron asked what the impact would have had if they just closed EES and moved them all to MMES?
	  • G.Brewster noted they would be putting more kids into the same size space that it currently is
	  • P.Beaudon noted that the school is not designed for around 300 more students
	  ○ A.Cameron noted aside from educational space, the school would still have even worse parking and pick up issues along with outdoor space. A.Cameron noted that it may be smart to go through this process just to be able to prove that it is not feasible and knock this option out for feasibility study
	  • P.Beaudoin noted that goal of including this is to show that it is not an option, she noted that the		

Andy Oldeman	
Charlie Hay	Yes
Gordon Brewster	Yes
Tyler Virden	Yes
Adam Zaiger	
Annie Cameron	Yes
Henry Oettinger	Yes
Ariel Fernando Brian	
Jen Hocherman	Yes
Michael Gerhardt	
Timonthy McDonald	
David Pereen	Advisor – No Vote
Lisa O'Donnell	

- A.Cameron asked if there will be a larger group of SBC members that will review the proposals aside from the three selected?
  - C.Dell Angelo noted that they will meet with the selected members and the whole SBC can have a review and discussion also
  - A.Cameron thought that last time there was a larger working group that reviewed them all
- C.Dell Angelo reviewed the firms that attended the Designer Selection walkthrough at Essex Elementary School (Slide 8)

	district does not have a desire to rework the educational program but noted that it has to be included as they already submitted it to the MSBA • C.Dell Angelo noted that if they wanted to go through with this they would have to make a really strong case to the MSBA about why their educational program changed so drastically from the MMES that it can now accommodate all these new students ○ P.Beaudoin noted that the project team will review all the options to help find the most cost effective one via the MSBA process. She also noted that she does not think there will be any operational cost savings due to how many students there will be in the school ○ T.Verden asked if all the students who moved to MMES would the educational program be met • C.Hay noted no it would not ○ T.Whitman asked if it would meet health and safety standards and noted she knows it would not meet the classroom population number • It was noted that it would have to be reviewed ○ A.Cameron noted that having this information and why it would not work as an FAQ would be smart as it would be brought ○ G.Brewster noted that will politics and money aside there could be an opportunity to do an addition renovation project on the current MMES to accommodate the full Manchester-Essex program • C.Dell Angelo noted that this is a very high-level review, and it will take getting the designer on board to really get into the weeds and figure out what is possible and what isn't • T.Whitman noted that it will be important to include language so that a no cost option is not viable		
2.6	**Website:** • C.Dell Angelo reviewed the website and noted that it can be edited live and will host a lot of information for the project (Slide 13) • C.Dell Angelo noted it will be important for a list of FAQs to be developed	Record	
2.7	**Goal Setting:**	Record	

	• C.Dell Angelo reviewed the goal setting responses gathered from the committee (Slide 15-16)
	• A.Cameron noted that she is disappointed that educational program or anything student released is not larger on the word cloud
	  ○ C.Hay agreed but also noted how the MSBA process really makes the educational program very important and an important aspect of their project
	• C.Dell Angelo noted it could be a good idea to continue asking for the goal setting throughout the process to see how it changes
	• P.Beaudon shared how the SBC is not building an educational program as this is already created but is making a building for the future and the educational program helps keep this in check and the building should reflect what is important in the program. She noted it is not a cost driver but is a philosophy for the district
	  ○ C.Hay added that the district writes the educational program so they do have control over the philosophy and what will be included in the building		

2.8	**Working Groups:** • C.Dell Angelo reviewed the responses to the working group selections (Slide 18) • C.Dell Angelo noted they are very useful for having productive conversations and then bring them back to the SBC for review. She noted they will start organizing them and sending out invites once the designer is on board	Record	
2.9	**Upcoming Meetings:** • C.Dell Angelo reviewed the upcoming meetings (Slide 20)	Record	
2.10	**Other Topics not Reasonably Anticipated 48 hours prior to the meeting:** • None	Record	
2.11	**Public Comment:** • None	Record	
2.12	**Adjourn:**	Record	

Roll Call Vote: A motion to adjourn the meeting was made at 6:58 pm by T.Virden and seconded by H.Oettinger

Name	Yes/No/Abstain & Absent
Michelle Cresta	Yes
Pam Beaudoin	Yes
Kim Provost	Yes
Jason Waldron	Advisor – No Vote
Theresa Whitman	Yes
John Binieris	
Ruth Pereen	
Andy Oldeman	
Charlie Hay	Yes
Gordon Brewster	Yes
Tyler Virden	Yes
Adam Zaiger	
Annie Cameron	Yes
Henry Oettinger	Yes
Ariel Fernando Brian	
Jen Hocherman	Yes
Michael Gerhardt	
Timonthy McDonald	
David Pereen	Advisor – No Vote
Lisa O'Donnell	Advisor – No Vote

Sincerely,
DORE + WHITTIER
Jacob Greco
Assistant Project Manager
Cc: Attendees, File
The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes.

Essex Elementary School Project

School Building Committee Meeting #02

June 24, 2025 @ 6:00 PM

DORE + WHITTIER

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes 4/29/25 (Vote Expected)
3. Invoices & Commitments for Review and Approval
   - DWMP Invoice No. 1 - $22,423.00 (Vote Expected)
4. Designer Selection Process (Vote Expected)
5. Memorial Elementary School Expansion Potential
6. Website
7. Goal Setting
8. Working Groups
9. Upcoming Meetings
10. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
11. Public Comment
12. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes 4/29/25 (Vote Expected)
3. Invoices & Commitments for Review and Approval
   - DWMP Invoice No. 1 - $22,423.00 (Vote Expected)
4. Designer Selection Process (Vote Expected)
5. Memorial Elementary School Expansion Potential
6. Website
7. Goal Setting
8. Working Groups
9. Upcoming Meetings
10. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
11. Public Comment
12. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes 4/29/25 (Vote Expected)
3. Invoices & Commitments for Review and Approval
   - DWMP Invoice No. 1 - $22,423.00 (Vote Expected)
4. Designer Selection Process (Vote Expected)
5. Memorial Elementary School Expansion Potential
6. Website
7. Goal Setting
8. Working Groups
9. Upcoming Meetings
10. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
11. Public Comment
12. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes 4/29/25 (Vote Expected)
3. Invoices & Commitments for Review and Approval
   - DWMP Invoice No. 1 - $22,423.00 (Vote Expected)
4. Designer Selection Process (Vote Expected)
5. Memorial Elementary School Expansion Potential
6. Website
7. Goal Setting
8. Working Groups
9. Upcoming Meetings
10. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
11. Public Comment
12. Adjourn

Designer RFS Process-Designer Selection Panel

- **TBD – CEO**
- **TBD – Superintendent**
- **TBD – School Committee Designee**
- Beth McDougal, AIA, MSBA Designee, Registered Architect, Vice-Chair
- Rachel E. Shanley, PE, LEED, MSBA Designee, Professional Engineer, Vice-Chair
- Russell Bartash, MA Building Trades Council Designee
- Eric Bernardin, ACEC Designee, Professional Engineer
- Karl Brown, AIA, MSBA Staff, Registered Architect
- John S. Ferrante, Associated General Contractors of Massachusetts Designee
- Barbara Hansberry, MSBA Executive Director Designee
- Eric LeBeau, Public Member
- Joseph McDonough, Public Member
- Leo F. Peters, FACEC, Professional Engineer
- Alankrita Prasad, MA AIA Designee, Registered Architect
- Jose Soliva, AIA, MSBA Designee, Registered Architect
- Ashley Stanton, MSBA Staff
- Peter Sun, MSBA Staff
- Diane Sullivan, MSBA Staff
- Emily Udy, MSBA Staff
- John F. Jumpe Jr., Professional Engineer, MSBA Staff *

Designer RFS Schedule

- Submit Ad to Central Register: 5/29/25
- Ad Appears in Central Register: 6/4/25
- Designer Walkthrough: 6/18/25
- Applications Due: 7/2/25
- Applications Sent to MSBA: 7/10/25
- Application Reviews: **7/29/25**
- Interviews: **8/12/25**

Designer RFS Walkthrough Attendees

- Flansburgh
- JCJ Architecture
- Lavallee Brensinger
- NV5
- IMEG
- CES
- Morgan Thompson Architects
- CBT

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes 4/29/25 (Vote Expected)
3. Invoices & Commitments for Review and Approval
   - DWMP Invoice No. 1 - $22,423.00 (Vote Expected)
4. Designer Selection Process (Vote Expected)
5. Memorial Elementary School Expansion Potential
6. Website
7. Goal Setting
8. Working Groups
9. Upcoming Meetings
10. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
11. Public Comment
12. Adjourn

Manchester Memorial Elementary School Expansion Potential

- PSR phase planned expansion intended for northwest part of site
- Project progressed, flood plains and restrictions, approach revised
- PreK reduced from 4 to 2 moved to northeast part of site
- Potential expansion plans moved to northeast part of site
- If facility needed to be expanded rely on reprogramming
- Proposed expansion would be adding two classrooms at the northeast off the PreK wing and repurposed the two project rooms into general classrooms
- Would provide 4 additional classrooms to the school

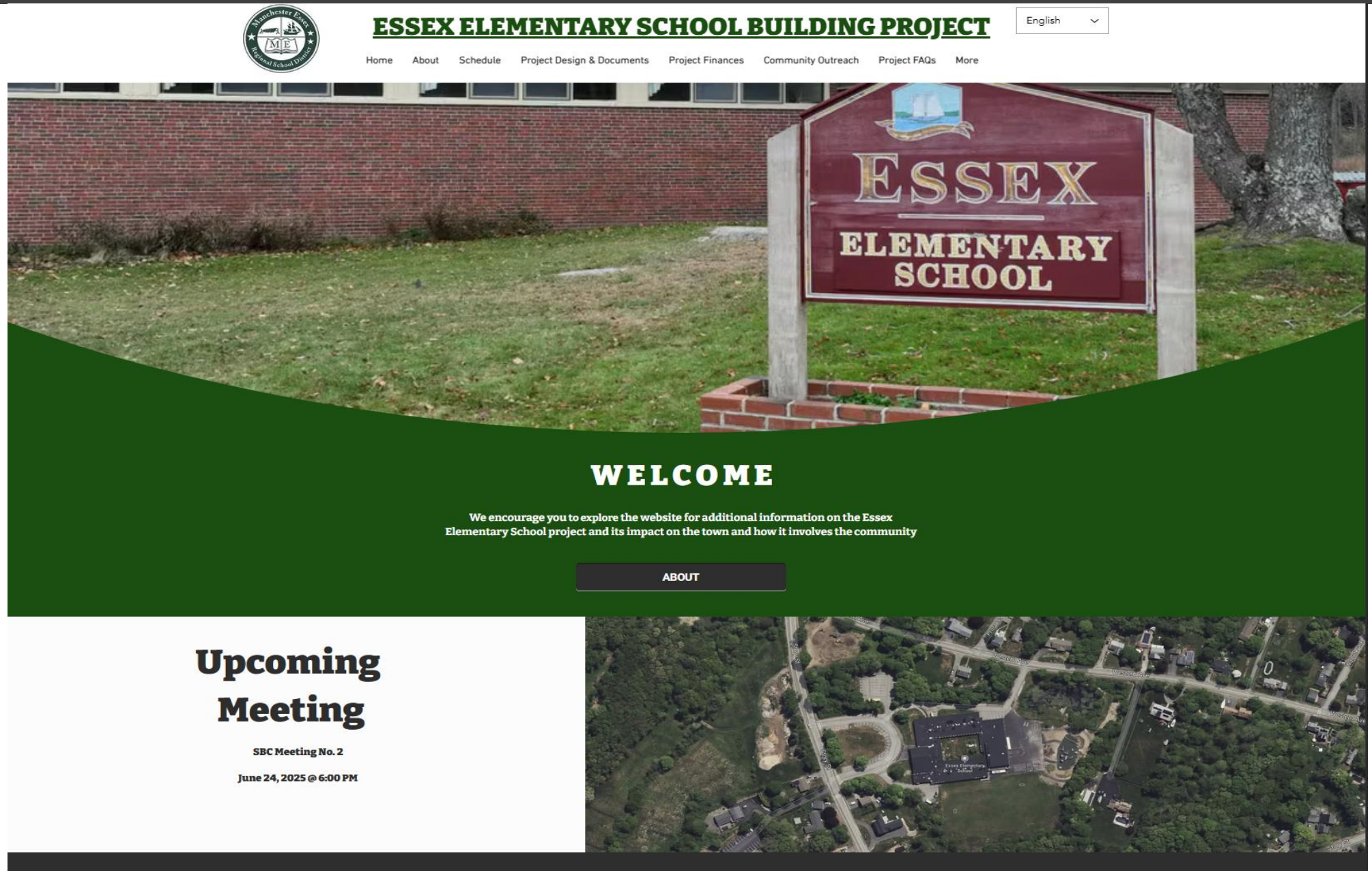
Manchester Memorial Elementary School Expansion Potential



- If further expansion was needed, PreK program would need to be removed, PreK wing would become kindergarten, and existing k would become general classrooms
- Would add 6 total classrooms to the school and account for 1 additional classroom per grade
- Existing building foundations and structure not designed for an additional floor
- Current Parking-80 regular spaces, 6 handicap
- Current Pick up and drop off loop-40 cars to cue
- Where does Pre-K go?

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes 4/29/25 (Vote Expected)
3. Invoices & Commitments for Review and Approval
   - DWMP Invoice No. 1 - $22,423.00 (Vote Expected)
4. Designer Selection Process (Vote Expected)
5. Memorial Elementary School Expansion Potential
6. Website
7. Goal Setting
8. Working Groups
9. Upcoming Meetings
10. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
11. Public Comment
12. Adjourn

Website


ESSEX ELEMENTARY SCHOOL BUILDING PROJECT
English
Home
About
Schedule
Project Design & Documents
Project Finances
Community Outreach
Project FAQs
More
ESSEX
ELEMENTARY SCHOOL
WELCOME
We encourage you to explore the website for additional information on the Essex Elementary School project and its impact on the town and how it involves the community
ABOUT
Upcoming Meeting
SBC Meeting No. 2
June 24, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes 4/29/25 (Vote Expected)
3. Invoices & Commitments for Review and Approval
   - DWMP Invoice No. 1 - $22,423.00 (Vote Expected)
4. Designer Selection Process (Vote Expected)
5. Memorial Elementary School Expansion Potential
6. Website
7. Goal Setting
8. Working Groups
9. Upcoming Meetings
10. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
11. Public Comment
12. Adjourn

Goal Setting – Word Cloud



Goal Setting - Summary

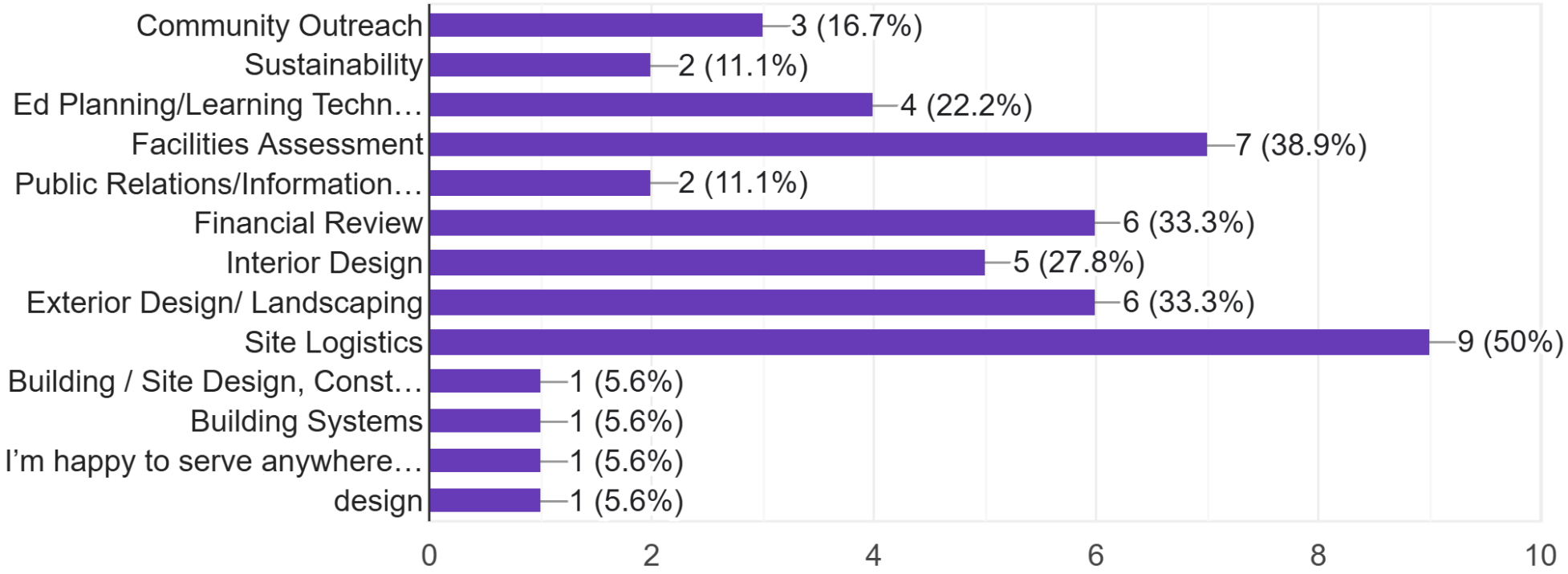
- **Primary Goal: Value**
  - Balance between cost, quality, and functionality
  - Not just low-cost, but best overall return
- **Cost Efficiency & Budget Awareness**
  - Cost-effective design and construction
  - Realistic cost parameters
  - Difficult approval process anticipated
- **Design Priorities**
  - Resilient, sustainable, and flexible building
  - Reflect “Essex” identity
  - Interior design that supports long-term needs
- **Student-Centered Spaces**
  - Spaces for diverse academic and non-academic needs
  - Focused on best student experience
- **Community & Collaboration**
  - Engage community to foster pride and support
  - Equitable offerings compared to MBTS Memorial School
- **Long-Term Vision**
  - 50-year solution
  - Adaptable for future educational models
  - Explore site use and potential reuse of existing facilities
- **Key Values**
  - Sustainability, reliability, safety
  - Parity, diligence, and collaboration
  - Pride in ownership and community asset

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes 4/29/25 (Vote Expected)
3. Invoices & Commitments for Review and Approval
   - DWMP Invoice No. 1 - $22,423.00 (Vote Expected)
4. Designer Selection Process (Vote Expected)
5. Memorial Elementary School Expansion Potential
6. Website
7. Goal Setting
8. Working Groups
9. Upcoming Meetings
10. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
11. Public Comment
12. Adjourn

Working Groups

Working Groups: Please select the working group(s) you would like to join. If there's a different group you're interested in, feel free to list it under "Other."

18 responses



1. Call to Order & Intro
2. Previous Topics & Meeting Minutes 4/25/29 (Vote Expected)
3. Invoices & Commitments for Review and Approval
   - DWMP Invoice No. 1 - $22,423.00 (Vote Expected)
4. Designer Selection Process (Vote Expected)
5. Memorial Elementary School Expansion Potential
6. Website
7. Goal Setting
8. Working Groups
9. Upcoming Meetings
10. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
11. Public Comment
12. Adjourn

Upcoming Meetings

- **SBC Meeting No. 3 – July 22, 2025 @ 6:00PM**
- **MSBA Designer RFS Meeting No. 1 – July 29 @ 8:30am**
- **MSBA Designer RFS Meeting No. 2 – August 12 @ 8:30am**
- **SBC Meeting No. 4 – August 26, 2025 @ 6:00PM**
- **SBC Meeting No. 5 – September 23, 2025 @ 6:00PM**
- **Community Meeting No. 1 – October (Exact Date TBD)**

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
3. Invoices & Commitments for Review and Approval
   - DWMP Invoice No. 1 - $22,423.00 (Vote Expected)
4. Designer Selection Process (Vote Expected)
5. Memorial Elementary School Expansion Potential
6. Website
7. Goal Setting
8. Working Groups
9. Upcoming Meetings
10. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
11. Public Comment
12. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
3. Invoices & Commitments for Review and Approval
   - DWMP Invoice No. 1 - $22,423.00 (Vote Expected)
4. Designer Selection Process (Vote Expected)
5. Memorial Elementary School Expansion Potential
6. Website
7. Goal Setting
8. Working Groups
9. Upcoming Meetings
10. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
11. Public Comment
12. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
3. Invoices & Commitments for Review and Approval
   - DWMP Invoice No. 1 - $22,423.00 (Vote Expected)
4. Designer Selection Process (Vote Expected)
5. Memorial Elementary School Expansion Potential
6. Website
7. Goal Setting
8. Working Groups
9. Upcoming Meetings
10. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
11. Public Comment
12. Adjourn

MEETING AGENDA

Meeting Date: July 22, 2025
Meeting Time: 6:00PM – 8:00PM
Project Name: Essex Elementary School
Project Number: 202306980020
Meeting Purpose: School Building Committee Meeting
Location: This meeting will be a hybrid meeting (both in-person and remote) at Essex Elementary School Cafeteria
Meeting Link: https://us06web.zoom.us/j/85349809336

---

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
    - SBC Meeting No. 2 20250624
3. Invoices & Commitments for Review and Approval (Vote Expected)
    - DWMP Invoice No. 2 $17,973.50
4. Designer RFS Submissions Review
5. Upcoming Meetings
6. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
7. Public Comment
8. Adjourn

DORE + WHITTIER

Project:	Essex Elementary School	Project No:	
Subject:	School Building Committee Meeting	Meeting Date:	07/22/2025
Location:	Hybrid (Essex Elementary School Cafeteria & Zoom)	Time:	6:00 PM
Distribution:	Attendees, Project File	Prepared By:	Jacob Greco

Present	Name	Affiliation
√	Michelle Cresta	Director of Finance & Operations
√	Pam Beaudoin	Superintendent
√	Kim Provost	Principal
	Theresa Whitman	SBC Co-Chair
	John Binieris	SBC Co-Chair
	Ruth Pereen	Essex Board of Selectman Chair
√	Andy Oldeman	Manchester Finance Committee / Director of Engineering (Structural Engineer)
√	Charlie Hay	Architect School Building Experience
√	Gordon Brewster	Engineer, Sr. Proj. Manager, Owner's PM, former Member of MERMHS & Memorial building
√	Tyler Virden	Project Executive -Wise Construction / Paren
√	Annie Cameron	Former SC Member and Memorial SBC Member
	Ariel Fernando Brian	Architect - CBT
√	Jen Hocherman	Architect - Partner SV Design
√	Michael Gerhardt	Civil Engineer / Parent
	Timonthy McDonald	Architect - Onion Flats
√	David Pereen	Resident / Plumbing & Fire
√	Lisa O'Donnell	Design & Construction / Essex Planning Board
	Mike Burton	Project Director / Partner - DWMP
√	Christina Dell Angelo	Project Executive - DWMP
	John Albright	Project Manager - DWMP
	Rachel Rincon	Assistant Project Manager - DWMP
√	Jacob Greco	Assistant Project Manager - DWMP

Item No.	Action Item	Requested by	Ball in Court
3.4	DWMP to send out a report to the full building committee after the July 29th MSBA meeting, informing them of next steps for interviews and who will be interviewed.	SBC	DWMP

- **Please click here for the presentation**
  - **This will be referenced in the meeting minutes with slide numbers called out to refer to.**
- **Below is a summation of key points, please view the recording here for full transcript and chapter summaries.**

<table>
<tr><td>Item No.</td><td></td><td>Description</td><td>Action</td></tr>
<tr><td>3.1</td><td>Call to Order & Intro: Called to order by P.Beaudoin at 6:06pm, please refer to the attendee list.</td><td>Record</td><td></td></tr>
<tr><td>3.2</td><td>Approval of June 24 - 2025, Meeting Minutes:

Roll Call Vote: A motion to approve the June 24, 2025, Meeting Minutes made by A.Cameron and seconded by K.Provost.

<table>
<tr><td>Name</td><td>Yes/No/Abstain & Absent</td></tr>
<tr><td>Michelle Cresta</td><td>Yes</td></tr>
<tr><td>Pam Beaudoin</td><td>Yes</td></tr>
<tr><td>Kim Provost</td><td>Yes</td></tr>
<tr><td>John Binieris</td><td></td></tr>
<tr><td>Theresa Whitman</td><td></td></tr>
<tr><td>Ruth Pereen</td><td></td></tr>
<tr><td>Andy Oldeman</td><td>Yes</td></tr>
<tr><td>Charlie Hay</td><td>Yes</td></tr>
<tr><td>Gordon Brewster</td><td>Yes</td></tr>
<tr><td>Tyler Virden</td><td>Yes</td></tr>
<tr><td>Annie Cameron</td><td></td></tr>
</table>
</td><td>Record</td><td></td></tr>
</table>

	Ariel Fernando Brian		
	Jen Hocherman	Yes	
	Michael Gerhardt	Yes	
	Timonthy McDonald		
	David Pereen	Yes	
	Lisa O'Donnell	Advisor – No Vote	
		Advisor – No Vote	
3.3	**Invoices & Commitments for Review and Approval (Vote Expected)** **Roll Call Vote:** A motion to approve the DWMP Invoice No. 2 ($17,973.50) made by A.Cameron and seconded by C.Hay .		Record
	Name	Yes/No/Abstain & Absent	
	Michelle Cresta	Yes	
	Pam Beaudoin	Yes	
	Kim Provost	Yes	
	Theresa Whitman		
	John Binieris		
	Ruth Pereen		
	Andy Oldeman	Yes	
	Charlie Hay	Yes	
	Gordon Brewster	Yes	
	Tyler Virden	Yes	
	Adam Zaiger		
	Annie Cameron		
	Ariel Fernando Brian	Yes	
	Jen Hocherman	Yes	
	Michael Gerhardt	Yes	
	Timonthy McDonald		
	David Pereen	Yes	

	Lisa O'Donnell	Advisor – No Vote		

3.4	**Designer RFS Submissions Review**
	
	C.Dell Angelo reviewed the three (3) SBC members chosen to be on the Designer Selection Panel and the received proposals (Slide 6 & 7)
	• G.Brewster noted that the Maryann Thompson proposal was very aspirational and they lacked experience and the required team members
	• G.Brewster noted that he thought Lavalle Brensinger provided a good proposal and he was impressed with their experience and options for the Essex Project. He noted a weakness was the Project Architect with only 7 years of experience and also did not like how they had multiple project managers for different phases.
	• G.Brewster noted that JCJ had the strongest proposal and lied how on Manchester Memorial the Principal-in-Charge was very involved in the project and their Project Architect is very good. He also liked their experience and options for the Essex Project.
	• P.Beaudoin noted that G.Brewster summarized her view very well, she added that Lavallee's proposal was good but she focuses a lot on MSBA experience and especially with regional school districts which JCJ does have.
	• M.Cresta agreed
	• M.Gerhardt asked why the two firms that did not submit decided not to
	  ○ C.Dell Angelo noted that one firm shared that they had another project that was aligned more for what they wanted at that time. The other firm was smaller and lacked MSBA experience so they decided to not go after the project
	• A.Cameron asked for definitions of "Living - Building - Challenge" and "Mass Timber"
	  ○ C.Dell Angelo noted that it is a rigorous sustainability certification program that promotes regenerative design in the built environment, aiming for buildings that give more than they take. She also noted that Mass Timber uses wood for the structure of the building instead of steel as it is more sustainable
	• A.Cameron wants to make sure each firm gets a fair discussion
	  ○ A.Cameron noted that Maryann Thompson focused a lot more on sustainability than the educational
		Record	

process and lacks MSBA experience. She noted they lacked information on the public process and Chapter 149a
    - C.Hay noted that they are create wonderful designs but the MSBA process is extremely difficult and has a very steep learning curve that the MSBA may want to pay interest into
    - C.Dell Angelo noted that they also did not address the third enrollment option
  - A.Cameron noted that she is a fan of the Lavallee proposal and is curios to hear more of the negatives from G.Brewster. She also noted it will be good to reflect back on the process with JCJ and what they accomplished such as handling Covid, being successful with public outreach, and other things such as safety.
- C.Hay noted that it will be important for the three DSP members to be aligned with what they want during the DSP meeting
- G.Brewster asked if they will be able to use their past experience as leverage in the DSP meeting or only the proposals
  - C.Dell Angelo noted they can use their past experience and noted that this first DSP meeting will be similar to this SBC meeting right now and then the interview stage will really see the teams interact and get a better picture of them
- P.Beaudoin noted that she was listed as a reference on JCJ's project and shared that they have still been very helpful in the post construction as well as being strong leading up to the project and during the construction
  - P.Beaudoin also added that an advantage of JCJ is that if the Manchester Memorial expansion is chosen they will have a lot of knowledge and understanding for that
- C.Hay noted a lot of Lavallee's experience comes from other firms and their architects that joined them from other companies
  - G.Brewster added that a lot of the team members have a lot of experience but not a lot in the firm so they have not worked on many/if any <SBA projects together as a team
- J.Hocherman asked if the SBC and Project Team had a good feeling about JCJs MEP Engineers?

- C.Dell Angelo noted yes they use GGD which she has worked with a lot and they are great, they were also on the Manchester Memorial Project
- P.Beaudoin noted that in the Manchester Project she thought the District, Town Boards/Committees, the OPM, Designer & CM at Risk firm all worked well together
- M.Gerhardt noted he has worked with Lavallee a lot in the past but not on schools and with a different team but they were very great to work with and he thinks their proposal is comparable to JCJ and it should really come down the interview process. He also noted that with JCJ being centered around Connecticut if that caused any issues?
  - C.Dell Angelo noted they also have a Boston office which the PM was out of and all the project team from Connecticut made it to all the meetings they were required at
  - G.Brewster noted the process was very smooth regardless of location during the design process
- A.Fernando Brian noted his company attended the walkthrough and they decided to not follow through thinking JCJ would get the job. He noted that they should not discredit Maryann Thompson and shared that in the architect word she is extremely respected and they should have a fair shot at an interview
- A.Cameron asked the DSP members what their plan is after hearing the feedback
  - G.Brewster noted he will go with the groups choice but he does not see value in interviewing all three firms
  - P.Beaudoin noted she will be very interested in hearing from the designers as there is always importance in designing the building but there is a lot that happens outside of that with the public, MSBA & political process
    - C.Hay noted this will not be a high design process and what P.Beaudoin listed will be of the upmost importance
- J.Hocherman called out how important the experience to the Massachusetts public process is as it is so much different than the private world or any other states public process
- C.Dell Anglo noted that the project team is very important as they will be working with the everyone for the next 8 or so years
- A.Oldeman noted that he would be curious to see what Maryann Thompson would produce in an interview but

<table>
<tr><td></td><td>knows how critical the MSBA and MA process is. He also noted the budget will be a major factor for this and a lot of the sustainable aspects she has proposed will be expensive
• C.Hay shared how important the PDP and PSR phases are and the amount of paperwork that has to be created would be very daunting for a firm with no MSBA experience
• C.Dell Angelo noted that the Designer Selection Panel meeting is on July 29th and it is a public meeting if anyone wants to join</td><td></td><td></td></tr>
<tr><td>3.5</td><td>Upcoming Meetings

C.Dell Angelo reviewed the upcoming meetings (slide 13)</td><td></td><td></td></tr>
<tr><td>3.6</td><td>Other Topics not Reasonably Anticipated 48 hours prior to the meeting:

None</td><td>Record</td><td></td></tr>
<tr><td>3.7</td><td>Public Comment:

None</td><td>Record</td><td></td></tr>
<tr><td>3.8</td><td>Adjourn:

Roll Call Vote: A motion to adjourn the meeting was made at 7:22 pm by G.Brewster and seconded by J.Hocherman
<table>
<tr><td>Name</td><td>Yes/No/Abstain & Absent</td></tr>
<tr><td>Michelle Cresta</td><td>Yes</td></tr>
<tr><td>Pam Beaudoin</td><td>Yes</td></tr>
<tr><td>Kim Provost</td><td>Yes</td></tr>
<tr><td>Theresa Whitman</td><td>Yes</td></tr>
<tr><td>John Binieris</td><td></td></tr>
<tr><td>Ruth Pereen</td><td></td></tr>
<tr><td>Andy Oldeman</td><td></td></tr>
<tr><td>Charlie Hay</td><td>Yes</td></tr>
</table></td><td>Record</td><td></td></tr>
</table>

Gordon Brewster	Yes
Tyler Virden	Yes
Adam Zaiger	
Annie Cameron	Yes
Henry Oettinger	Yes
Ariel Fernando Brian	
Jen Hocherman	Yes
Michael Gerhardt	
Timonthy McDonald	
David Pereen	Advisor – No Vote
Lisa O'Donnell	Advisor – No Vote

Sincerely,
DORE + WHITTIER
Jacob Greco
Assistant Project Manager
Cc: Attendees, File
The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes.

Essex Elementary School Project

School Building Committee Meeting #03

July 22, 2025 @ 6:00 PM

DORE + WHITTIER

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 2 20250624
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 2 $17,973.50
4. Designer RFS Submissions Review
5. Upcoming Meetings
6. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
7. Public Comment
8. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 2 20250624
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 2 $17,973.50
4. Designer RFS Submissions Review
5. Upcoming Meetings
6. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
7. Public Comment
8. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 2 20250624
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 2 $17,973.50
4. Designer RFS Submissions Review
5. Upcoming Meetings
6. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
7. Public Comment
8. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 2 20250624
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 2 $17,973.50
4. Designer RFS Submissions Review
5. Upcoming Meetings
6. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
7. Public Comment
8. Adjourn

Designer RFS Process-Designer Selection Panel

- **Pam Beaudoin – CEO**
- **Michelle Cresta – Superintendent (Delegate)**
- **Gordon Brewster – School Committee Designee (Delegate)**
- Beth McDougal, AIA, MSBA Designee, Registered Architect, Vice-Chair
- Rachel E. Shanley, PE, LEED, MSBA Designee, Professional Engineer, Vice-Chair
- Russell Bartash, MA Building Trades Council Designee
- Eric Bernardin, ACEC Designee, Professional Engineer
- Karl Brown, AIA, MSBA Staff, Registered Architect
- John S. Ferrante, Associated General Contractors of Massachusetts Designee
- Barbara Hansberry, MSBA Executive Director Designee
- Eric LeBeau, Public Member
- Joseph McDonough, Public Member
- Leo F. Peters, FACEC, Professional Engineer
- Alankrita Prasad, MA AIA Designee, Registered Architect
- Jose Soliva, AIA, MSBA Designee, Registered Architect
- Ashley Stanton, MSBA Staff
- Peter Sun, MSBA Staff
- Diane Sullivan, MSBA Staff
- Emily Udy, MSBA Staff
- John F. Jumpe Jr., Professional Engineer, MSBA Staff *

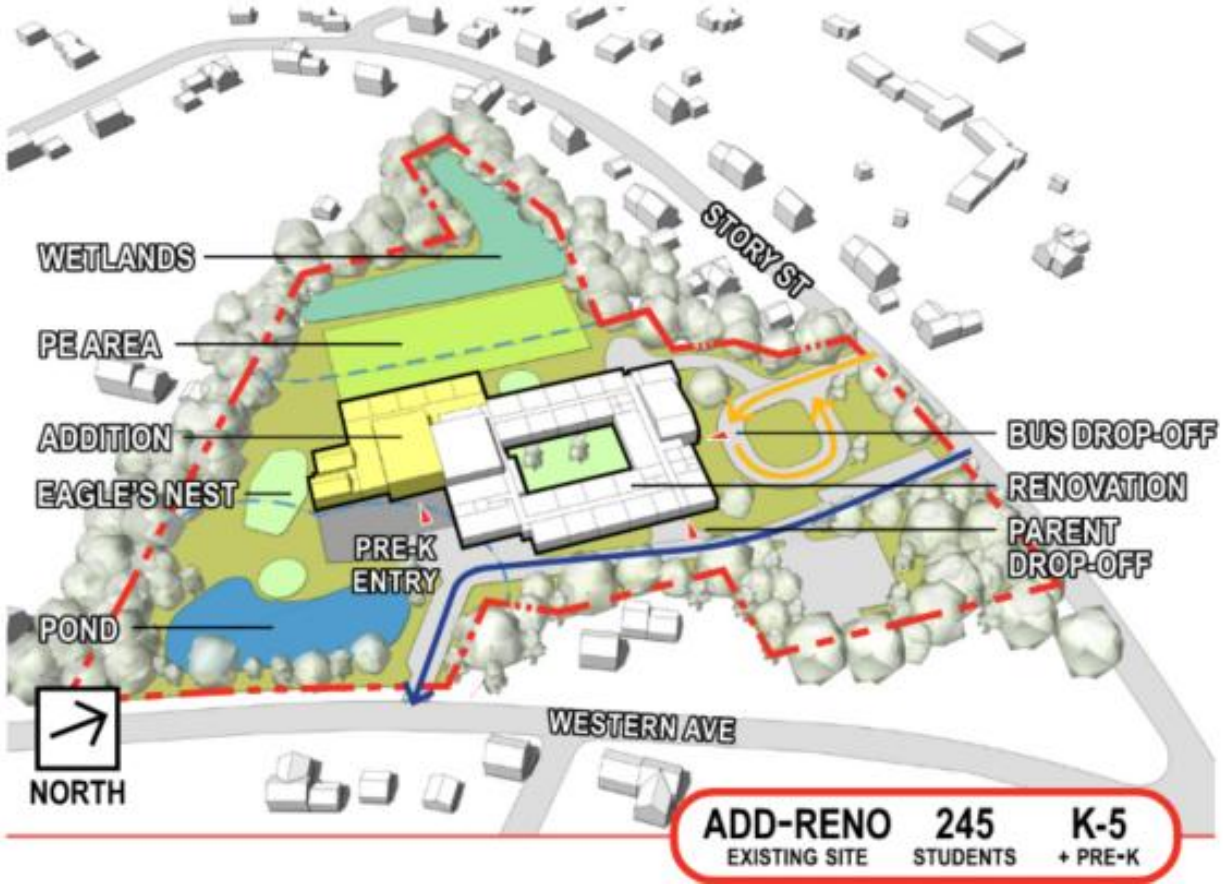
Designer RFS Submission Review

Submissions Received:

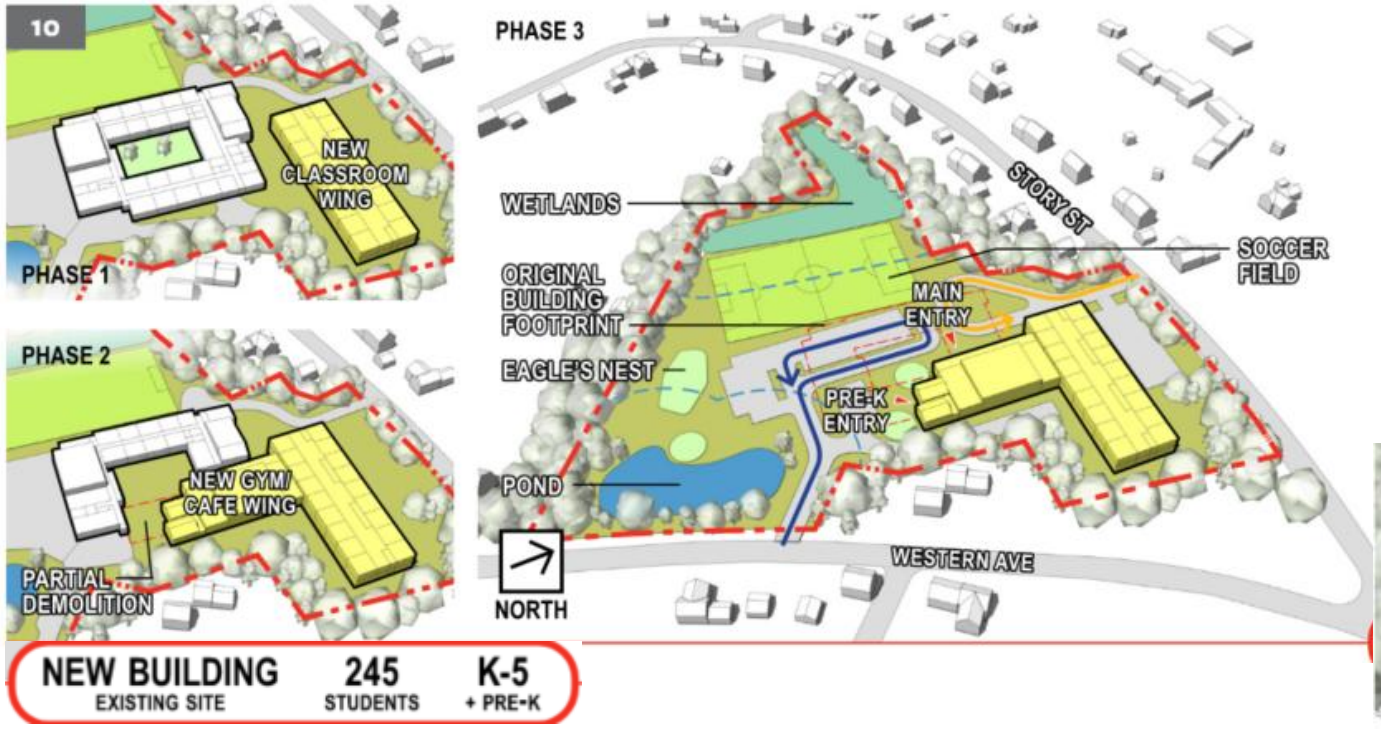
- JCJ Architecture
- Lavallee Brensinger
- Maryann Thompson

Designer RFS Submission Review - JCJ





Designer RFS Submission Review - JCJ



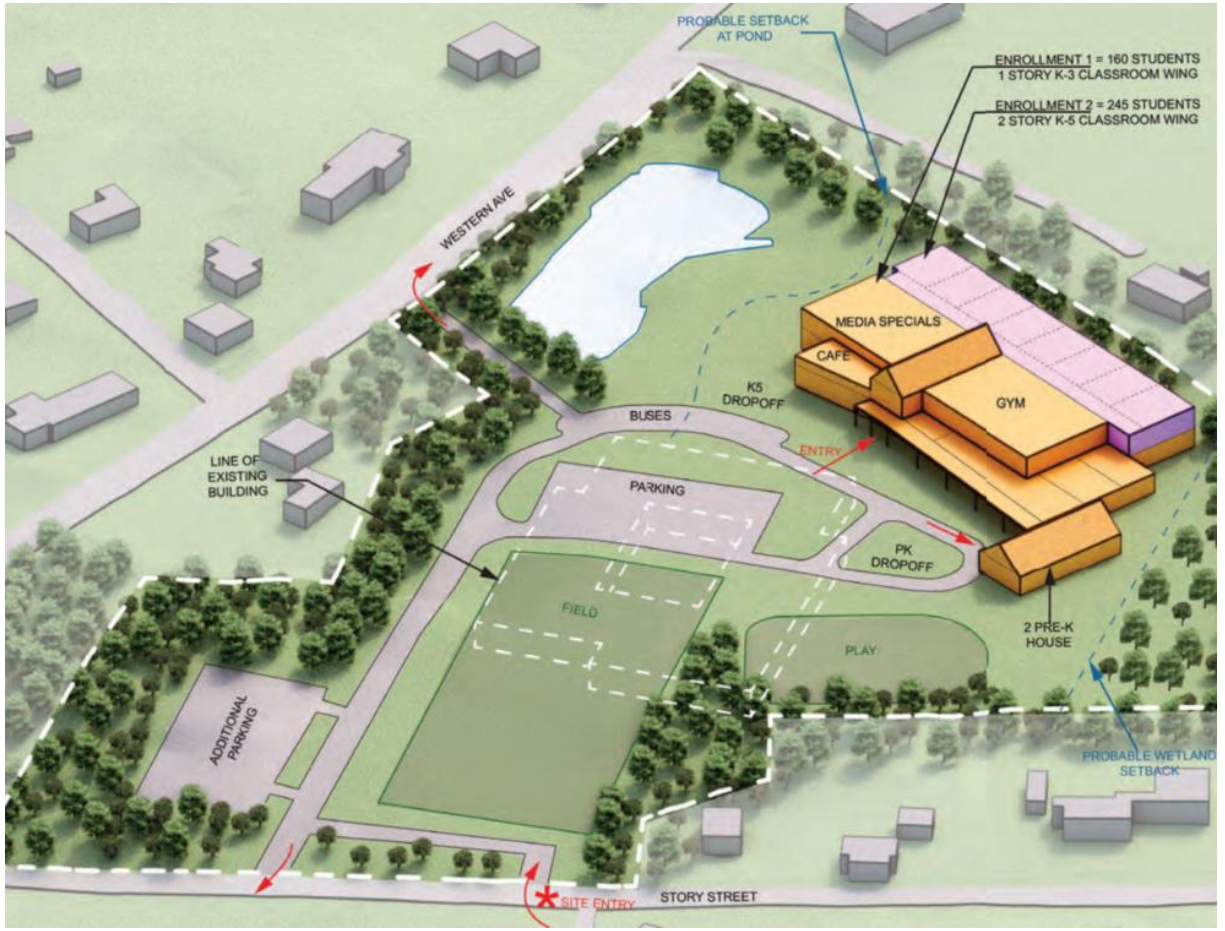


Designer RFS Submission Review - **Lavallee Brensinger**

ADD/RENO SCHOOL | A: 1-Story New Additions and Pre-K 'Minimal Expansion' (Essex Elementary Site)

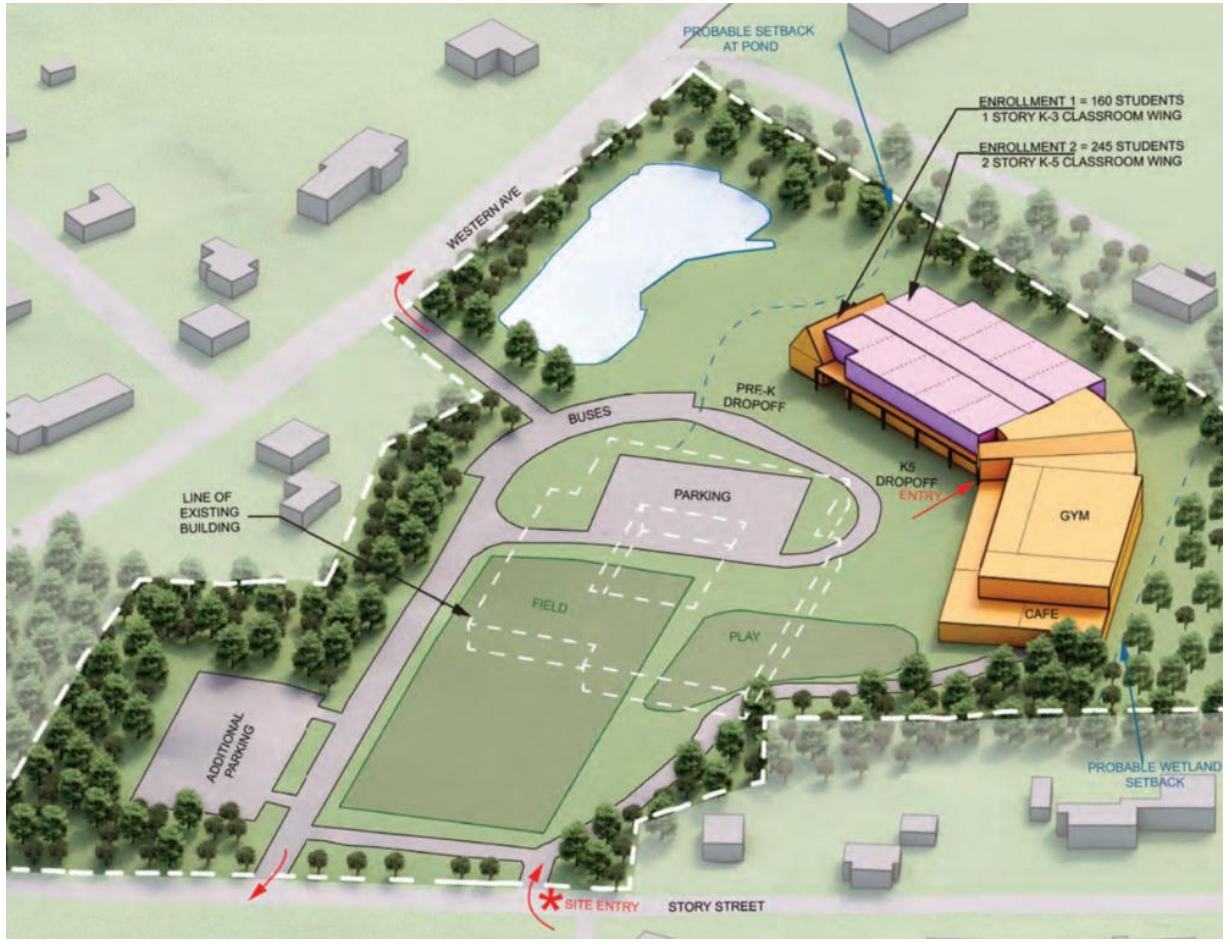


NEW SCHOOL | B: 1 or 2-Story Elementary School "Compact Planning' (Essex Elementary Site)

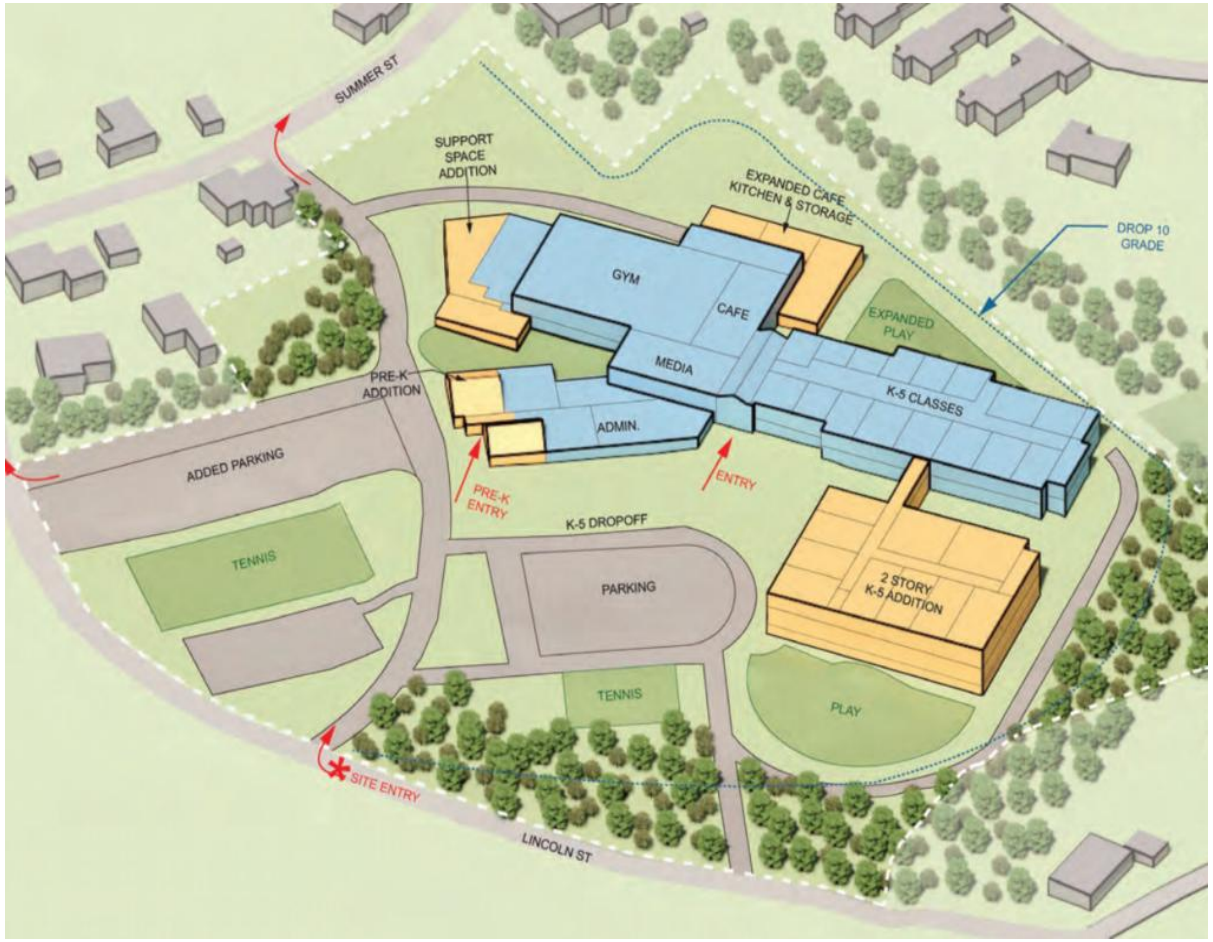


Designer RFS Submission Review - Lavallee Brensinger

NEW SCHOOL | C: 1 or 2-Story Elementary School 'Corner Nestled' (Essex Elementary Site)



NEW SCHOOL | D: 1 and 2-Story Additions to Recent School 'Integrated Expansion' (Manchester Memorial Elementary Site)



Designer RFS Submission Review - Maryann Thompson

THE COURTYARD RENEWAL – A RENOVATION ROOTED IN CONTINUITY



"THE ESSEX GREEN" – A NEW CONSTRUCTION VILLAGE OF LEARNING



1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 2 20250624
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 2 $17,973.50
4. Designer RFS Submissions Review
5. Upcoming Meetings
6. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
7. Public Comment
8. Adjourn

Upcoming Meetings

- **MSBA Designer RFS Meeting No. 1 – July 29 @ 8:30am**
- **MSBA Designer RFS Meeting No. 2 – August 12 @ 8:30am**
- **SBC Meeting No. 4 – August 26, 2025 @ 6:00PM**
- **SBC Meeting No. 5 – September 23, 2025 @ 6:00PM**
- **Community Meeting No. 1 – October (Exact Date TBD)**

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 2 20250624
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 2 $17,973.50
4. Designer RFS Submissions Review
5. Upcoming Meetings
6. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting.
7. Public Comment
8. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 2 20250624
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 2 $17,973.50
4. Designer RFS Submissions Review
5. Upcoming Meetings
6. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
7. Public Comment
8. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 2 20250624
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 2 $17,973.50
4. Designer RFS Submissions Review
5. Upcoming Meetings
6. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
7. Public Comment
8. Adjourn

MEETING AGENDA

Meeting Date: August 26, 2025
Meeting Time: 6:00PM – 8:00PM
Project Name: Essex Elementary School
Project Number: 202306980020
Meeting Purpose: School Building Committee Meeting
Location: This meeting will be a hybrid meeting (both in-person and remote) at Essex Elementary School Cafeteria
Meeting Link: https://us06web.zoom.us/j/85349809336

---

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
    - SBC Meeting No. 3 20250722
3. Invoices & Commitments for Review and Approval (Vote Expected)
    - DWMP Invoice No. 3 $22,921.50
    - JCJ Contract - $900,000 ($600,000 for JCJ Services & $300,000 for Environmental/Site Consultants)
    - BRR #1
4. Designer Introduction: JCJ Architecture
5. Review Project Schedule
6. Introduce Visioning Plan
7. Review Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting.
10. Public Comment
11. Adjourn

DORE + WHITTIER

Project:	Essex Elementary School	Project No:	
Subject:	School Building Committee Meeting	Meeting Date:	08/26/2025
Location:	Hybrid (Essex Elementary School Cafeteria & Zoom)	Time:	6:00 PM
Distribution:	Attendees, Project File	Prepared By:	Jacob Greco

Present	Name	Affiliation
√	Michelle Cresta	Director of Finance & Operations
√	Pam Beaudoin	Superintendent
√	Kim Provost	Principal
	Theresa Whitman	SBC Co-Chair
	John Binieris	SBC Co-Chair
	Ruth Pereen	Essex Board of Selectman Chair
√	Andy Oldeman	Manchester Finance Committee / Director of Engineering (Structural Engineer)
√	Charlie Hay	Architect School Building Experience
√	Gordon Brewster	Engineer, Sr. Proj. Manager, Owner's PM, former Member of MERMHS & Memorial building
√	Tyler Virden	Project Executive -Wise Construction / Paren
√	Annie Cameron	Former SC Member and Memorial SBC Member
√	Ariel Fernando Brian	Architect - CBT
√	Jen Hocherman	Architect - Partner SV Design
√	Michael Gerhardt	Civil Engineer / Parent
	Timothy McDonald	Architect - Onion Flats
√	David Pereen	Resident / Plumbing & Fire
√	Lisa O'Donnell	Design & Construction / Essex Planning Board
	Mike Burton	Project Director / Partner - DWMP
√	Christina Dell Angelo	Project Executive - DWMP
	John Albright	Project Manager - DWMP
	Rachel Rincon	Assistant Project Manager - DWMP
√	Jacob Greco	Assistant Project Manager - DWMP
√	James LaPosta	Principal - JCJ Architecture
√	Fawn Pellegrini	Senior Project Manager - JCJ Architecture
√	Jeff Elliott	Project Architect - JCJ Architecture
√	Mike Pirollo	Principal – MLP Integrated Design

Item No.	Action Item	Requested by	Ball in Court

- **Please click here for the presentation**
  - **This will be referenced in the meeting minutes with slide numbers called out to refer to.**
- **Below is a summation of key points, please view the recording here for full transcript and chapter summaries.**

<table>
<tr><td>Item No.</td><td></td><td>Description</td></tr>
<tr><td>4.1</td><td>Call to Order & Intro: Called to order by A.Cameron at 6:01pm, please refer to the attendee list.</td><td>Record</td></tr>
<tr><td>4.2</td><td>Approval of July 22 - 2025, Meeting Minutes:

Roll Call Vote: A motion to approve the July 22, 2025, Meeting Minutes made by P.Beaudoin and seconded by M.Cresta .

<table>
<tr><td>Name</td><td>Yes/No/Abstain & Absent</td></tr>
<tr><td>Michelle Cresta</td><td>Yes</td></tr>
<tr><td>Pam Beaudoin</td><td>Yes</td></tr>
<tr><td>Kim Provost</td><td>Yes</td></tr>
<tr><td>John Binieris</td><td></td></tr>
<tr><td>Theresa Whitman</td><td></td></tr>
<tr><td>Ruth Pereen</td><td></td></tr>
<tr><td>Andy Oldeman</td><td>Yes</td></tr>
<tr><td>Charlie Hay</td><td>Yes</td></tr>
</table></td><td>Record</td></tr>
</table>

	<table><tr><td>Gordon Brewster</td><td>Yes</td></tr><tr><td>Tyler Virden</td><td>Yes</td></tr><tr><td>Annie Cameron</td><td>Yes</td></tr><tr><td>Ariel Fernando Brian</td><td>Yes</td></tr><tr><td>Jen Hocherman</td><td>Yes</td></tr><tr><td>Michael Gerhardt</td><td>Yes</td></tr><tr><td>Timonthy McDonald</td><td></td></tr><tr><td>David Pereen</td><td>Advisor – No Vote</td></tr><tr><td>Henry Oettinger</td><td>Yes</td></tr><tr><td>Lisa O'Donnell</td><td>Advisor – No Vote</td></tr></table>	

4.3	**Invoices & Commitments for Review and Approval (Vote Expected)**
	• C.Dell Angelo reviewed the basic MSBA Designer Contract and explained the current Feasibility Study Agreement along with the Budget Revision Request (BRR)No.1 (Slide 5)
	• M.Cresta noted she has reviewed this and agrees with it all and for the BRR it is just moving money from one bucket to another and not changing any totals
	• A.Cameron asked what is involved in the "other' budget category
	  ◦ C.Dell Angelo noted it could be anything from mailing costs, legal advice, extra site services not involved in the JCJ contract, or any other third-party services that are not normally part of the process
	• C.Hay asked if these costs are not to exceeds or hard numbers
	  ◦ C.Dell Angelo noted they can use the other category for any overages and any left over money will be pushed to the next phase
	• M.Gerhardt asks what occurs in the Environmental & Site category
	  ◦ J.LaPosta noted the MSBA only allows two categories for this phase and some of the services would be surveying, geotechnical reviews, wetlands, as examples but they are mostly investigative services
		Record

- P.Beaudoin noted it is all driven by what needs to be included in the report to the MSBA
- M.Gerhardt asked how these numbers and costs will be managed
  - C.Dell Angelo noted they will review the exhibits when they are finalized and compare them to other schools
  - C.Hay noted they are normally managed by the OPM and Designer with the input from the District and the project team will provide recommendations if they think they need to do any extra work above and beyond
  - J.LaPosta reviewed the MSBA prescribed list of site items and noted that the costs will be included on the contract before it is signed.

- DWMP Invoice No. 3 $22,921.50
- JCJ Contract - $900,000 ($600,000 for JCJ Services & $300,000 for Environmental/Site Consultants)
- Budget Revision Request #1

Roll Call Vote: A motion to approve the DWMP Invoice No. 3 ($22,921.50), JCJ Contract - $900,000 ($600,000 for JCJ Services & $300,000 for Environmental/Site Consultants), & the Budget Revision Request #1 made by C.Hay and seconded by M.Gerhardt.

Name	Yes/No/Abstain & Absent
Michelle Cresta	Yes
Pam Beaudoin	Yes
Kim Provost	Yes
Theresa Whitman	
John Binieris	
Ruth Pereen	
Andy Oldeman	Yes
Charlie Hay	Yes
Gordon Brewster	Yes
Tyler Virden	Yes

Adam Zaiger	
Annie Cameron	
Ariel Fernando Brian	Yes
Jen Hocherman	Yes
Michael Gerhardt	Yes
Timonthy McDonald	
David Pereen	Advisor – No Vote
Henry Oettinger	Yes
Lisa O'Donnell	Advisor - No Vote

4.4	**Designer Introduction: JCJ Architecture**
	
	● The JCJ team introduced themselves
	● The SBC Members introduced themselves
	● J.LaPosta reviewed their introduction slides and basic project scope/design imagery that JCJ created during the interview and application process (Slides 7 to 25)
	  ○ A.Cameron asked about the two schemes
	  ● J.Elliott noted that the first scheme may have regulatory wetland hurdles where the second scheme may have phasing logistic hurdles
	  ○ G.Brewster asked about the viability of using the existing building to meet current day standards not just code
	  ● J.LaPosta noted he truly does not know yet but he has not seem that solution work for most communities but they need to do the work here first to see. He noted that the current building has a good base but there are still a lot of existing issues.
	  ● C.Hay noted that the phasing aspect pushes the number way up also due to modulars
	  ○ M.Gerhardt asked if two story schools work for elementary schools
	  ● J.LaPosta noted that they do it often for elementary schools
	● A.Oldeman asked if there is still consideration of another site aside from Manchester Memorial and the current Essex Elementary
		Record

	○ C.Hay noted yes and it is important to review these and narrow it down as early as possible to conserve time and money ○ J.LaPosta noted they can rule sites out pretty easily based on size/viability and also added that if it is not town owned it will have to be purchased which is not reimbursable by the MSBA. LaPosta shared how they will create an evaluation criteria to compare all sites equally based on what the proposed school needs	
4.5	**Review Project Schedule** ● C.Dell Angelo reviewed the project schedule timeline, she noted that this has been reviewed high level with JCJ but they will be going into more detail prior to the next meeting (Slide 27) ● C.Dell Angelo reviewed what the MSBA Preliminary Design Program consists of (Slide 28) ○ Review Educational Plan ○ Educational Visioning ○ Space Summary ○ Existing Conditions Review ○ Preliminary Evaluations of Alternatives ● Where all the possible proposed school options are reviewed ● C.Hay asked for a request to have less than 19 options as they did during the Manchester Memorial as he found it was a little too much and was unproductive ● C.Dell Angelo noted that she is concerned with the Apple Street site give old farms have poor soil and pesticides ○ A.Cameron wants to make sure that the Apple Street site is reviewed very thoroughly to make sure that it is settled either way ● A.Cameron noted that the November 2026 Town Meeting makes her slightly nervous ○ C.Dell Angelo noted nothing is set in stone and this can be reviewed it was just based on the normal town meeting schedule ● P.Beaudoin asked that when the matrix for site evaluation is created can revising the regional agreement be included	Record

	○ C.Dell Angelo noted yes the criteria is up to the district and some items can be weighted to be more impactful than others. She thinks it should be included in the matrix	
4.6	**Introduce Visioning Plan** • M.Pirollo reviewed the visioning plan for the Essex Project (Slide 30 & 31) • C.Dell Angelo noted they plan on having a kick off meeting later this week or early next with P.Beaudoin to start the process and having a work plan in place	Record
4.7	**Review Working Groups** • C.Dell Angelo reviewed the currently proposed working groups (Slide 33 & 34) • C.Dell Angelo noted that they would like to schedule a communication working group soon as there will be a community meeting in October that needs to be reviewed • P.Beaudoin noted that they have a communication director now that can be involved • A.Cameron asked if J.LaPosta will be at the community meetings ○ J.LaPosta noted yes	Record
4.8	**Upcoming Meetings** • C.Dell Angelo reviewed the upcoming meetings for the SBC (Slide 36) • G.Brewster asked why all the meetings are not on Tuesdays ○ C.Dell Angelo noted there are some holidays and events within the district • L.O'Donnell noted that the Planning Board meets on first & third Wednesdays • A.Cameron asked for a revised schedule and invites for people's calendars once they are confirmed	Record
4.9	**Other Topics not Reasonably Anticipated 48 hours prior to the meeting:**	Record

<table>
<tr><td></td><td>

- A.Oldeman noted that Essex is not a Stretch Code opt-in but he thinks it will be good to set a sustainability goal early on in the process
  - C.Hay added that sustainability drives cost and Essex is very cost conscious
  - C.Dell Angelo noted that there is more reimbursement from the MSBA for having a green school

</td><td></td></tr>
<tr><td>4.10</td><td>Public Comment:</td><td>Record</td></tr>
<tr><td>4.11</td><td>Adjourn:

Roll Call Vote: A motion to adjourn the meeting was made at 7:23pm by C.Hay and seconded by M.Gerhardt
<table>
<tr><td>Name</td><td>Yes/No/Abstain & Absent</td></tr>
<tr><td>Michelle Cresta</td><td>Yes</td></tr>
<tr><td>Pam Beaudoin</td><td>Yes</td></tr>
<tr><td>Kim Provost</td><td>Yes</td></tr>
<tr><td>Theresa Whitman</td><td>Yes</td></tr>
<tr><td>John Binieris</td><td></td></tr>
<tr><td>Ruth Pereen</td><td></td></tr>
<tr><td>Andy Oldeman</td><td></td></tr>
<tr><td>Charlie Hay</td><td>Yes</td></tr>
<tr><td>Gordon Brewster</td><td>Yes</td></tr>
<tr><td>Tyler Virden</td><td>Yes</td></tr>
<tr><td>Adam Zaiger</td><td></td></tr>
<tr><td>Annie Cameron</td><td>Yes</td></tr>
<tr><td>Henry Oettinger</td><td>Yes</td></tr>
<tr><td>Ariel Fernando Brian</td><td></td></tr>
</table></td><td>Record</td></tr>
</table>

Jen Hocherman	Yes	
Michael Gerhardt		
Timonthy McDonald		
David Pereen	Advisor – No Vote	
Lisa O'Donnell	Advisor – No Vote	

Sincerely,
DORE + WHITTIER
Jacob Greco
Assistant Project Manager
Cc: Attendees, File
The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes.

Essex Elementary School Project

School Building Committee Meeting #04

August 26, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 3 20250722
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 3 $22,921.50
   - JCJ Contract - $900,000 ($600,000 for JCJ Services & $300,000 for Environmental/Site Consultants)
   - BRR #1
4. Designer Introduction: JCJ Architecture
5. Review Project Schedule
6. Introduce Visioning Plan
7. Review Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting
10. Public Comment
11. Adjourn

SBC Meeting Agenda – August 26, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 3 20250722
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 3 $22,921.50
   - JCJ Contract - $900,000 ($600,000 for JCJ Services & $300,000 for Environmental/Site Consultants)
   - BRR #1
4. Designer Introduction: JCJ Architecture
5. Review Project Schedule
6. Introduce Visioning Plan
7. Review Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting
10. Public Comment
11. Adjourn

SBC Meeting Agenda – August 26, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 3 20250722
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 3 $22,921.50
   - JCJ Contract - $900,000 ($600,000 for JCJ Services & $300,000 for Environmental/Site Consultants)
   - BRR #1
4. Designer Introduction: JCJ Architecture
5. Review Project Schedule
6. Introduce Visioning Plan
7. Review Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting
10. Public Comment
11. Adjourn

Budget Details

Feasibility Study Agreement:

OPM-$300,000

Designer-$930,000

Environmental & Site-$225,000

Other-$45,000

Revised FSA:

OPM-$450,000

Designer-$600,000

E&S-$300,000

Other-$150,000

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 3 20250722
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 3 $22,921.50
   - JCJ Contract - $900,000 ($600,000 for JCJ Services & $300,000 for Environmental/Site Consultants)
   - BRR #1
4. Designer Introduction: JCJ Architecture
5. Review Project Schedule
6. Introduce Visioning Plan
7. Review Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting
10. Public Comment
11. Adjourn

YOUR TEAM

MSBA

ESSEX ELEMENTARY SCHOOL

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT

DORE + WHITTIER
OWNERS PROJECT MANAGER

JCJARCHITECTURE, P.C.

1 ARCHITECTURE | 18 SPECIFICATIONS | 19 LIBRARY/MEDIA | 24 CODE | 25 ACCESSIBILITY/UNIVERSAL DESIGN | 27 FF&E

James E. LaPosta, Jr. FAIA, LEED AP, MCPPO
PRINCIPAL-IN-CHARGE AND COMMUNITY ENGAGEMENT
(MA REG #30304)

Fawn Walton Pellegrini AIA, LEED AP, MCPPO
PROJECT MANAGER

Jeffrey K. Elliott AIA, LEED AP BD+C
PROJECT DESIGNER (MA REG #31822)

Dustin Lombardi AIA
PROJECT ARCHITECT (MA REG #952501)

Emily E. Czarnecki NCIDQ
LEAD INTERIOR DESIGNER AND FF&E

Jillian Gibbs NCIDQ, LEED AP ID+C
INTERIOR DESIGNER

Eric Haggstrom AIA, LEED AP
SUSTAINABILITY DESIGNER (MA REG #50318)

Roy C. Olsen RA, CCS, CSI, LEED AP
SPECIFICATIONS CONSULTANT

CONSULTANTS

2 EDUCATIONAL PROGRAMMING MLP INTEGRATED DESIGN MIKE PIROLLO, ALEP	**3 CIVIL ENGINEERING** SAMIOTES CONSULTANTS WBE STEPHEN POWERS, PE, LEED AP MA# 45896	**4 LANDSCAPE ARCHITECTURE** STUDIO 2112 WBE LYNNE GIESECKE, ASLA MA# 1621	**5 STRUCTURAL ENGINEERING** RSE ASSOCIATES MBE SOFYA AUREN, PE MA# 48825	**6 FIRE PROTECTION** C.A. CROWLEY ENGINEERING WBE RAYMOND VINCENT, PE MA# 46528	**7 PLUMBING ENGINEERING** C.A. CROWLEY ENGINEERING WBE RAYMOND VINCENT, PE MA# 46528
8 HVAC ENGINEERING GGD CONSULTING ENGINEERS DOMINICK B. PUNIELLO PE, CEM, LEED AP MA# 48326	**9 ELECTRICAL / LIGHTING ENGINEERING** GGD CONSULTING ENGINEERS DAVID M. PEREIRA, PE MA# 49310	**10 DATA / COMMUNICATIONS** GGD CONSULTING ENGINEERS DAVID M. PEREIRA, PE MA# 49310	**11 ENVIRONMENTAL PERMITTING** SAMITOES CONSULTANTS WBE STEPHEN POWERS, PE, LEED AP MA# 45896	**12 GEOTECHNICAL ENGINEERING** MCPHAIL ASSOCIATES JONATHAN W. PATCH, PE MA# 47156	**13 GEOENVIRONMENTAL ENGINEERING** MABBETT & ASSOCIATES SDVOBE STEPHEN VETERE, PE, LSP, LEP MA# 45240
14 HAZARDOUS MATERIALS MABBETT & ASSOCIATES SDVOBE MICHAEL DELANEY MA# AI901152	**15 COST ESTIMATING** A.M. FOGARTY PETER TIMOTHY	**16 KITCHEN / FOOD SERVICE CONSULTANT** CRABTREE MCGRATH ASSOCIATES, INC. JOHN SOUSA, JR.	**17 LABORATORY CONSULTANT** JCJARCHITECTURE EMILY CZARNECKI, NCIDQ	**18 ACOUSTICAL CONSULTANT** NEWCOMB + BOYD BRANDON WESTERGAARD, INCE	**19 SPECIFICATIONS** JCJARCHITECTURE ROY C. OLSEN RA, CSI, CCS, LEED AP
20 LIBRARY/MEDIA JCJARCHITECTURE EMILY CZARNECKI, NCIDQ	**21 TECHNOLOGY / AUDIO VISUAL CONSULTANT** NEWCOMB + BOYD BO LARAIA, RCDD BRITTON GATES, CTS-D	**22 THEATRICAL CONSULTANT** NEWCOMB + BOYD KRIS KUIPERS CTS-D, CTS-I	**23 SUSTAINABLE, GREEN DESIGN, RENEWABLE ENERGY** SODEN SUSTAINABILITY WBE COLLEEN RYAN SODEN, LEED AP BD+C, IDC	**24 CODE CONSULTANT** JCJARCHITECTURE DUSTIN LOMBARDI, AIA MA#952501	**25 ACCESSIBILITY/UNIVERSAL DESIGN CONSULTANT** JCJARCHITECTURE DUSTIN LOMBARDI, AIA MA# 952501
	26 TRAFFIC CONSULTANT GREENMAN-PEDERSEN REBECCA BROWN, PE, PTOE MA# 49112	**27 FURNITURE, FIXTURES AND EQUIPMENT** JCJARCHITECTURE EMILY CZARNECKI, NCIDQ	**28 SITE SURVEYING** SAMITOES CONSULTANTS WBE DANIEL FLEMING, PLS MA# 55476	**29 SECURITY CONSULTANT** GOOD HARBOR TECHMARK MATTHEW ALLAIN	

STEPPING INTO A PROCESS

The School District's Process Began with 3 Schools in Need



THE TOWN OF ESSEX









ESSEX ELEMENTARY SCHOOL
ESSEX, MASSACHUSETTS









DESIGN THAT SUPPORTS **ADAPTABILITY**







DESIGN THAT PROMOTES **EQUITY**







DESIGN THAT BUILDS **COMMUNITY**







DESIGN THAT CREATES A **SENSE OF PLACE**











HEALTH & WELLNESS

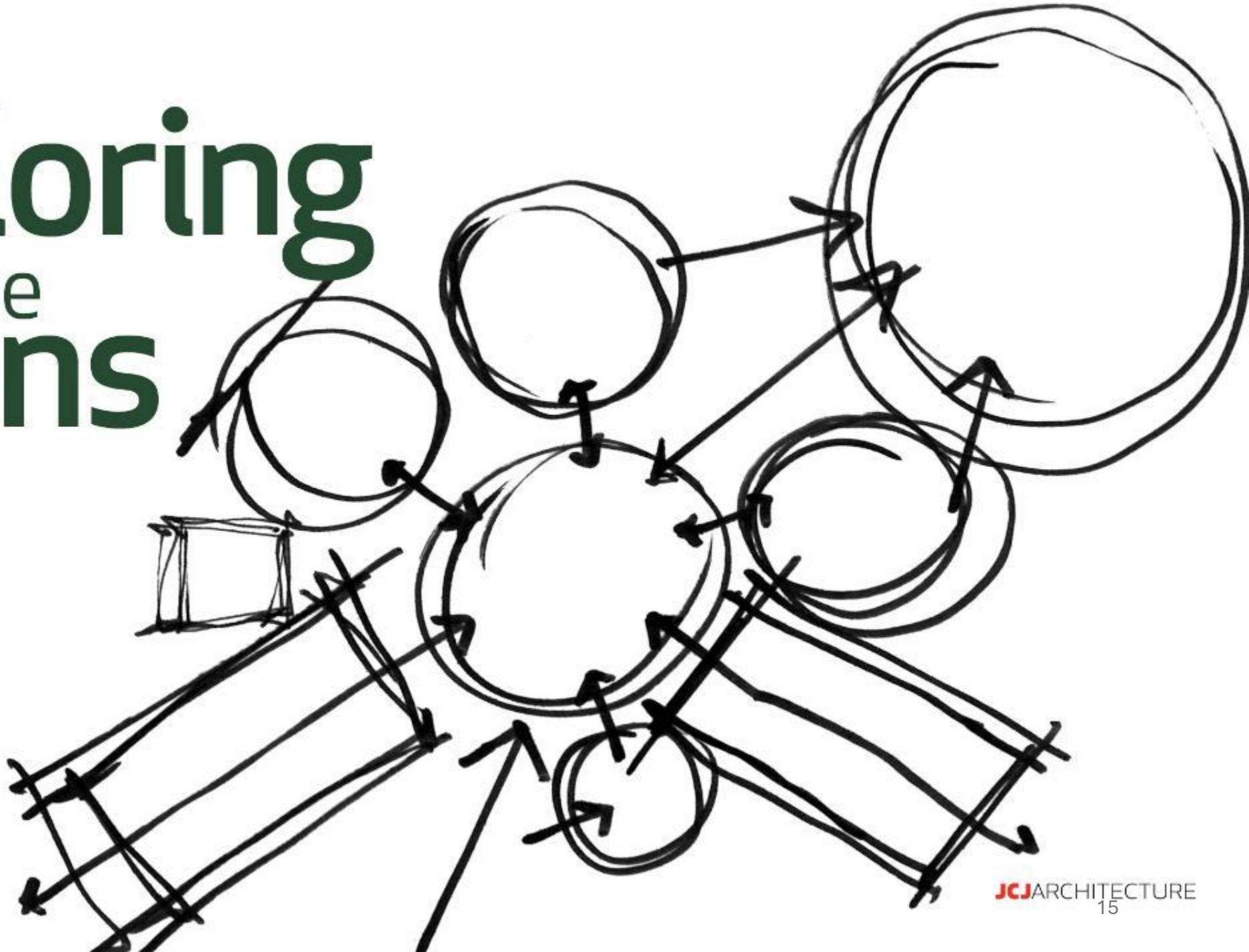




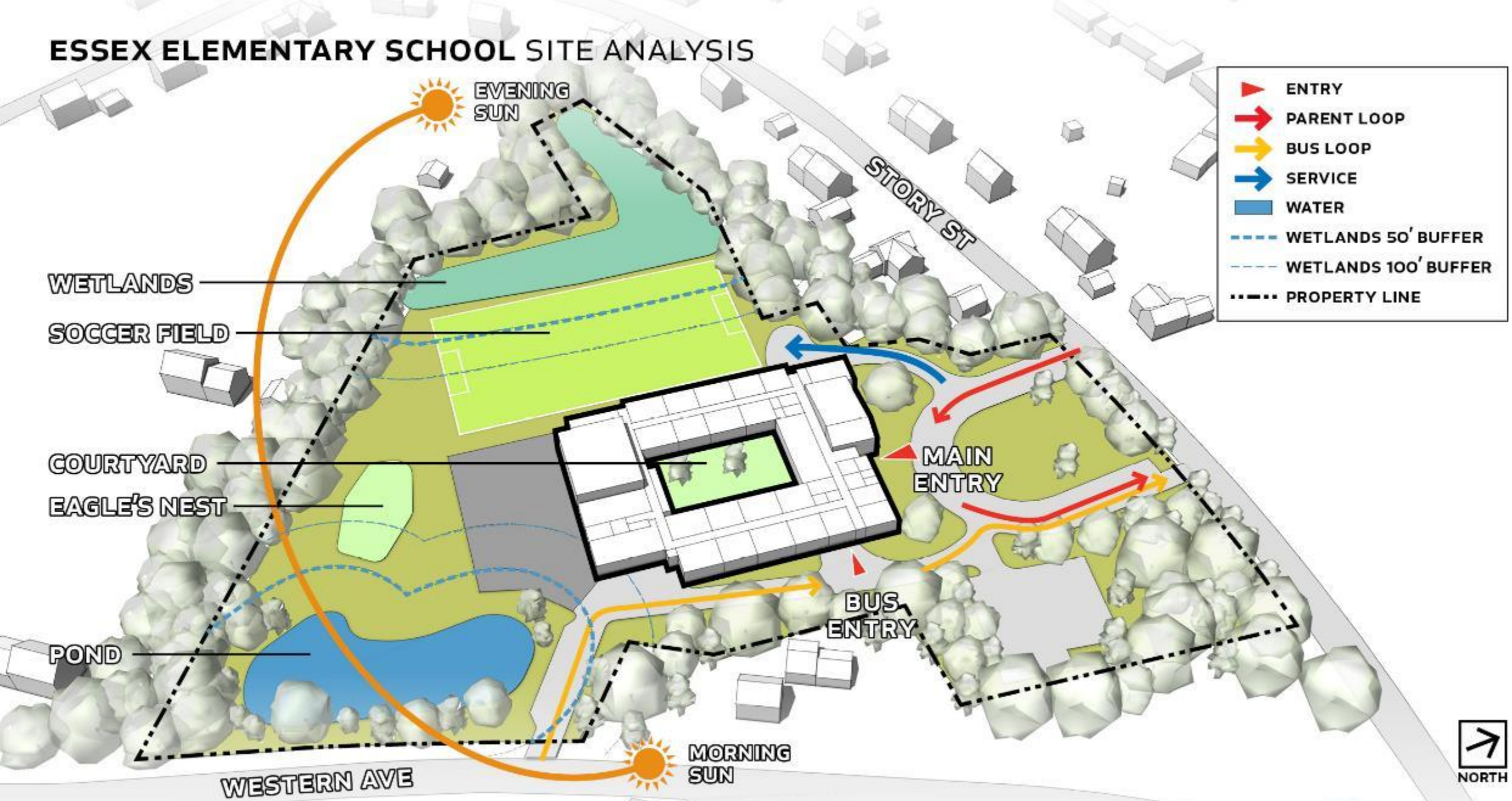




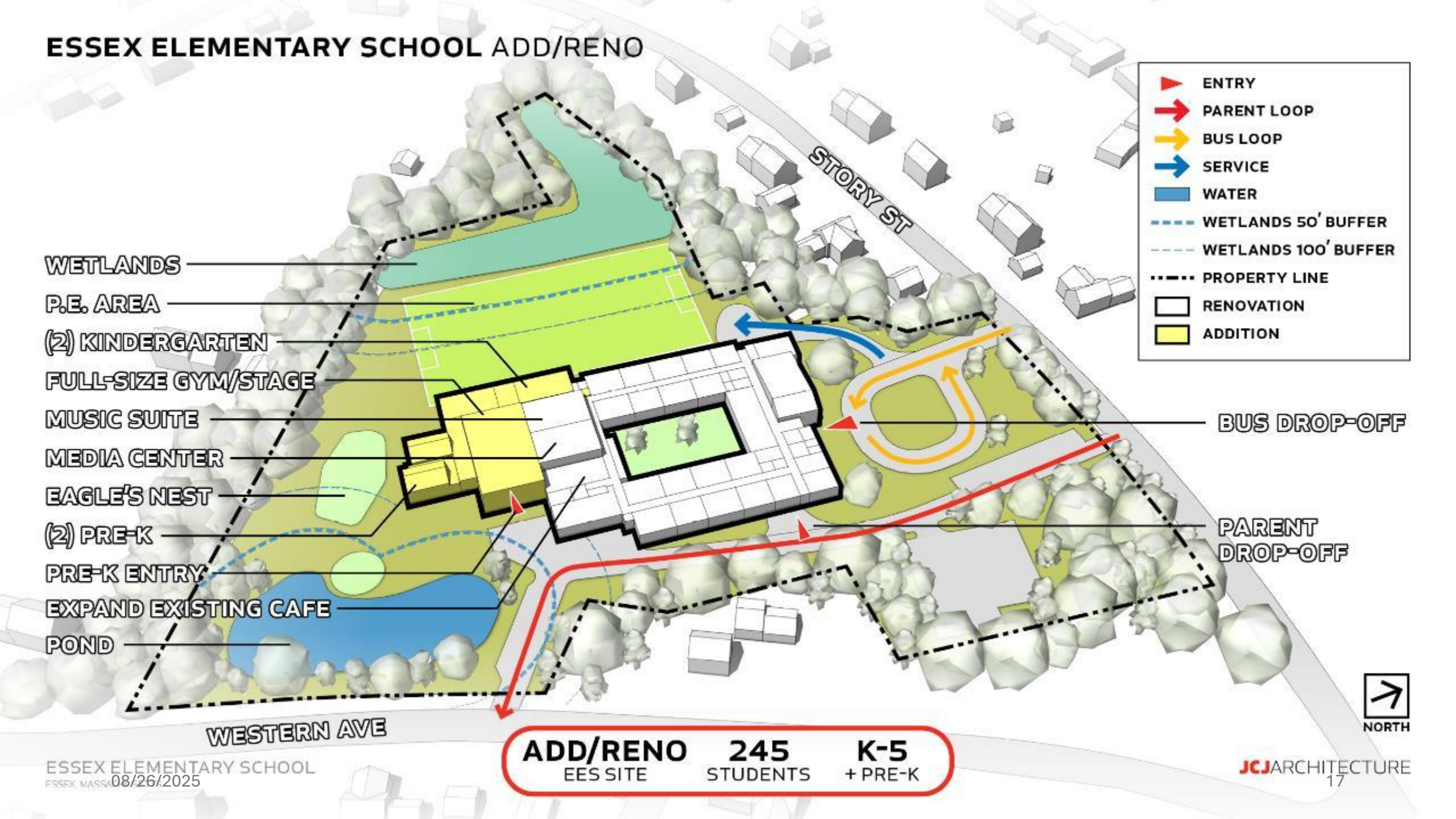
Exploring the Options



ESSEX ELEMENTARY SCHOOL SITE ANALYSIS

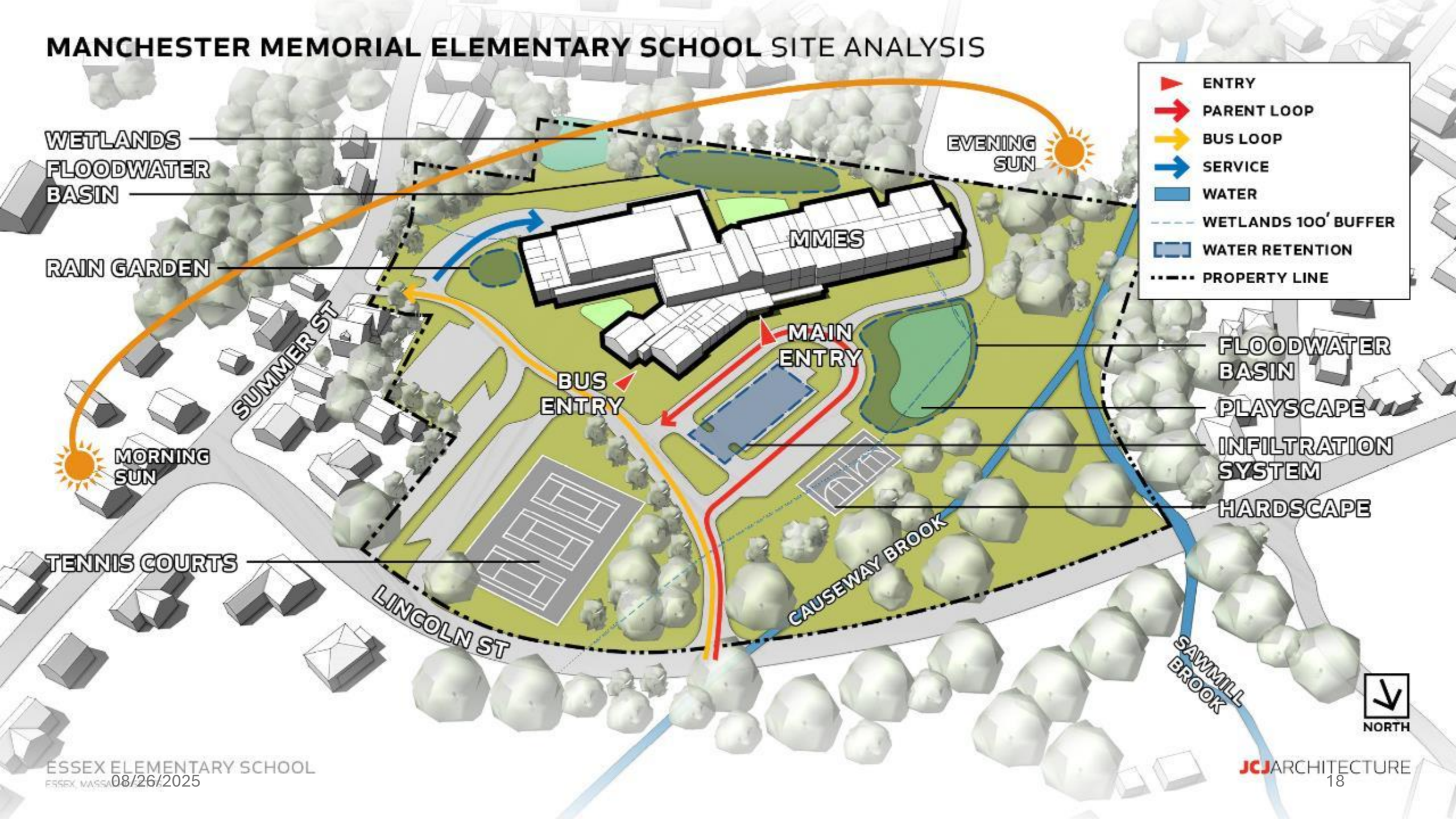


ESSEX ELEMENTARY SCHOOL ADD/RENO

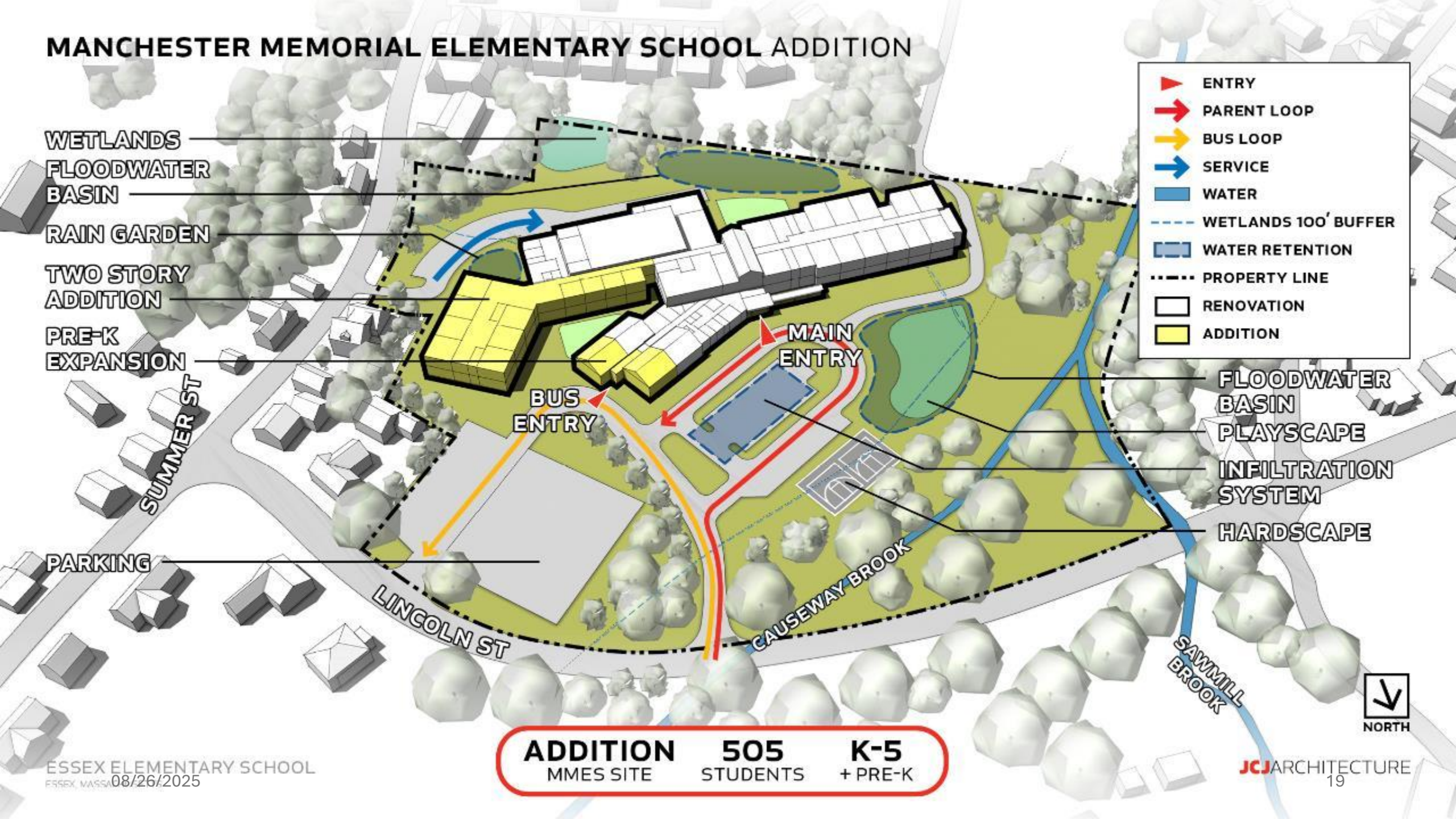


ADD/RENO EES SITE | **245** STUDENTS | **K-5** + PRE-K

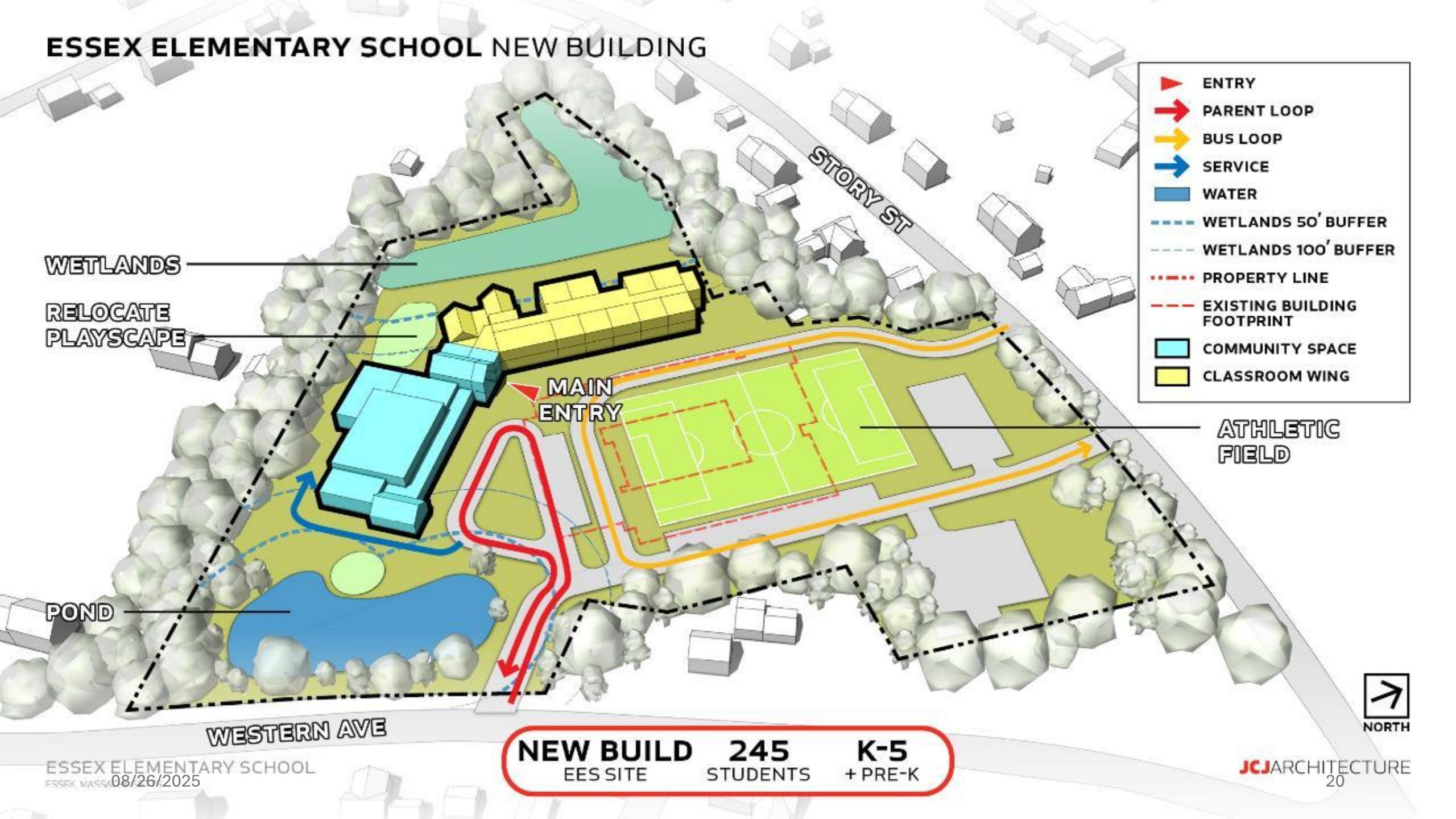
MANCHESTER MEMORIAL ELEMENTARY SCHOOL SITE ANALYSIS

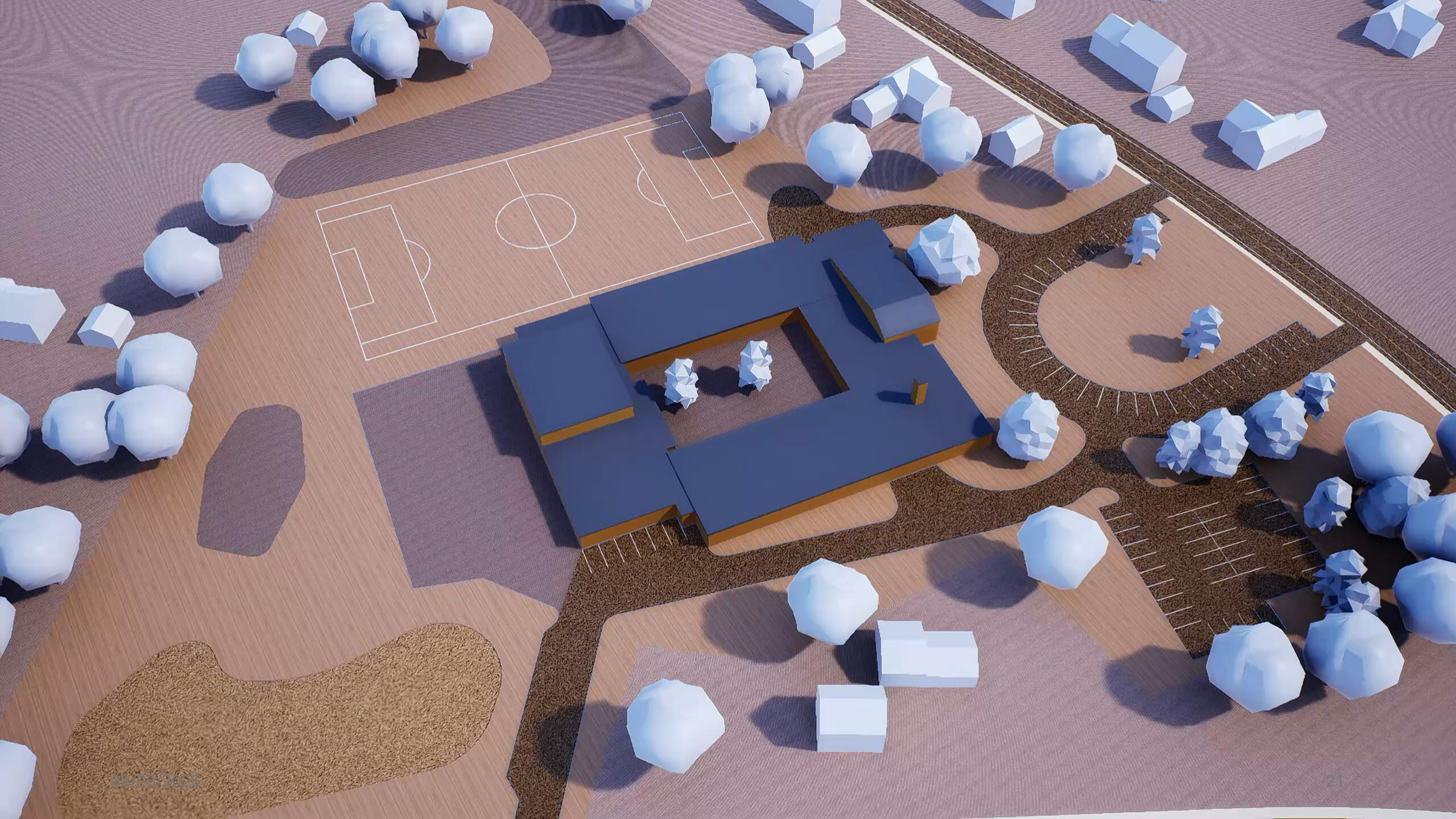


MANCHESTER MEMORIAL ELEMENTARY SCHOOL ADDITION

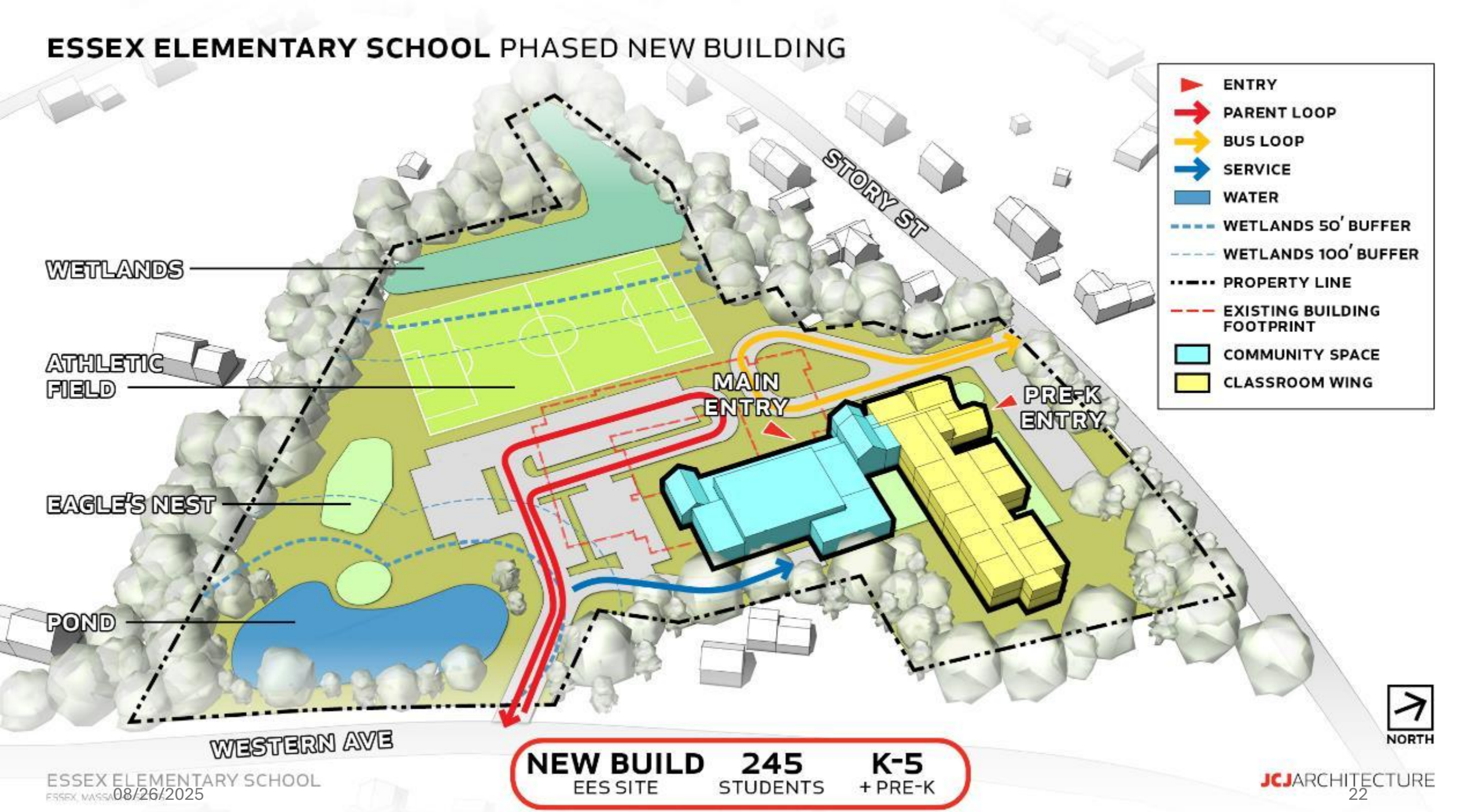


ADDITION MMES SITE | **505** STUDENTS | **K-5** + PRE-K

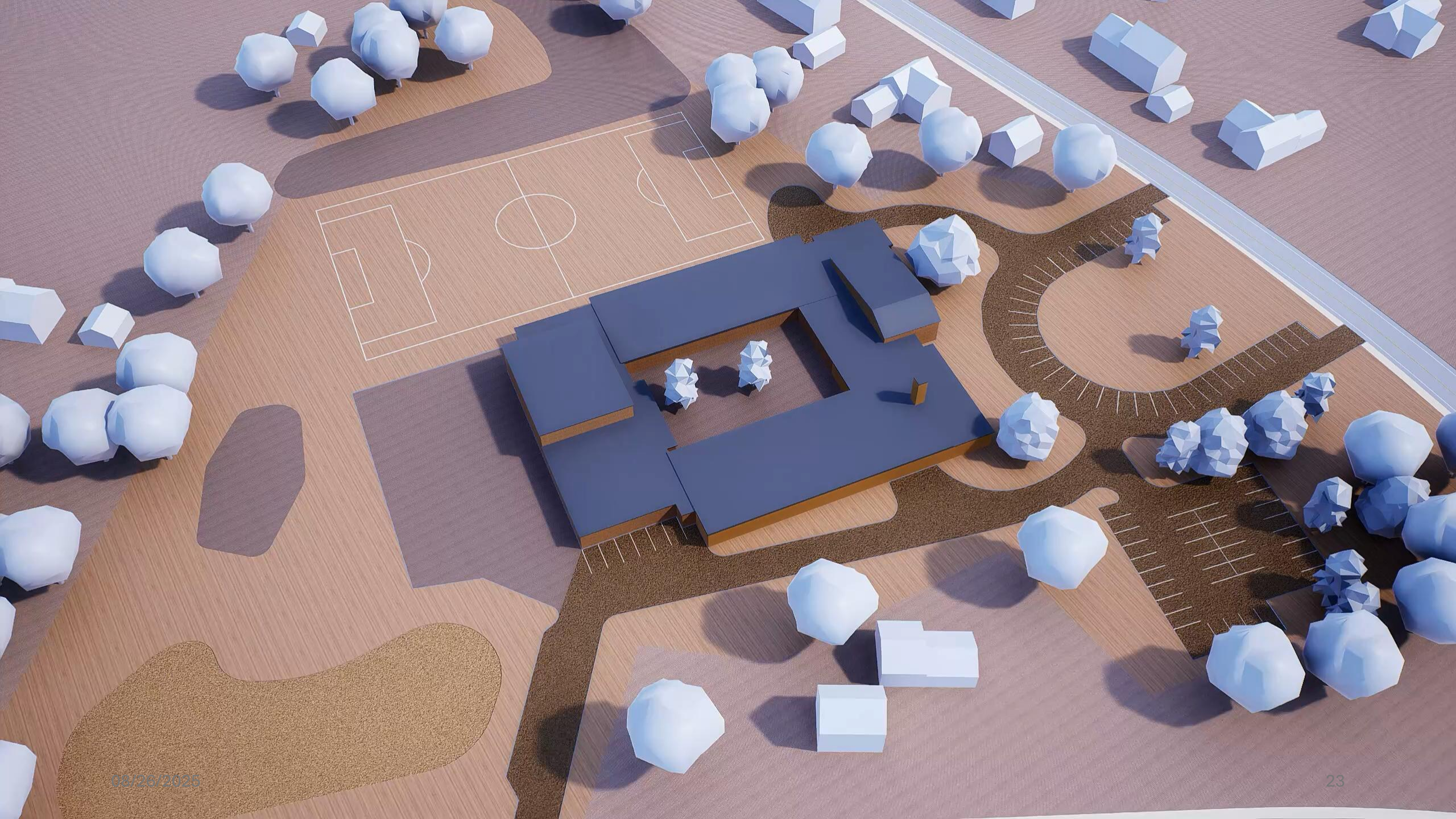

ESSEX ELEMENTARY SCHOOL NEW BUILDING
ENTRY
PARENT LOOP
BUS LOOP
SERVICE
WATER
WETLANDS 50' BUFFER
WETLANDS 100' BUFFER
PROPERTY LINE
EXISTING BUILDING FOOTPRINT
COMMUNITY SPACE
CLASSROOM WING
STORY ST
WETLANDS
RELOCATE PLAYSCAPE
MAIN ENTRY
ATHLETIC FIELD
POND
WESTERN AVE
NORTH
NEW BUILD EES SITE
245 STUDENTS
K-5 + PRE-K



ESSEX ELEMENTARY SCHOOL PHASED NEW BUILDING



NEW BUILD EES SITE | **245** STUDENTS | **K-5** + PRE-K



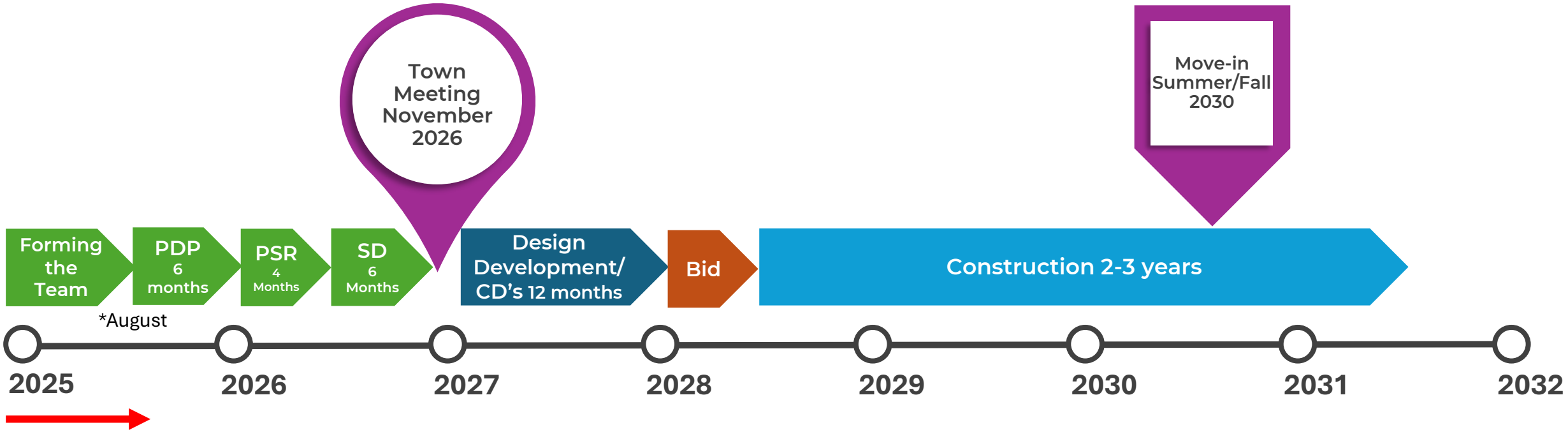

ESSEX ELEMENTARY SCHOOL
ESSEX, MASSACHUSETTS
JCJARCHITECTURE



SBC Meeting Agenda – August 26, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 3 20250722
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 3 $22,921.50
   - JCJ Contract - $900,000 ($600,000 for JCJ Services & $300,000 for Environmental/Site Consultants)
   - BRR #1
4. Designer Introduction: JCJ Architecture
5. Review Project Schedule
6. Introduce Visioning Plan
7. Review Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting
10. Public Comment
11. Adjourn

Anticipated Project Timeline



We are here

Construction duration is shown to provide a potential range.
Final duration will be determined toward the end of initial design.

DORE + WHITTIER

Preliminary Design Program

- Review Educational Plan
- Educational Visioning
- Space Summary
- Existing Conditions Review
- Preliminary Evaluation of Alternatives
    - Multiple enrollments, Reno, Add/Reno, New Construction (includes many options to review)

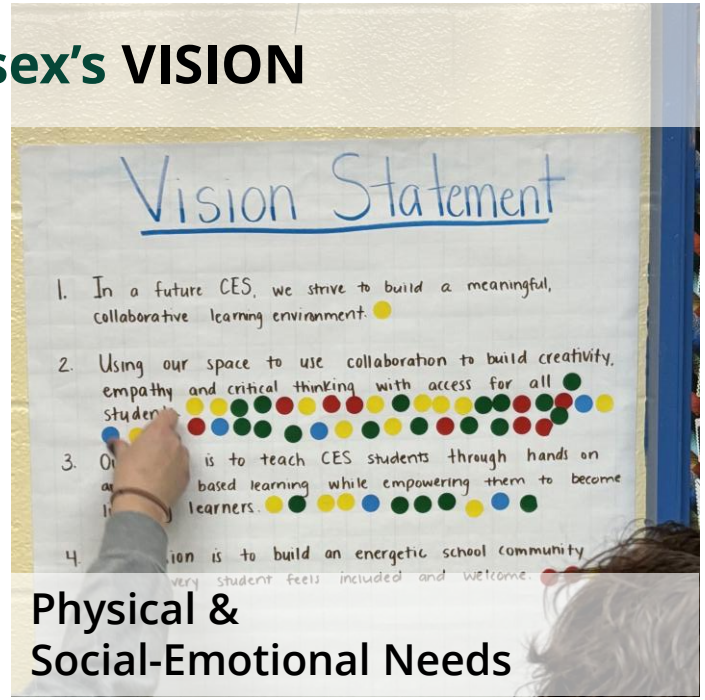
SBC Meeting Agenda – August 26, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 3 20250722
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 3 $22,921.50
   - JCJ Contract - $900,000 ($600,000 for JCJ Services & $300,000 for Environmental/Site Consultants)
   - BRR #1
4. Designer Introduction: JCJ Architecture
5. Review Project Schedule
6. Introduce Visioning Plan
7. Review Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting
10. Public Comment
11. Adjourn

BUILDING Manchester Essex's VISION



Educational &
Community Priorities



Physical &
Social-Emotional Needs



Developmental Impacts &
Enrollment Scenarios



Program
Adjacencies



High-Quality
Instructional Practices

Key Considerations for Enrollment Studies



Child Development & Transitions

Grade span and developmental alignment

Number of student & family transitions

Sense of belonging

Social-emotional impacts

Student identity and role in school



Instructional Quality & Program Equity

Equal access to specials and supports

Consistency of program offerings

Staffing organization and distribution

Equitable distribution of resources

Equity in overall educational experience



Building Use & Family Logistics

Individual building capacity

Balanced enrollment across sites

Travel time and transportation impacts

Family rountines and community use

Community identity and role in school

SBC Meeting Agenda – August 26, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 3 20250722
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 3 $22,921.50
   - JCJ Contract - $900,000 ($600,000 for JCJ Services & $300,000 for Environmental/Site Consultants)
   - BRR #1
4. Designer Introduction: JCJ Architecture
5. Review Project Schedule
6. Introduce Visioning Plan
7. Review Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting
10. Public Comment
11. Adjourn

Proposed Working Groups

Communication Working Group	Ed Planning	Facilities Assesmen/Building Systems
Lisa O'Donnell	Kim Provost	Theresa Whitman
Theresa Whitman	Henry Ottinger	David Pareen
Annie Cameron	Annie Cameron	Gordon Brewster
		Lisa O'Donnell
		Michelle Cresta
		Andy Oldeman

Proposed Working Groups

Financial Review	Design	Site Logistics
Michelle Cresta	John Binieris	Ruth Pereen
Mike Gerhardt	Theresa Whitman	Mike Gerhardt
Andy Oldeman	David Pareen	Lisa O'Donnell
Theresa Whitman	Gordon Brewster	Gordon Brewster
John Binieris	Ariel Brain	David Pareen
	Charlie Hay	Theresa Whitman
	Kim Provost	Jen Hocherman
	Michelle Cresta	
	Jen Hocherman	

SBC Meeting Agenda – August 26, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 3 20250722
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 3 $22,921.50
   - JCJ Contract - $900,000 ($600,000 for JCJ Services & $300,000 for Environmental/Site Consultants)
   - BRR #1
4. Designer Introduction: JCJ Architecture
5. Review Project Schedule
6. Introduce Visioning Plan
7. Review Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting
10. Public Comment
11. Adjourn

Upcoming Meetings

- September 15, 2025
- September 30, 2025
- Community Meeting No. 1 October 8, 2025
- October 14, 2025
- October 28, 2025
- November 6, 2025
- Community Meeting No. 2 November 20, 2025
- November 25, 2025
- Community Meeting No. 3 December 9, 2025
- December 15, 2025

SBC Meeting Agenda – August 26, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 3 20250722
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 3 $22,921.50
   - JCJ Contract - $900,000 ($600,000 for JCJ Services & $300,000 for Environmental/Site Consultants)
   - BRR #1
4. Designer Introduction: JCJ Architecture
5. Review Project Schedule
6. Introduce Visioning Plan
7. Review Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting
10. Public Comment
11. Adjourn

SBC Meeting Agenda – August 26, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 3 20250722
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 3 $22,921.50
   - JCJ Contract - $900,000 ($600,000 for JCJ Services & $300,000 for Environmental/Site Consultants)
   - BRR #1
4. Designer Introduction: JCJ Architecture
5. Review Project Schedule
6. Introduce Visioning Plan
7. Review Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting
10. Public Comment
11. Adjourn

SBC Meeting Agenda – August 26, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 3 20250722
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 3 $22,921.50
   - JCJ Contract - $900,000 ($600,000 for JCJ Services & $300,000 for Environmental/Site Consultants)
   - BRR #1
4. Designer Introduction: JCJ Architecture
5. Review Project Schedule
6. Introduce Visioning Plan
7. Review Working Groups
8. Upcoming Meetings
9. Other Topics not Reasonably Anticipated 48 hours prior to the meeting
10. Public Comment
11. Adjourn

MEETING AGENDA

Meeting Date: September 15, 2025
Meeting Time: 6:00PM – 8:00PM
Project Name: Essex Elementary School
Project Number: 202306980020
Meeting Purpose: School Building Committee Meeting
Location: This meeting will be a hybrid meeting (both in-person and remote) at Essex Elementary School Cafeteria
Meeting Link: https://us06web.zoom.us/j/85349809336

---

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
    - SBC Meeting No. 4 20250826
3. Work Plan
4. Visioning Plan
5. Existing Conditions
6. Apple Street/Site Selection/Evaluation
7. Communication Working Group – Report Out
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

DORE + WHITTIER

Project:	Essex Elementary School	Project No:	
Subject:	School Building Committee Meeting	Meeting Date:	09/15/2025
Location:	Hybrid (Essex Elementary School Cafeteria & Zoom)	Time:	6:00 PM
Distribution:	Attendees, Project File	Prepared By:	Jacob Greco

Present	Name	Affiliation
√	Michelle Cresta	Director of Finance & Operations
√	Pam Beaudoin	Superintendent
√	Kim Provost	Principal
√	Theresa Whitman	SBC Co-Chair
√	John Binieris	SBC Co-Chair
	Ruth Pereen	Essex Board of Selectman Chair
√	Andy Oldeman	Manchester Finance Committee / Director of Engineering (Structural Engineer)
√	Charlie Hay	Architect School Building Experience
	Gordon Brewster	Engineer, Sr. Proj. Manager, Owner's PM, former Member of MERMHS & Memorial building
√	Tyler Virden	Project Executive -Wise Construction / Paren
√	Annie Cameron	Former SC Member and Memorial SBC Member
√	Ariel Fernando Brian	Architect - CBT
√	Jen Hocherman	Architect - Partner SV Design
√	Michael Gerhardt	Civil Engineer / Parent
	Timonthy McDonald	Architect - Onion Flats
√	David Pereen	Resident / Plumbing & Fire
√	Lisa O'Donnell	Design & Construction / Essex Planning Board
√	Mike Burton	Project Director / Partner - DWMP
√	Christina Dell Angelo	Project Executive - DWMP
	John Albright	Project Manager - DWMP
	Rachel Rincon	Assistant Project Manager - DWMP
√	Jacob Greco	Assistant Project Manager - DWMP
√	James LaPosta	Principal - JCJ Architecture
√	Fawn Pellegrini	Senior Project Manager - JCJ Architecture
√	Jeff Elliott	Project Architect - JCJ Architecture
√	Mike Pirollo	Principal – MLP Integrated Design

DORE + WHITTIER

Item No.	Action Item	Requested by	Ball in Court
5.6	Provide feedback on the site selection criteria	Project Team	SBC Members
5.3	Schedule meetings with the Facilities Assessment Building Systems subgroup to review consultant reports once they are completed	SBC	JCJ

- **Please click here for the presentation**
  - **This will be referenced in the meeting minutes with slide numbers called out to refer to.**
- **Below is a summation of key points, please view the recording here for full transcript and chapter summaries.**

Item No.		Description
5.1	**Call to Order & Intro:** Called to order by T.Whitman at 6:14pm, please refer to the attendee list.	Record
5.2	**Approval of August 26 - 2025, Meeting Minutes:** **Roll Call Vote:** A motion to approve the August 26, 2025, Meeting Minutes made by A.Cameron and seconded by C.Hay.	Record

Name	Yes/No/Abstain & Absent
Michelle Cresta	Yes
Pam Beaudoin	Yes
Kim Provost	Yes
John Binieris	Abstain
Theresa Whitman	Abstain

	Ruth Pereen	
	Andy Oldeman	Yes
	Charlie Hay	Yes
	Gordon Brewster	Yes
	Tyler Virden	Yes
	Annie Cameron	Yes
	Ariel Fernando Brian	Yes
	Jen Hocherman	Yes
	Michael Gerhardt	Yes
	Timonthy McDonald	
	David Pereen	Advisor – No Vote
	Henry Oettinger	Yes
	Lisa O'Donnell	Advisor – No Vote

5.3	**Work Plan**
	• F.Pellegrini introduced herself as she was not at the first meeting with JCJ.
	• F.Pellegrini shared the activity that has been conducted since the first meeting (Slide 5)
	• F.Pellegrini shared the current Preliminary Design Program (PDP) work plan (Slide 6)
	  ○ C.Dell Angelo noted that this is being shown for a general overview and not to be gone through line by line at this meeting. She also shared the upcoming SBC meetings and their general agendas which F.Pellegrini reviewed (Slide 7)
	• A.Cameron clarified that there are two community meetings
	  ○ C.Dell Angelo noted there are three: October 8th, November 20th, December 9th
	  ○ A.Cameron asked if they had three during the PDP for the last project
	  • C.Dell Angelo noted that they thought it would be important to share the PDP cost estimates or at the very least a range of them as C.Hay noted that maybe it won't be best to share those numbers
	  • F.Pellegrini noted they can use the cost just for comparison purposes and do not have to share direct costs
		Record

5.4	**Visioning Plan** • C.Dell Angelo reviewed the upcoming visioning plan and meetings (Slide 9) • M.Priollo added that the leadership group's goal is to take the high level plan they have and get more granular to help produce the building adjacencies. He noted that the visioning sessions are for getting input from a broader source • P.Beaudoin noted that if anyone is curious as to what the ed plan looks like it is posted to their website, there may be updates through the process which will be added	Record

5.5	**Existing Conditions**
	
	• F.Pellegrini shared an update on the existing conditions review for the Essex Elementary School (Slide 11)
	• T.Whitman asked how the facilities assessment subcommittee fall into this plan
	  ○ C.Dell Angelo noted that once the reports are received and reviewed by the project team, they can host a meeting with the subcommittee and then report out to the full SBC
	• A.Cameron asked if there is a gab in knowledge about the building or does the Habeeb report capture everything
	  ○ C.Dell Angelo noted that S.Hunt has been at the building for a long time and can provide information if there are any questions
	• C.Hay asked about the geotech and environmental surveys and thinks that Apple Street location deserves at least a day of environmental survey to see what the site conditions are like
	  ○ C.Dell Angelo noted that the next agenda topic will touch on this and cover the evaluation of the selected sites
	• P.Beaudoin asked what type of things will be conducted that the Habeeb report did not cover
	  ○ F.Pellegrini stated that with hazardous materials as an example they would come in and conduct a review to say what would have to be removed or remediated if they did an add/reno and this will follow suit for all disciplines
		Record

5.6	**Apple Street/Site Selection/Evaluation**
	
	• J.Elliott reviewed the three (3) selected potential sites for the future Essex Elementary School including both opportunities, constraints & unknowns (Slide 13 - 16)
	  ○ A.Cameron clarified that bringing utilities to the site is fully on the District but once it is on the site it is reimbursed
	  • J.LaPosta noted that everything on the property will be eligible to be reimbursed but there are caps on the reimbursement
	  ○ T.Virden added that a big part of evaluating the site will be access, traffic & how the site circulation will work
	  ○ C.Hay noted that it would be important to see the impact of how many people live around each site and see if one or the other will allow for more access for walking and biking. He added that Apple Street is a scenic way and is not supposed to be modified and there is also multiple bridges on both access roads. C.Hay also shared that Apple Street is a dangerous road and people drive too fast on it
	  ○ T.Whitman noted that Apple Street was brought forth by the town administrators and asked A.Cameron if the select board is still discussing this
	  • A.Cameron noted they are still not talking about it, but she shared how during the high school there were lots of comments about were all the locations reviewed, and she wants to make sure that they are for this project
	  • T.Whitman noted she has a list of all the town owned parcels and thinks they should go through an informal study of these to make sure they are not missing any locations
	  • P.Beaudoin said that she thinks they would need to make a request to the board of selectman to ask for any town parcels that meet the criteria and that they want to be considered for the project. She noted that the SBC cannot just choose town owned land to be used, it has to be provided and agreed to be leased by the board of the selectman
	  • A.Cameron stated that she did not think the regional high school sites were officially offered during the process
	  • P.Beaudoin asked what process they should follow to satisfy the requirement of reviewing these sites.
		Record

	She noted that the project team should write a letter to the board of selectmen to provide a list of available sites that they would be willing to provide • C.Dell Angelo reviewed the criteria matrix that they will use to evaluate the three sites and asked the SBC to review it and let the project team know if there is anything they want to add or remove (Slide 17) ○ C.Hay noted that they should add future capacity as a criteria option ○ P.Beaudoin said they could go back to the MSBA if there is a finalized development that comes to town • C.Dell Angelo noted this is very tough subject with the MSBA and it is very rare for them to increase any enrollment. She agreed with C.Hay they should add this to the criteria • J.Elliot shared the one they will use for evaluating the future options they will develop (Slide 18) ○ C.Dell Angelo noted that this could change also if any of the sites drop off or are added and this is just showing the format as a lookahead ○ C.Dell Angelo asked that the SBC provide any updates or changes to the criteria by the end of the week so the project team can review it and update it for the September 30th meeting	
5.7	**Communication Working Group - Report Out** • C.Dell Angelo reviewed the first communication working group discussions and the community meeting (Slide 20) • A.Cameron asked who will be leading the tours that are taking place before the community meeting ○ C.Dell Angelo noted the project team can be here along with K.Provost and said that they can provide a poll to see who is around	Record
5.8	**Other Topics not Reasonably Anticipated 48 hours prior to the meeting:** • T.Whitman stated that everyone should have gotten an invite to the shared folder for community emails and said that five (5) of the emails were about the Apple Street location	Record

DORE + WHITTIER

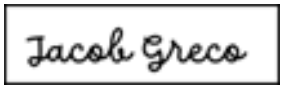
<table>
<tr><td></td><td>

- A.Cameron asked if they should start characterizing the letters for the record
  - T.Whitman noted yes and there were six (6) emails - five (5) against Apple Street location and one (1) against any new school and in favor of consolidation

</td><td></td></tr>
<tr><td>5.9</td><td>Public Comment:

Please review the recording here for public comment</td><td>Record</td></tr>
<tr><td>5.10</td><td>Adjourn:

Roll Call Vote: A motion to adjourn the meeting was made at 7:28 pm by A.Cameron and seconded by T.Virden
<table>
<tr><td>Name</td><td>Yes/No/Abstain & Absent</td></tr>
<tr><td>Michelle Cresta</td><td>Yes</td></tr>
<tr><td>Pam Beaudoin</td><td>Yes</td></tr>
<tr><td>Kim Provost</td><td>Yes</td></tr>
<tr><td>Theresa Whitman</td><td>Yes</td></tr>
<tr><td>John Binieris</td><td></td></tr>
<tr><td>Ruth Pereen</td><td></td></tr>
<tr><td>Andy Oldeman</td><td></td></tr>
<tr><td>Charlie Hay</td><td>Yes</td></tr>
<tr><td>Gordon Brewster</td><td></td></tr>
<tr><td>Tyler Virden</td><td>Yes</td></tr>
<tr><td>Adam Zaiger</td><td></td></tr>
<tr><td>Annie Cameron</td><td>Yes</td></tr>
<tr><td>Henry Oettinger</td><td></td></tr>
<tr><td>Ariel Fernando Brian</td><td></td></tr>
<tr><td>Jen Hocherman</td><td></td></tr>
<tr><td>Michael Gerhardt</td><td></td></tr>
<tr><td>Timonthy McDonald</td><td></td></tr>
<tr><td>David Pereen</td><td>Advisor – No Vote</td></tr>
<tr><td>Lisa O'Donnell</td><td>Advisor – No Vote</td></tr>
</table>
</td><td>Record</td></tr>
</table>

Sincerely,
DORE + WHITTIER
Jacob Greco

Assistant Project Manager
Cc: Attendees, File
The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes.

Essex Elementary School Project

School Building Committee Meeting #05

September 15, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 4 20250826
3. Work Plan
4. Visioning Plan
5. Existing Conditions
6. Apple Street/Site Selection/Evaluation
7. Communication Working Group – Report Out
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 4 20250826
3. Work Plan
4. Visioning Plan
5. Existing Conditions
6. Apple Street/Site Selection/Evaluation
7. Communication Working Group – Report Out
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

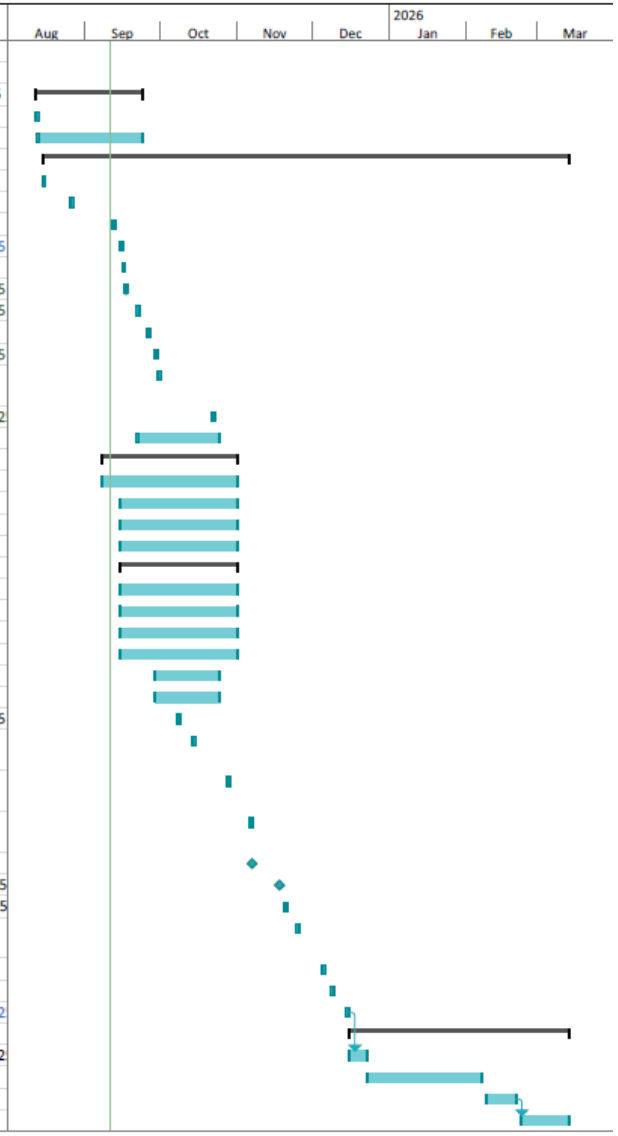
1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 4 20250826
3. Work Plan
4. Visioning Plan
5. Existing Conditions
6. Apple Street/Site Selection/Evaluation
7. Communication Working Group – Report Out
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

Work Plan Review

- JCJ Architecture activity since our last SBC Meeting:
  - Discussed scope of services and solicited fees from our Consultants
  - Progressed Contract For Designer Services
  - Collaboratively drafted the Feasibility and Schematic Work Plan
  - Created the Educational Visioning Work Plan
  - Scheduled the Educational Visioning Meetings (September and October)
  - Began Architectural Existing Conditions Review at Essex ES

Work Plan Review

ID	Task Name	Duration	Start	Finish
1	Manchester Essex Regional School District			
2	**Essex Elementary School**			
3	**Designer Selection**	**31 days**	**Tue 8/12/25**	**Tue 9/23/25**
4	MSBA Designer Selection	1 day	Tue 8/12/25	Tue 8/12/25
5	Execute Contract	30 days	Wed 8/13/25	Tue 9/23/25
6	**Module 3: Feasibility Phase - PDP**	**151 days**	**Fri 8/15/25**	**Fri 3/13/26**
7	Kick Off Meeting: Dore + Whittier & District	1 day	Fri 8/15/25	Fri 8/15/25
8	SBC Meeting #4: Kick Off with JCJ	1 day	Tue 8/26/25	Tue 8/26/25
9	ESS Communications Working Group Meeting	1 day	Fri 9/12/25	Fri 9/12/25
10	SBC Meeting #5: Workplan Review, Evaluation Framework	1 day	Mon 9/15/25	Mon 9/15/25
11	Educational Visioning #1: Launch & Priorities	1 day	Tue 9/16/25	Tue 9/16/25
12	Educational Visioning #2: Shadow Day	1 day	Wed 9/17/25	Wed 9/17/25
13	Educational Visioning #3: Development, Belonging, Grad Configura	1 day	Mon 9/22/25	Mon 9/22/25
14	Educational Visioning #4: School Tours	1 day	Fri 9/26/25	Fri 9/26/25
15	Educational Visioning #5: Workshop-Specific Program Needs & Adj	1 day	Mon 9/29/25	Mon 9/29/25
16	SBC Meeting #6: Educational Visioning Update, Site Development Requirements, Sustainability Goals	1 day	Tue 9/30/25	Tue 9/30/25
17	Educational Visioning #6: Teaching, Learning & Space	1 day	Wed 10/22/2	Wed 10/22/2
18	Educational Visioning #7: Workshop Special Education & Related Se	25 days	Mon 9/22/25	Fri 10/24/25
19	**Existing Conditions Building Investigations**	40 days	Mon 9/8/25	Fri 10/31/25
20	Architectural	40 days	Mon 9/8/25	Fri 10/31/25
21	Regulated Materials	35 days	Mon 9/15/25	Fri 10/31/25
22	Structural	35 days	Mon 9/15/25	Fri 10/31/25
23	MEP/FP Systems (Possible Hydrant Flow Tests)	35 days	Mon 9/15/25	Fri 10/31/25
24	**Existing Conditions Site Investigations**	35 days	Mon 9/15/25	Fri 10/31/25
25	Civil and Infrastructure	35 days	Mon 9/15/25	Fri 10/31/25
26	Phase 1 Environmental Assessments	35 days	Mon 9/15/25	Fri 10/31/25
27	Geotechnical Studies	35 days	Mon 9/15/25	Fri 10/31/25
28	Environmental Noise Surveys	35 days	Mon 9/15/25	Fri 10/31/25
29	Food Service Program Meeting	20 days	Mon 9/29/25	Fri 10/24/25
30	Security Program Meeting	20 days	Mon 9/29/25	Fri 10/24/25
31	Community Meeting #1: Process, Schedule, Existing Conditions	1 day	Wed 10/8/25	Wed 10/8/25
32	SBC Meeting #7: Review Community Meeting #1 Feedback, Initial Space Summary	1 day	Tue 10/14/25	Tue 10/14/25
33	SBC Meeting #8: Preliminary Evaluation of Alternatives (Review), Acceptance of Space Summary	1 day	Tue 10/28/25	Tue 10/28/25
34	SBC Meeting #9: Preliminary Evaluation of Alternatives (Draft), Acceptance of Educational Program	1 day	Thu 11/6/25	Thu 11/6/25
35	Submit PDP Alternatives to Cost Estimator	0 days	Fri 11/7/25	Fri 11/7/25
36	SC Approval of Educational Program & Acceptance of Space Summa	0 days	Tue 11/18/25	Tue 11/18/25
37	Community Meeting #2: Sites & Alternatives Considered	1 day	Thu 11/20/25	Thu 11/20/25
38	SBC Meeting #10: Review Community Meeting #2 Feedback and Cost Estimate	1 day	Tue 11/25/25	Tue 11/25/25
39	Submit Draft PDP to SBC	1 day	Fri 12/5/25	Fri 12/5/25
40	Community Meeting #3: Review Draft PDP Results with Costs	1 day	Tue 12/9/25	Tue 12/9/25
41	SBC Meeting #11: Vote Approval of PDP	1 day	Mon 12/15/2	Mon 12/15/2
42	**MSBA PDP Submission and Review**	**64 days**	**Tue 12/16/25**	**Fri 3/13/26**
43	Submit PDP to MSBA	5 days	Tue 12/16/25	Mon 12/22/2
44	MSBA Review PDP and Comment - Timeframe TBD	34 days	Tue 12/23/25	Fri 2/6/26
45	Respond MSBA Comments and Resubmit	10 days	Mon 2/9/26	Fri 2/20/26
46	MSBA Accept PDP - Timeframe TBD	15 days	Mon 2/23/26	Fri 3/13/26



Work Plan Review: SBC Meetings During PDP Phase

SBC Meetings	Topics
Sept. 30, 2025	Educational Visioning Update, Site Development Requirements, Sustainability Goals
Oct. 14, 2025	Review Community #1 Feedback, Initial Space Summary
Oct. 28, 2025	Preliminary Evaluation of Alternatives (Review), Acceptance of Space Summary
Nov. 6, 2025	Preliminary Evaluation of Alternatives (Draft), Acceptance of Educational Program
Nov. 25, 2025	Review Community Meeting #2 Feedback, Cost Estimate
Dec. 15, 2025	Vote Approval of PDP

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 4 20250826
3. Work Plan
4. Visioning Plan
5. Existing Conditions
6. Apple Street/Site Selection/Evaluation
7. Communication Working Group – Report Out
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

Upcoming Visioning Meetings

- Leadership Group (District Staff)
  - 9/16-Launch and Priority Mapping
  - 9/17-Essex ES Shadowing
  - 9/26-Building Tour
  - 9/29-Program Workshop-Specific Program Needs & Adjacencies

- Visioning Sessions (Teachers, Families, Community Members)
  - 9/22-Development, Belonging, and Grade Configurations
  - 10/22-Teaching, Learning & Space

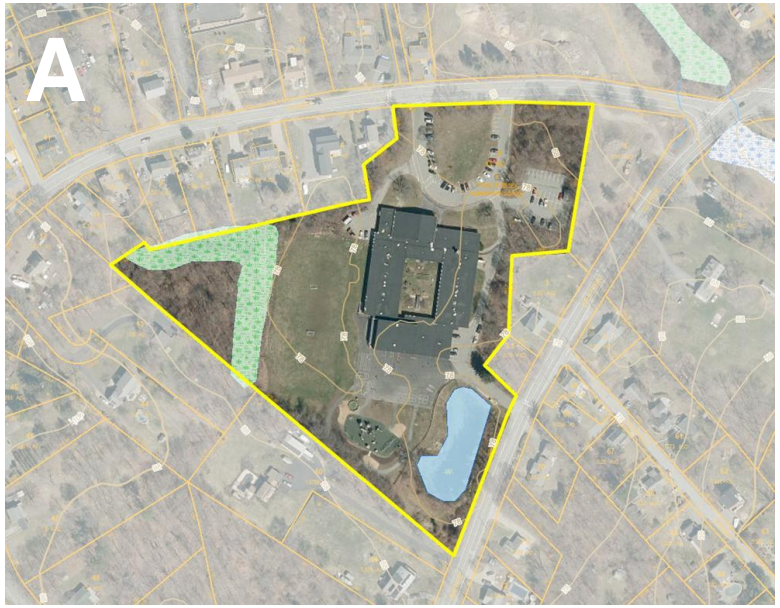
1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 4 20250826
3. Work Plan
4. Visioning Plan
5. Existing Conditions
6. Apple Street/Site Selection/Evaluation
7. Communication Working Group – Report Out
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

Existing Conditions

- Received existing construction drawings of Essex ES
- Began Architectural Existing Conditions Review at Essex ES
- Scheduling Consultant Existing Conditions Reviews
  - Mechanical, Electrical, Plumbing, Information Technology and Audio/Visual
  - Structural
  - Civil and Infrastructure
  - Phase 1 Environmental Assessments & Regulated Material Investigations
  - Geotechnical
  - Survey
  - Environmental Noise Surveys
  - Traffic

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 4 20250826
3. Work Plan
4. Visioning Plan
5. Existing Conditions
6. Apple Street/Site Selection/Evaluation
7. Communication Working Group – Report Out
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

Identified Sites



Current Essex Elementary School

12 Story Street, Essex



Current Manchester Memorial Elementary School

43 Lincoln Street, Manchester



Apple Street Site

30 Apple Street, Essex

Current Essex Elementary School



Opportunities

Established identity in the community
Developed site utilities
Multiple options for site access

Constraints

Construction activities on occupied school site
Wetlands & pond
Some topography on north side of site

Unknowns

Soil conditions proximate to wetlands

Current Manchester Memorial ES



Opportunities

Developed site utilities

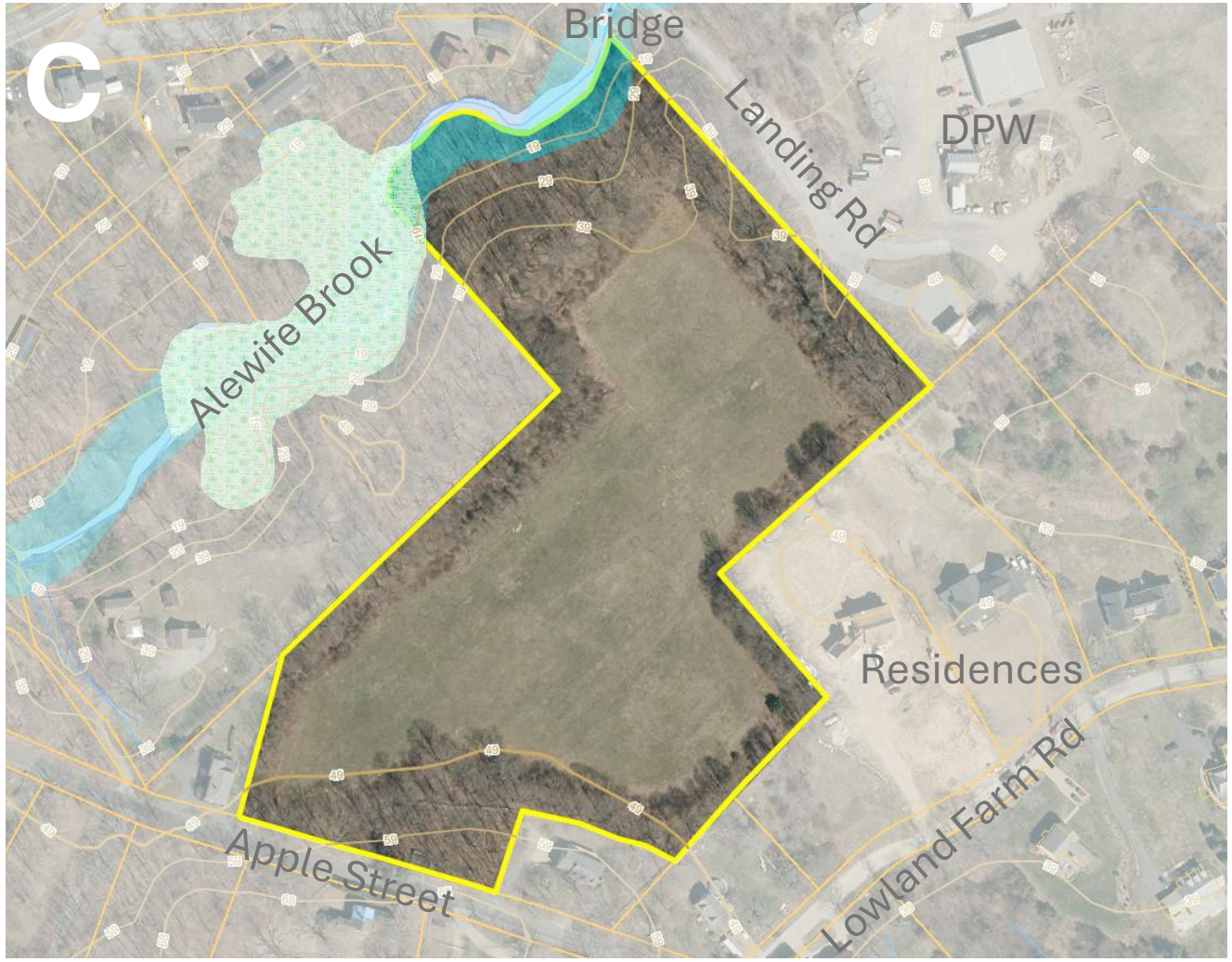
Constraints

Construction activities on occupied school site
Dense site with limited expansion options
Wetlands and flood zone
Transportation from Essex to Manchester Regional Agreement

Unknowns

MSBA funding considerations

Apple Street Site



Opportunities

No disruption to existing schools
Construction phasing

Constraints

Undeveloped site
Restricted site access
Impacts to adjacent residences

Unknowns

Environmental risks

Site Evaluation Criteria For Review

Legend	
	Not Preferable
	Nuetral
	Advantageous







ESSEX ELEMENTARY SCHOOL PROJECT SITE ALTERNATIVES	SITE A CURRENT ESSEX ES	SITE B CURRENT MMES	SITE C APPLE STREET
	12 STORY ST	43 LINCOLN ST	30 APPLE ST
Town Existing Acreage Zoning Parcel #	ESSEX 9.75 ACRES General Use District (GUD) 129-005	MANCHESTER 11.313 ACRES G 47-0-6	ESSEX 11.50 ACRES General Use District (GUD) 142-008
Town Owned			
Compatible with District Agreement			
Adequate Site Acreage / Buildable Area			
Adequate Site Access			
Meets Educational Need			
Maximizes Community Resources			
Minimizes Adverse Community / Social Impact			
Minimizes Impact to Neighbors			
Minimizes Environmental Impact			
Regulatory Considerations			
Minimizes Economic Impact (New roads, sitework, etc.)			
Access to Utilities			
Sub-surface Soil Conditions			

Evaluation of Design Options

Legend		
0.00		Not Preferable
1.00		Poor
2.00		Satisfactory
3.00		Advantageous
4.00		Highly Advantageous





ESSEX ELEMENTARY SCHOOL PROJECT EVALUATION OF DESIGN OPTIONS		SITE A CURRENT ESSEX ES						SITE B CURRENT MMES	SITE C APPLE STREET	
		A0.1	A0.2	A1.1	A1.2	A2.1	A2.2	B1.1	C2.1	C2.2
		Code Upgrade/ Base Repair	Code Upgrade/ Base Repair	Addition/ Renovation	Addition/ Renovation	New Construction	New Construction	Addition/ Renovation	New Construction	New Construction
Enrollment Grade Configuration		160 K-3	245 K-5	160 K-3	245 K-5	160 K-3	245 K-5	505 K-5	160 K-3	245 K-5
Educational Program	Delivery of Educational Program & Vision	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Provides Equity across the District	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Accomodates Future Growth and Expansion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Provides Flexible and Adaptable Spaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Community	Heart of the Essex Community	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Create a Sense of Place	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Improve Access for Community Use	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Enhance Safety and Security	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Compatible with Regional Agreement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Meets Sustainability Goals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site	Minimize Regulatory Impacts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Adapts to Existing Topography	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Neighborhood Traffic Impact	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Optimize Safety & Efficiency of Parent and Bus Drops	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Adequate Parking	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Adequate Play and Athletics Fields	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Maximize Student Outdoor Educational Activities	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building	Address facility Deficiencies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Visible Entries and Unobstructed Sight Lines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Ability to Implement Energy Efficient Envelope	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Ability to Implement Energy Efficient Building Systems	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cost & Schedule	Cost Effective	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Maximize MSBA Grant Reimbursement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Phasing Minimizes Construction Duration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Accommodates Transition without Swing Space	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Adequate Construction Access and Staging	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Minimizes Impact to Site Parking and Athletic Fields	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Reduce Operational Costs over Lifespan of Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 4 20250826
3. Work Plan
4. Visioning Plan
5. Existing Conditions
6. Apple Street/Site Selection/Evaluation
7. Communication Working Group – Report Out
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

Communications WG Report Out

- Save the Date
- Electronic Flyer Distribution (ParentSquare, Blackboard, Town email distributions)
- Every Direct Door Mailers to both Manchester and Essex
  - Date, Time, Agenda, Hybrid meeting
- Facebook page updates
- Website updates with electronic flyer detail

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 4 20250826
3. Work Plan
4. Visioning Plan
5. Existing Conditions
6. Apple Street/Site Selection/Evaluation
7. Communication Working Group – Report Out
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 4 20250826
3. Work Plan
4. Visioning Plan
5. Existing Conditions
6. Apple Street/Site Selection/Evaluation
7. Communication Working Group – Report Out
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

SBC Meeting Agenda – September 15, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 4 20250826
3. Work Plan
4. Visioning Plan
5. Existing Conditions
6. Apple Street/Site Selection/Evaluation
7. Communication Working Group – Report Out
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

MEETING AGENDA

Meeting Date:	September 30, 2025
Meeting Time:	6:00PM – 8:00PM
Project Name:	Essex Elementary School
Project Number:	202306980020
Meeting Purpose:	School Building Committee Meeting
Location:	This meeting will be a hybrid meeting (both in-person and remote) at Essex Elementary School Cafeteria
Meeting Link:	https://us06web.zoom.us/j/85349809336

---

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
    - SBC Meeting No. 5 20250915
3. Invoices & Commitments for Review and Approval (Vote Expected)
    - DWMP Invoice No. 4 $21,180.00
4. Visioning Plan Update
5. Update of Site Selection Criteria
6. Sustainability Goals Discussion
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Adjourn

DORE + WHITTIER

Project:	Essex Elementary School	Project No:	
Subject:	School Building Committee Meeting	Meeting Date:	09/30/2025
Location:	Hybrid (Essex Elementary School Cafeteria & Zoom)	Time:	6:00 PM
Distribution:	Attendees, Project File	Prepared By:	Jacob Greco

Present	Name (* Voting Member)	Affiliation
√	Michelle Cresta*	Director of Finance & Operations
√	Pam Beaudoin*	Superintendent
√	Kim Provost*	Principal
√	Theresa Whitman*	SBC Co-Chair
√	John Binieris*	SBC Co-Chair
√	Andy Oldeman*	Manchester Finance Committee / Director of Engineering (Structural Engineer)
√	Charlie Hay*	Architect School Building Experience
√	Gordon Brewster*	Engineer, Sr. Proj. Manager, Owner's PM, former Member of MERMHS & Memorial building
√	Tyler Virden*	Project Executive -Wise Construction / Paren
√	Annie Cameron*	Former SC Member and Memorial SBC Member
	Ariel Fernando Brian*	Architect - CBT
√	Jen Hocherman*	Architect - Partner SV Design
√	Michael Gerhardt*	Civil Engineer / Parent
	Timonthy McDonald*	Architect - Onion Flats
√	David Pereen	Resident / Plumbing & Fire
√	Lisa O'Donnell	Design & Construction / Essex Planning Board
√	Steve Hunt*	Facilities Manager
√	Emily Dwyer* (Pending SC Approval)	EES Teacher
√	Kim Field	EES Teacher
√	Rachelle Rousseau	EES Teacher
	Mike Burton	Project Director / Partner - DWMP
√	Christina Dell Angelo	Project Executive - DWMP
√	John Albright	Project Manager - DWMP
	Rachel Rincon	Assistant Project Manager - DWMP
√	Jacob Greco	Assistant Project Manager - DWMP
√	James LaPosta	Principal - JCJ Architecture
√	Fawn Pellegrini	Senior Project Manager - JCJ Architecture
√	Jeff Elliott	Project Architect - JCJ Architecture

√	Emily Czarnecki	Principal (Interiors) – JCJ Architecture
√	Mike Pirollo	Principal – MLP Integrated Design
√	Eric Haggstrom	Sustainability Director – JCJ Architecture
√	Kelley Tapia	Soden Sustainability

Item No.	Action Item	Ball in Court
6.4	Have School Committee Vote on new SBC Members	SBC
6.6	Schedule a Site Working Group	DWMP
6.7	Schedule a Sustainability Working Group	DWMP
6.6	Update the Site Selection Criteria	JCJ

- **Please click here for the presentation**
  - **This will be referenced in the meeting minutes with slide numbers called out to refer to.**
- **Below is a summation of key points, please view the recording here for full transcript and chapter summaries.**

Item No.		Description
6.1	**Call to Order & Intro:** Called to order by T.Whitman at 6:05pm, please refer to the attendee list.	Record
6.2	**Approval of September 15 - 2025, Meeting Minutes (Vote Expected):** **Roll Call Vote:** A motion to approve the September 15, 2025, Meeting Minutes made by E.Dwyer and seconded by A.Cameron Name | Yes/No/Abstain & Absent	Record

Michelle Cresta	Yes
Pam Beaudoin	Yes
Kim Provost	Yes
John Binieris	Absent
Theresa Whitman	Yes
Andy Oldeman	Yes
Charlie Hay	Yes
Gordon Brewster	Yes
Tyler Virden	Yes
Annie Cameron	Yes
Ariel Fernando Brian	Yes
Jen Hocherman	Abstain
Michael Gerhardt	Yes
Timonthy McDonald	Absent
Henry Oettinger	Yes
Steve Hunt	Absent
Emily Dwyer	Abstain
Kim Field	Advisor – No Vote
Rachelle Rousseau	Advisor – No Vote
David Pereen	Advisor – No Vote
Lisa O'Donnell	Advisor – No Vote

6.3	**Invoices & Commitments for Review and Approval (Vote Expected):** **Roll Call Vote:** A motion to approve the DWMP Invoice No. 4 ($21,180.00), made by A.Cameron and seconded by G.Brewster	Record

Name	Yes/No/Abstain & Absent
Michelle Cresta	Yes
Pam Beaudoin	Yes
Kim Provost	Yes
John Binieris	Absent
Theresa Whitman	Yes

Andy Oldeman	Yes
Charlie Hay	Yes
Gordon Brewster	Yes
Tyler Virden	Yes
Annie Cameron	Yes
Ariel Fernando Brian	Yes
Jen Hocherman	Abstain
Michael Gerhardt	Yes
Timonthy McDonald	Absent
Henry Oettinger	Yes
Steve Hunt	Absent
Emily Dwyer	Abstain
Kim Field	Advisor – No Vote
Rachelle Rousseau	Advisor – No Vote
David Pereen	Advisor – No Vote
Lisa O'Donnell	Advisor – No Vote

6.4 **Update to SBC Roster:**

- P.Beaudoin introduced the new members of the School Building Committee and noted that this will go to School Committee for official vote (Slide 6)
  - Emily Dwyer – EES Teacher (Voting Member)
  - Kim Field – EES Teacher (Advisor)
  - Rachelle Rousseau – EES Teacher (Advisor)
  - Steve Hunt – Facilities Manager (Voting Member)
- A.Cameron noted how five of the voting members (out of 17) are not district residences and shared how this is of concern for her with regarding optics and for functionality
  - T.Whitman listed the MSBA requirements for a School Building Committee
  - E.Dwyer added that it is the point of where the advocacy is coming from
  - P.Beaudoin shared what the makeup of the SBC was for the Memorial Project

	• T.Whitman added that if more Essex members are added they will need to match it with Manchester residences • A.Cameron proposed making K.Field the voting member, finding a Manchester lawyer to add, and promoting the two Essex advisors to voting members ○ K.Field noted that she does not want to represent Manchester as a voting member as she wants to advise this from the viewpoint of a teacher from EES not a Manchester resident • T.Whitman held a straw poll vote to proceed with a recommendation to the School Committee to approve the SBC roster as presented in Slide 6	

6.5	**Visioning Plan Update:**
	
	• M.Priollo provided an updated on the educational visioning that has occurred so far for the project (Slide 8 & 9)
	  ○ G.Brewster noted how visioning is critical for these projects and how the next step is to choose the option they want, he asked J.LaPosta how this helps JCJ narrow down the options for the SBC
	  • J.LaPosta noted it is foundational to the process and required by MSBA by way of helping finalize or adjust the educational program that P.Beaudoin will write and submit. He added that for site selection it has less of an impact but it will help inform them in some way
	  • G.Brewster added that the school visits may push people to the new school option after seeing them
	  • P.Beaudoin noted that the visits were more about the program and how the education was conducted in these and not necessarily the finishes of the building
	  • K.Field shared how the tours were focused on the educational aspect
	  • E.Dwyer noted by MSBA they have to look at all the options and cannot just drive right to a new building
	  • P.Beaudoin noted they already do have an educational plan already and they are using the tours and visioning to test the assumptions they already have
		Record

	• J.LaPosta added how the tours were meant to find schools that have a different set up educationally than both Memorial and Essex Elementary ○ A.Cameron asked where the work on the grade configuration is • P.Beaudoin noted they are working on it through the visioning sessions and she is working on it financially • C.Dell Angelo added that they will decide on this and bring it to the SBC by the end of October/ early November	
6.6	**Update of Site Selection Criteria:** • J.Elliott reintroduced the updated site selection criteria matrix from comments provided by the SBC (Slide 11). ○ A.Cameron reported out on an update of the possible sites in Essex that could be used. She noted that T.Whitman pulled a list of any site that was larger than 9.55 acres and the town reviewed the list and noted that the only site the Board of Selectman will propose is the Apple Street site ○ M.Gerhardt wanted to clarify that criteria of walkability should be for the Essex student population not Manchester as Memorial has great walkability but not for Essex residences • J.Elliott shared a walkability study for the surrounding neighborhoods for the three (3) proposed sites (Slides 12 - 14) • C.Hay noted they need the information from JCJ to fill it out properly • A.Cameron added that last time JCJ filled it out and the committee debated it ○ G.Brewster agreed ○ C.Dell Angelo noted they will take a try at filling it out and bring it back to the SBC • C.Hay noted they should review any criteria that members have questions on ○ C.Hay started with walkability and noted it should be red for Apple Street as it is too dangerous unless the school would take a stance to say that no walkers or bikers are allowed • P.Beaudoin noted they do not need to debate the danger but asked what the cost would be to create a safe way	Record

	• C.Hay asked if it can even be modified and noted that one of his comments was to add a cost of infrastructure criteria section • T.Whitman noted that if wanted A.Cameron can bring this issue to the Essex Board of Selectman about town improvements being wanted or not • C.Hay noted whether town betterment of school project either way it is the same tax payers • P.Beaudoin noted that it isnt and during the Memorial project they had to pull out of the senior center as it was being viewed as Essex paying for Manchester betterment and will be the same vice versa for Essex • L.O'Donnell shared that a scenic road designation is determined by a town meeting vote so she would assume they can remove it. She added that there is very loose rules and it mainly focuses on affecting trees and stone walls. L.O'Donnell thinks that if Apple Street really is the best site she would not let this deter the committee • C.Hay noted that even so it is another vote they would need to progress with it and taking land for entrances will make a political firestorm ○ P.Beaudoin noted that a bullet point should be added to just note that the selected site is ready to go for construction ○ C.Dell Angelo noted they can schedule a working group to go through the matrix with the project team and bring it back to the SBC	
6.7	**Introduction Sustainability Discussion:** • E.Haggstrom & K.Tapia shared the introduction to sustainability and the approach for the project including the available incentives and the associated requirements (Slides 16 - 22) ○ C.Dell Angelo noted that there is no decisions that need to be made now but she wanted to start the conversation given Essex did not opt-in to the stretch code as there is a stigma that this all costs more money but it really is not the case and can save the District more money by the end of the project	Record

	○ A.Cameron asked if Andy and all the people who know this agree ○ T.Whitman asked at what point in the commitment to the incentives are they guaranteed the money but not when do they get the money • E.Haggstrom noted that for the Mass Save it will be as early as Schematic Design and it will be locked in, same with the MSBA. ○ A.Cameron asked how schools are handling this for the IRA portion • E.Haggstrom noted it is really about evaluating how much risk the District wants to undertake as there is no way to know how it will change it the future ○ E.Haggstrom noted they provide a life cycle cost analysis to the committee that shows the cost of all these options for day 1, year to year, overall, etc.. ○ C.Dell Angelo asked for any committee members to reach out if they want to join the sustainability subgroup ○ R.Russo asked which comes first the site selection or the grade configuration • C.Dell Angelo noted that they are doing the site first so if the site comes off the table they do not have to study the grade configurations for those sites	
6.8	**Other Topics not Reasonably Anticipated 48 hours prior to the meeting:** • A.Cameron asked if they can have a map of the order of decisions for the community meeting ○ P.Beaudoin noted they will discuss this Friday at the communication working group • A.Cameron noted that they sold a product and educational experience to Manchester and it would be wrong to go back and now change it • P.Beaudoin noted it is important to talk about the pros and cons of both sites as they both came from town staff members • E.Dwyer noted that she went through this process in her district and it is important to get the load voices with different views to join the community meeting	Record

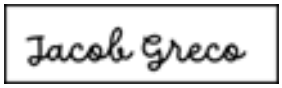
DORE + WHITTIER

<table>
<tr><td>6.9</td><td>Public Comment:

To view public comment please click here</td><td>Record</td></tr>
<tr><td>6.10</td><td>Adjourn:

Roll Call Vote: A motion to adjourn the meeting was made at 8:06 pm by A.Cameron and seconded by G.Brewster

<table>
<tr><td>Name</td><td>Yes/No/Abstain & Absent</td></tr>
<tr><td>Michelle Cresta</td><td>Yes</td></tr>
<tr><td>Pam Beaudoin</td><td>Yes</td></tr>
<tr><td>Kim Provost</td><td>Yes</td></tr>
<tr><td>John Binieris</td><td>Absent</td></tr>
<tr><td>Theresa Whitman</td><td>Absent</td></tr>
<tr><td>Andy Oldeman</td><td>Absent</td></tr>
<tr><td>Charlie Hay</td><td>Yes</td></tr>
<tr><td>Gordon Brewster</td><td>Yes</td></tr>
<tr><td>Tyler Virden</td><td>Yes</td></tr>
<tr><td>Annie Cameron</td><td>Yes</td></tr>
<tr><td>Ariel Fernando Brian</td><td>Absent</td></tr>
<tr><td>Jen Hocherman</td><td>Yes</td></tr>
<tr><td>Michael Gerhardt</td><td>Yes</td></tr>
<tr><td>Timonthy McDonald</td><td>Absent</td></tr>
<tr><td>Henry Oettinger</td><td>Absent</td></tr>
<tr><td>Steve Hunt</td><td>Absent</td></tr>
<tr><td>Emily Dwyer</td><td>Absent</td></tr>
<tr><td>Kim Field</td><td>Absent</td></tr>
<tr><td>Rachelle Rousseau</td><td>Absent</td></tr>
<tr><td>David Pereen</td><td>Advisor – No Vote</td></tr>
<tr><td>Lisa O'Donnell</td><td>Advisor – No Vote</td></tr>
</table>
</td><td>Record</td></tr>
</table>

Sincerely,
DORE + WHITTIER

Jacob Greco
Assistant Project Manager
Cc: Attendees, File
The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes.

Essex Elementary School Project

School Building Committee Meeting #06

September 30, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250915
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 4 $21,180.00
4. Update to SBC Roster (Vote Expected)
5. Visioning Plan Update
6. Update of Site Selection Criteria
7. Introductory Sustainability Discussion
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250915
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 4 $21,180.00
4. Update to SBC Roster (Vote Expected)
5. Visioning Plan Update
6. Update of Site Selection Criteria
7. Introductory Sustainability Discussion
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250915
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 4 $21,180.00
4. Update to SBC Roster (Vote Expected)
5. Visioning Plan Update
6. Update of Site Selection Criteria
7. Introductory Sustainability Discussion
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250915
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 4 $21,180.00
4. Update to SBC Roster (Vote Expected)
5. Visioning Plan Update
6. Update of Site Selection Criteria
7. Introductory Sustainability Discussion
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

SBC Roster Changes

New Members:

- Emily Dwyer – EES Teacher (Voting Member)
- Kim Field – EES Teacher (Advisor)
- Rachelle Russo – EES Teacher (Advisor)
- Steve Hunt – Facilities Manager (Advisor)

- Ruth Pereen-Essex (stepped down)
- Adam Zaiger-Manchester (stepped down)

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250915
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 4 $21,180.00
4. Update to SBC Roster (Vote Expected)
5. Visioning Plan Update
6. Update of Site Selection Criteria
7. Introductory Sustainability Discussion
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

Draft Project Goals

1. Experiences and spaces that **promote students first** as the doers and leaders of their own learning
2. A learning **environment that captures** and **supports** the **energy of kids**
3. Space to **support** all iterations of **engagement** now and in the future (student – student; student –teacher; teacher – teacher)
4. School should serve as the **hub of the community**
5. Facility should support **extensions of learning**, including **before** and **after school** opportunities
6. A shared **large-scale school community** for parents and students to experience small group, large group, and whole school gathering



Visioning Next Steps

- Visioning Session (Child Development & Enrollment Scenarios) – 9/22
- School Tours – 9/26
- Program Workshop – 9/29
- Visioning Session (Teaching, Learning, Space) – 10/22



1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250915
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 4 $21,180.00
4. Update to SBC Roster (Vote Expected)
5. Visioning Plan Update
6. Update of Site Selection Criteria
7. Introductory Sustainability Discussion
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

Site Evaluation Criteria Update

Legend	
	Not Preferable
	Nuetral
	Advantageous



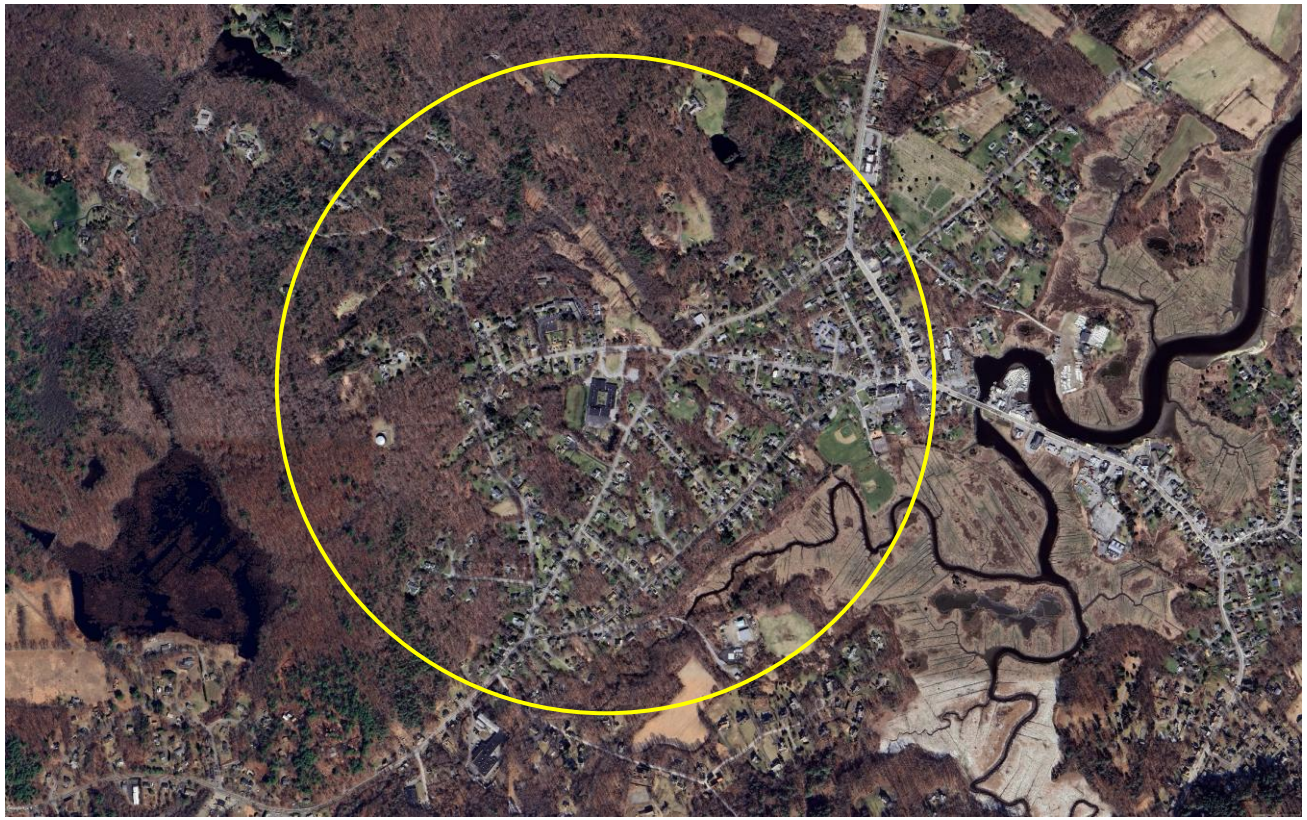




ESSEX ELEMENTARY SCHOOL PROJECT SITE ALTERNATIVES		SITE A CURRENT ESSEX ES	SITE B CURRENT MMES	SITE C APPLE STREET
		12 STORY ST	43 LINCOLN ST	30 APPLE ST
General	Location	ESSEX	MANCHESTER	ESSEX
	Size	9.75 ACRES	11.313 ACRES	11.50 ACRES
Site Development	Town Owned	●	●	●
	Adequate Buildable Area - Target minimum of 8 Acres	●	●	●
	Utilities Access			
	Subsurface Conditions – Geotechnical (Bearing Capacity, Organics, Ledge)			
	Subsurface Conditions – Environmental Contaminants			
	Regulatory - Wetlands, Rivers and Streams, Flood Zones			
	Future Development Options and Flexibility			
	Reimbursement potential from MSBA (Offsite, Budget cap)			
	Construction Complexity – Access, Laydown, Phasing			
Site Access	Infrastructure - Bridges, Road Surface			
	Walkability - Distances, Sidewalks			
	Safety - Road Width, Sight Lines			
	Busing			
Community	Compatible with District Agreement			
	Access to other Community Resources			
	Minimize Impact on Neighbors			
Education	Meets needs of Educational Program			
	Construction Impact on Existing School Activities			

DRAFT

Walkability



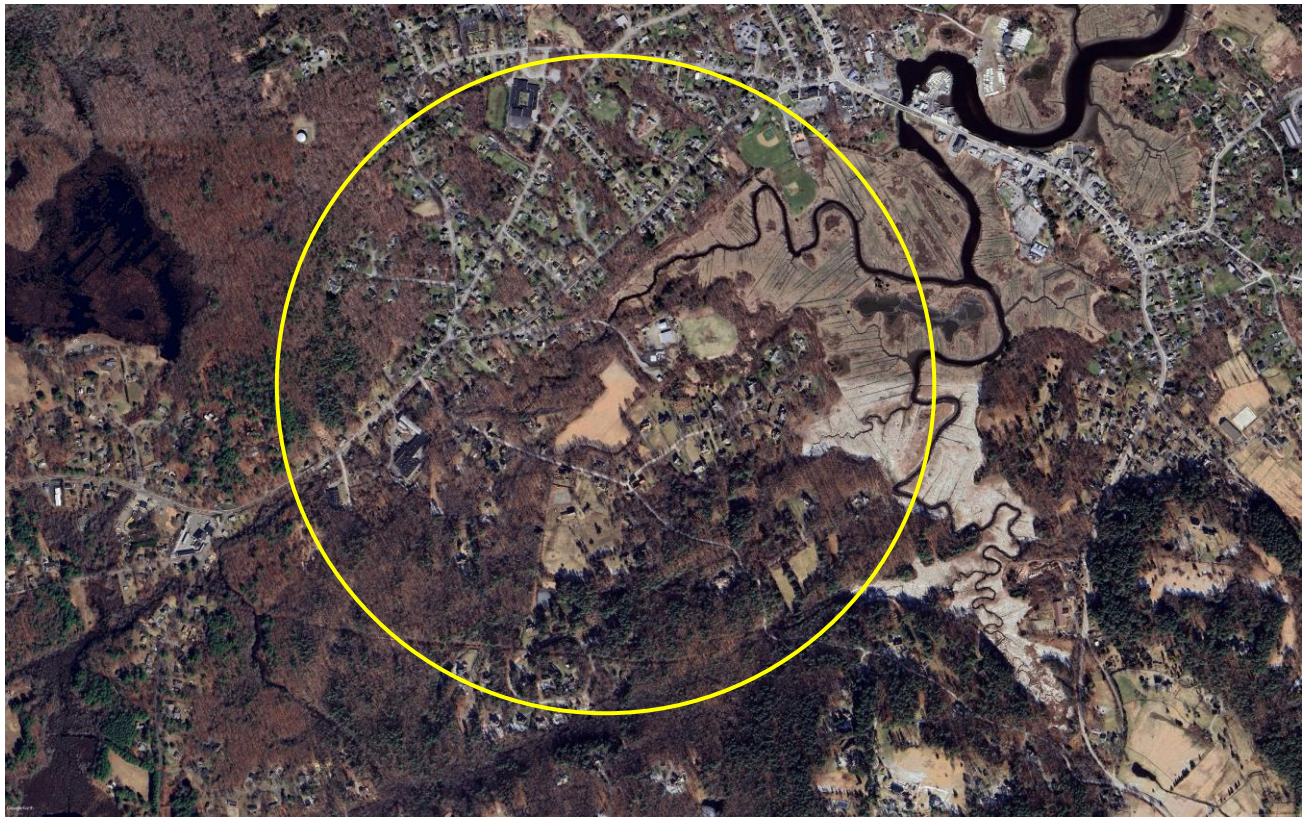
Current Essex Elementary School
12 Story Street, Essex

Nearby Residences
Approximately 300 in a half-mile radius

Sidewalks
Story St, Western Ave and Winthrop St

Other Considerations
Half-mile walking radius includes a portion of Main Street

Walkability



Apple Street Site

30 Apple Street, Essex

Nearby Residences

Approximately 200 in a half-mile radius

Sidewalks

Distance to nearest sidewalk:

1,100’ to corner of Landing Rd & Martin St

1,300’ to corner of Apple St & Martin St

Other Considerations

Bridges at Landing Rd and Apple St

Apple St is zoned a Scenic Road

Nearby walking trail to Memorial Park

Walkability



Current Manchester Memorial Elementary School

43 Lincoln Street, Manchester

Nearby Residences

Approximately 500 in a half-mile radius

Sidewalks

Lincoln St, Summer St, Brook St, Vine St, Norwood Ave

Other Considerations

Adjacent to High School

Graded “Medium” for *Potential for Walkable Trips* per MassDOT

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250915
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 4 $21,180.00
4. Update to SBC Roster (Vote Expected)
5. Visioning Plan Update
6. Update of Site Selection Criteria
7. Introductory Sustainability Discussion
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

Approach: Design Team

SODEN SUSTAINABILITY

JCJ ARCHITECTURE



Colleen Soden
LEED BD+C
LEED ID+C



Kelley Tapia
AIA
WELL AP
LEED BD+C
Fitwel Ambassador

Presenter Today



Eric Haggstrom
Director of Sustainability
AIA
LEED AP
Fitwel Ambassador

Presenter Today

c.a.crowley. ENGINEERING, INC.

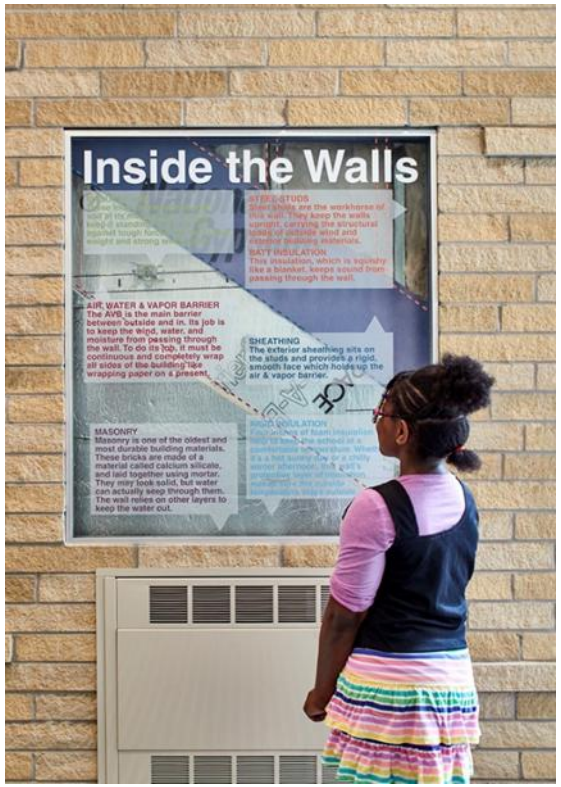
SAMIOTES

studio 2112 LANDSCAPE ARCHITECTURE

Approach: Design Team

We approach using a lens that **learning is the top priority**:

- Minimize first cost
- Minimize maintenance
- **Maximize value to district**
- Offer **training** opportunities (students, staff + teachers)
- Considering positioning now for **future incentives**
- Importance of **healthy indoor environments**
- Opportunities for teaching



MSBA Requirements (Project Advisory #81)

- **Minimum Requirements per MSBA Project Advisory #81:**
  - Achieve **Silver** using LEED-Schools v4.0 / v4.1
  - Achieve a minimum of 3 (out of 7) points in the following:
    - MR – Building Product Disclosure and Optimization, v4.1 – Material Ingredients (1 point)
      - Specify at least 20 different products from 5 different manufacturers that meet green certification standards
    - EQ – Low Emitting Materials, v4.1 (1 point)
      - Pursuing: Walls, Flooring, Ceilings
      - Optional: Paints + Coatings, Adhesives + Sealants, Walls, Furniture, Composite wood
    - EQ – Indoor Air Quality Assessment, v4.0 (1 point)
      - Perform pre-occupancy building flush-out

- **The school must meet the minimum energy efficiency requirements described in the**
- **MA DOER "Stretch Code Green Community" standards**

- **Be "solar ready"**

MSBA PA#81: Extra Reimbursement: 3% + 1%

- For an **extra 3% reimbursement** the project must meet the **Opt-In Specialized Stretch Energy Code**
  - To meet the Opt-In Code you can either be:
    - Net Zero (Zero Energy Pathway)
    - **All Electric Pathway - baseline assumption**
    - Mixed Fuel Pathway (not recommended b/c lose utility incentives)

- For an **additional 1% reimbursement** the project must earn additional material/air quality points (earn 5 of 7 available)
    - MR – Building Product Disclosure and Optimization, v4.1 – Material Ingredients (1 point)
    - EQ – Low Emitting Materials, v4.1 (1 point)
    - EQ – Indoor Air Quality Assessment, v4.0 (1 point)

Finding Value: IRA + Utility Rebates

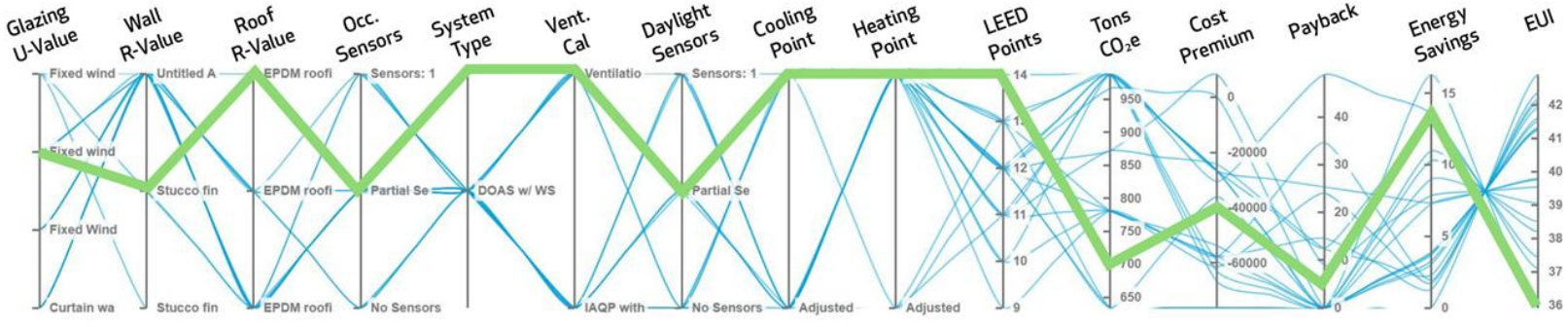
- **Inflation Reduction Act (IRA):** provides a 25.5% tax credit (or grant in the case of non-taxable entities) for geothermal installations. *25.5% from the full system – from wells to diffusers for completed system*.

- **Mass Saves Utility Incentives:**
  - New Construction Path 1 requires EUI < 25, which will **require an all-electric** building design (no gas connection)

INCENTIVES

EUI Targets	Payable at End of Construction		Payable at End of 1 yr. post occupancy	
	Construction Incentive $/sf	Heat Pump Adder	Post Occupancy Incentive $/sf	Adder for Getting Under ZNE EUI Target
VARY BY PROJECT TYPE	Either $1.50/sf or $2.00/sf (depending on EUI target)	Air Source Heat Pumps: $800/ton Variable Refrigerant Flow (VRF): $1,200/ton Ground Source Heat Pumps: $4,500/ton	$1.50	$0.05/EUI point reduction/sf

Finding Value: Putting this all Together



- Triple glazing
- High-performance double glazing

- Passive House
- High-performance envelope

- Ground-source heat pump
- Air-source heat pump
- Traditional VAV

Cost Comparison

	INITIAL	REBATES	OPERATION & MAINTENANCE
Ground-source heat pump	$$$	$$$	$
Air-source heat pump	$$	$$	$$
Traditional VAV	$	–	$$$

Cutler Elementary School Comparison: Baseline MSBA vs. Opt-In Green Schools Program

Full Electrification	-$400,000	Lower up-front cost for equipment offset by additional wiring
Additional LEED Points	+$50,000	Cost for full-building flush-out
Utility Incentives	-$350,000	
4% Additional Reimbursement	-$2,700,000	
Total Savings to Town	**$3,400,000**	

Next Steps

- Register project with LEED
- Sustainability Workshop 1 with the District, Dore + Whittier and the Design Team

Discussion: Questions and Responses



1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250915
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 4 $21,180.00
4. Update to SBC Roster (Vote Expected)
5. Visioning Plan Update
6. Update of Site Selection Criteria
7. Introductory Sustainability Discussion
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250915
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 4 $21,180.00
4. Update to SBC Roster (Vote Expected)
5. Visioning Plan Update
6. Update of Site Selection Criteria
7. Introductory Sustainability Discussion
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250915
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 4 $21,180.00
4. Update to SBC Roster (Vote Expected)
5. Visioning Plan Update
6. Update of Site Selection Criteria
7. Introductory Sustainability Discussion
   Sustainability Goals Discussion
8. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
9. Public Comment
10. Adjourn

MEETING AGENDA

Meeting Date: October 14, 2025
Meeting Time: 6:00PM – 8:00PM
Project Name: Essex Elementary School
Project Number: 202306980020
Meeting Purpose: School Building Committee Meeting
Location: This meeting will be a hybrid meeting (both in-person and remote) at Essex Elementary School Cafeteria
Meeting Link: https://us06web.zoom.us/j/85349809336

---

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
    - SBC Meeting No. 6 20250930
3. Invoices & Commitments for Review and Approval (Vote Expected)
    - JCJ Invoice No. 1 | ($27,000.00)
    - Minuteman EDDM | ($3,128.42)
    - DWMP Invoice No. 5 | ($46,225.50)
4. Community Meeting Report Out
5. Initial Ed Program and Space Summary Review
6. Site Logistics Working Group Report Out
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

DORE + WHITTIER

Project:	Essex Elementary School	Project No:	
Subject:	School Building Committee Meeting	Meeting Date:	10/14/2025
Location:	Hybrid (Essex Elementary School Cafeteria & Zoom)	Time:	6:00 PM
Distribution:	Attendees, Project File	Prepared By:	

Present	Name (* Voting Member)	Affiliation
√	Michelle Cresta*	Director of Finance & Operations
√	Pam Beaudoin*	Superintendent
√	Kim Provost*	Principal
√	Theresa Whitman*	SBC Co-Chair
√	John Binieris*	SBC Co-Chair
√	Andy Oldeman*	Manchester Finance Committee / Mechanical Engineer
√	Charlie Hay*	Architect School Building Experience
√	Gordon Brewster*	Engineer, Sr. Proj. Manager, Owner's PM, former Member of MERMHS & Memorial building
√	Tyler Virden*	Project Executive -Wise Construction / Paren
√	Annie Cameron*	Former SC Member and Memorial SBC Member
√	Ariel Fernando Brian*	Architect - CBT
√	Jen Hocherman*	Architect - Partner SV Design
√	Michael Gerhardt*	Civil Engineer / Parent
√	Timonthy McDonald*	Architect - Onion Flats
√	Henry Ottenginer	Manchester Conservation Committee / Education Background
	David Pereen	Resident / Plumbing & Fire
√	Lisa O'Donnell	Design & Construction / Essex Planning Board
	Steve Hunt*	Facilities Manager
√	Emily Dwyer*	EES Teacher
√	Kim Field	EES Teacher
√	Rachelle Rousseau	EES Teacher
	Mike Burton	Project Director / Partner - DWMP
√	Christina Dell Angelo	Project Executive - DWMP
√	John Albright	Project Manager - DWMP
	Rachel Rincon	Assistant Project Manager - DWMP
	Jacob Greco	Assistant Project Manager - DWMP
	James LaPosta	Principal - JCJ Architecture
√	Fawn Pellegrini	Senior Project Manager - JCJ Architecture
√	Jeff Elliott	Project Architect - JCJ Architecture

DORE + WHITTIER

- **Please click here for the presentation**
  - **This will be referenced in the meeting minutes with slide numbers called out to refer to.**
- **Below is a summation of key points, please view the recording here for full transcript and chapter summaries.**

<table>
<tr><th>Item No.</th><th></th><th>Description</th></tr>
<tr><td>6.1</td><td>Call to Order & Intro: Called to order by T.Whitman at 6:05pm, please refer to the attendee list.</td><td>Record</td></tr>
<tr><td>6.2</td><td>Approval of September 30 - 2025, Meeting Minutes (Vote Expected):

Roll Call Vote: A motion to approve the September 30, 2025, Meeting Minutes made by A.Cameron and seconded by C. Hay

Discussion included clarification that the prior meeting’s mention of outreach to the Select Board regarding Apple Street was premature, but no amendment was necessary.

<table>
<tr><th>Name</th><th>Yes/No/Abstain & Absent</th></tr>
<tr><td>Michelle Cresta</td><td>Yes</td></tr>
<tr><td>Pam Beaudoin</td><td>Yes</td></tr>
<tr><td>Kim Provost</td><td>Yes</td></tr>
<tr><td>John Binieris</td><td>Yes</td></tr>
<tr><td>Theresa Whitman</td><td>Yes</td></tr>
<tr><td>Andy Oldeman</td><td>Yes</td></tr>
<tr><td>Charlie Hay</td><td>Yes</td></tr>
<tr><td>Gordon Brewster</td><td>Yes</td></tr>
<tr><td>Tyler Virden</td><td>Yes</td></tr>
<tr><td>Annie Cameron</td><td>Yes</td></tr>
<tr><td>Ariel Fernando Brian</td><td></td></tr>
<tr><td>Jen Hocherman</td><td></td></tr>
<tr><td>Michael Gerhardt</td><td>Yes</td></tr>
</table></td><td>Record</td></tr>
</table>

Timonthy McDonald	Yes
Henry Oettinger	Yes
Steve Hunt	Advisor – No Vote
Emily Dwyer	Yes
Kim Field	Advisor – No Vote
Rachelle Rousseau	Advisor – No Vote
David Pereen	Advisor – No Vote
Lisa O'Donnell	Advisor – No Vote

6.3	**Invoices & Commitments for Review and Approval (Vote Expected):** **Roll Call Vote:** A motion to approve the: • JCJ Invoice No. 1 | ($27,326.21) • Minuteman EDDM | ($3,128.42) • DWMP Invoice No. 5 | ($46,225.50) It was made by A.Cameron and seconded by G. Brewster • Committee discussed the overall value and potential future frequency of printed mailers. • Suggestion made to consider quarterly rather than per-meeting mailers. • All invoices reviewed and confirmed consistently with project budget.	Record

Name	Yes/No/Abstain & Absent
Michelle Cresta	Yes
Pam Beaudoin	Yes
Kim Provost	Yes
John Binieris	Yes
Theresa Whitman	Yes
Andy Oldeman	Yes
Charlie Hay	Yes
Gordon Brewster	Yes
Tyler Virden	Yes
Annie Cameron	Yes

	<table><tr><td>Ariel Fernando Brian</td><td>Yes</td></tr><tr><td>Jen Hocherman</td><td>Yes</td></tr><tr><td>Michael Gerhardt</td><td>Yes</td></tr><tr><td>Timonthy McDonald</td><td>Yes</td></tr><tr><td>Henry Oettinger</td><td>Yes</td></tr><tr><td>Steve Hunt</td><td>Advisor – No Vote</td></tr><tr><td>Emily Dwyer</td><td>Yes</td></tr><tr><td>Kim Field</td><td>Advisor – No Vote</td></tr><tr><td>Rachelle Rousseau</td><td>Advisor – No Vote</td></tr><tr><td>David Pereen</td><td>Advisor – No Vote</td></tr><tr><td>Lisa O'Donnell</td><td>Advisor – No Vote</td></tr></table>	
6.4	**Community Meeting Report Out** The first public forum was held the prior week. • Attendance: approximately 40+ in person and 15–20 virtual participants. • Feedback was positive; residents appreciated transparency and engagement. • The presentation was clear, and questions were substantive and constructive. • Comments and community feedback will inform upcoming site analysis and design discussions.	

6.5	**Initial Space Summary Review**
	
	• C.Dell Angelo and P.Beaudoin described what the purpose and goals of the education program is, including some of the content
	  ○ The Educational Program outlines the teaching philosophy, grade structure, space needs, and instructional approach of the district.
	  ○ Serves as the foundation of the MSBA Feasibility Study and drives building size and space types.
	  ○ Includes:
	  ▪ Program structure (PreK–5)
	  ▪ Classroom size assumptions (18–22 students per room)
	  ▪ Core spaces: gymnasium, cafeteria, music, art, library, and small-group areas
		Record

- Special education and inclusion needs
- Flexibility for future changes in teaching methodology

Committee Discussion Highlights:

- The Ed Program is a descriptive planning tool — not a design document.
- Auditorium/cafetorium discussion: MSBA will not reimburse for auditoriums at the elementary level.
- Growth of special education services is noted as a design driver.
- Need for parity between Essex and Manchester Memorial facilities emphasized.
- Agreed that the program should reflect a 50-year outlook, not current enrollment alone.

- J.Elliott introduced the MSBA Space Summary and the Essex Elementary School existing floor plans (Slides 9 – 12)
  - The Space Summary aligns the Educational Program with MSBA space standards and identifies existing versus proposed spaces.
  - It defines the basis for reimbursement and evolves throughout feasibility.
  - Current work focuses on documenting existing spaces; proposed spaces will follow after MSBA enrollment confirmation.
  - Three enrollment scenarios are being modeled: 165, 250, and 515 students.

  Classrooms at Essex currently average 850–875 sq. ft., slightly below the MSBA guideline of 950 sq. ft.

Committee Discussion Highlights:

- Renovation adjustments will be made as data develops.
- Drafts of the Educational Program and Space Summary are expected within two weeks for School Building Committee acceptance and School Committee acceptance and approval.
- Consensus that these documents are “living” and will refine through schematic design.

6.6	**Site Logistics Working Group Report Out**
	
	• J.Elliott reviewed the site selection criteria matrix and the three (3) proposed sites (Slides 14 – 23)
	• J.Elliott summarized the site evaluation process, which began with sixteen potential parcels and was refined to seven, and then to three Town-owned viable options based on MSBA requirements, infrastructure availability, and environmental feasibility.
	• Remaining Sites Under Consideration:
	  ○ Essex Elementary School (Existing Site)
	  ○ Manchester Memorial Elementary School
	  ○ 30 Apple Street
	
	A. Essex Elementary School
	• Existing Conditions: Fully serviced site with established infrastructure.
	• Geotechnical Conditions: Sound foundation, typical for redevelopment.
	• Environmental: Known oil/fuel discharge in mechanical room (remediated and managed); some asbestos and lead in legacy materials.
	• Constructability: Adequate site area and access for phased construction.
	• Community Impact: Maintains neighborhood identity and walkability; minimal transportation disruption.
	• Risks: Primarily environmental abatement during construction—manageable within normal project scope.
	• Overall Rating: Predominantly *Green* on evaluation matrix.
	Schedule Risk: Low.
	
	B. Manchester Memorial Elementary School
	• Site Context: Fully developed, adjacent to Middle/High School campus.
	• Challenges: Limited space for additional construction; co-location would create traffic and parking constraints.
	• Regulatory: Complex permitting and inter-municipal implications.
	• Impact: Relocating Essex students here would increase transportation costs and reduce community accessibility.
	• Overall Rating: Multiple *Red* indicators for site capacity, traffic, and regulatory hurdles.
	Schedule Risk: High.
		Record

C. 30 Apple Street

- Description: Undeveloped parcel; potential for full new construction.
- Positives: Flat topography allows independent construction without disrupting school operations.
- Challenges:
- No existing water, sewer, or utilities.
- Access limitations—Apple Street width and bridge capacity inadequate for school traffic and construction loads.
- Likely need for eminent domain acquisition.
- Environmental unknowns: Possible contamination from nearby landfill and past agricultural use.
- Limited public support; multiple failed Town Meeting votes for Apple Street road and bridge improvements.
- Overall Rating: Predominantly *Red* and *Yellow* categories; significant cost, schedule, and political risk.
  Schedule Impact: Potentially jeopardizes the MSBA 913-day feasibility deadline.

Committee Discussion Highlights:

- Interest in understanding high-level cost differences but agreed Apple Street's infrastructure burden is prohibitive.
- Highlighted political and logistical barriers to eminent domain and roadwork approvals for Apple Street.
- Emphasis that Apple Street off-site improvements could jeopardize MSBA eligibility if schedule delays occur.
- Request for inclusion of cost escalation (e.g., 5% annually) in evaluation comparisons.
- An ask for whether Apple Street improvements appear in the Town's Capital Plan;
  - Response confirmed only bridge references, with no allocated funding.

Public Input Context:

- Noted that all three written public comments received opposed Apple Street and supported retaining Essex site.

Environmental Discussion

- Committee members reviewed matrix scoring and agreed Essex site's fuel tank issue could be rated "Yellow" rather than "Red." Consensus remained that Apple Street presented greater environmental and infrastructure uncertainty.

Community and Political Considerations

- Historic lack of Town Meeting support for Apple Street projects.

	• Concerns regarding eminent domain and off-site cost burdens falling solely on Essex.
	• Committee reaffirmed the importance of pursuing a solution with broad community backing and minimal political friction.
	
	Straw Poll and Next Steps
	• Informal Straw Poll Question: Should the Committee continue investigating 30 Apple Street as a viable site option?
	  ○ The straw poll was taken to gauge sentiment ahead of formal action. Yes, means continue pursuing Apple Street, No means remove from contention.
	  ○ The consensus favored unanimously on not studying Apple Street moving forward.
	  ○ Committee agreed to present findings and rationale to the Board of Selectmen before an official vote.
	• Next Steps:
	  ○ Prepare written summary and site comparison for Select Board meeting on Monday, October 20, 2025.
	  ○ Include cost, schedule, and MSBA compliance implications.
	  ○ Building Committee to hold a formal vote at next meeting to confirm removal or continuation of Apple Street.	

6.8	**Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting** Current Building Status: • Essex Elementary is functioning as a “shelter-in-place” building, meaning it can provide heat, food, and shelter during power outages. This term has been used loosely, and there are multiple levels of shelter-in-place designations, each with different requirements and costs. Committee Action: • Members will review infrastructure systems (foundations, steel, generator, etc.) as “homework” before the next Building Committee meeting. • Goal is to determine whether the same evaluation applies to new projects or if additional shelter requirements should be considered. Clarifications: • Not all schools officially designated as shelter-in-place perform the same functions; Essex currently provides essential services without formal designation. • Public safety designations and responsibility for shelter levels vary by town/district.	Record

<table>
<tr><td></td><td>

- Brendan Zabricki (Essex Town Manager), part of the regional emergency preparedness team, will clarify Essex Elementary's role in the broader emergency plan.

Next Steps:

- Align shelter capabilities and terminology with other district facilities for consistency and parity.
- Review and discuss findings of a future next Building Committee meeting.

</td><td></td></tr>
<tr><td>6.9</td><td>Public Comment:

To view public comment please click here</td><td>Record</td></tr>
<tr><td></td><td>Reflections & Action Items

Community Engagement:
• Proposed additional tours of Essex Elementary, potentially combined with the "Open Door Food Truck" event.
• Outreach to the Senior Center and Essex residents to increase awareness.
• Consideration of a similar tour for Memorial School to allow community comparison.
• Communications Working Group will schedule follow-up outreach and community meetings next week.</td><td></td></tr>
<tr><td>6.10</td><td>Adjourn:

Roll Call Vote: A motion to adjourn the meeting was made at 8:45 pm by C. Hay and seconded by T. Virden.

<table>
<tr><td>Name</td><td>Yes/No/Abstain & Absent</td></tr>
<tr><td>Michelle Cresta</td><td>Yes</td></tr>
<tr><td>Pam Beaudoin</td><td>Yes</td></tr>
<tr><td>Kim Provost</td><td>Yes</td></tr>
<tr><td>John Binieris</td><td>Yes</td></tr>
<tr><td>Theresa Whitman</td><td>Yes</td></tr>
</table>
</td><td>Record</td></tr>
</table>

Andy Oldeman	Yes
Charlie Hay	Yes
Gordon Brewster	Yes
Tyler Virden	Yes
Annie Cameron	Yes
Ariel Fernando Brian	Yes
Jen Hocherman	
Michael Gerhardt	Yes
Timonthy McDonald	
Henry Oettinger	Yes
Steve Hunt	Advisor – No Vote
Emily Dwyer	Yes
Kim Field	Advisor – No Vote
Rachelle Rousseau	Advisor – No Vote
David Pereen	Advisor – No Vote
Lisa O'Donnell	Advisor – No Vote

Sincerely,
DORE + WHITTIER
Jacob Greco
Assistant Project Manager
Cc: Attendees, File
The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes.



Essex Elementary School Project

SBC Meeting No. 7

October 14, 2025 @ 6:00 PM

DORE + WHITTIER

JCJARCHITECTURE

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250930
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - JCJ Invoice No. 1 | ($27,000.00)
   - D+W Invoice No. 5 ($46,225.50)
   - Minuteman EDDM | ($3,128.42)
4. Community Meeting Report Out
5. Initial Ed Program and Space Summary Review
6. Site Logistics Working Group Report Out
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250930
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - JCJ Invoice No. 1 | ($27,000.00)
   - D+W Invoice No. 5 ($46,225.50)
   - Minuteman EDDM | ($3,128.42)
4. Community Meeting Report Out
5. Initial Ed Program and Space Summary Review
6. Site Logistics Working Group Report Out
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250930
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - JCJ Invoice No. 1 | ($27,000.00)
   - D+W Invoice No. 5 ($46,225.50)
   - Minuteman EDDM | ($3,128.42)
4. Community Meeting Report Out
5. Initial Ed Program and Space Summary Review
6. Site Logistics Working Group Report Out
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250930
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - JCJ Invoice No. 1 | ($27,000.00)
   - D+W Invoice No. 5 ($46,225.50)
   - Minuteman EDDM | ($3,128.42)
4. Community Meeting Report Out
5. Initial Ed Program and Space Summary Review
6. Site Logistics Working Group Report Out
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

Community Meeting Report Out

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250930
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - JCJ Invoice No. 1 | ($27,000.00)
   - D+W Invoice No. 5 ($46,225.50)
   - Minuteman EDDM | ($3,128.42)
4. Community Meeting Report Out
5. Initial Ed Program and Space Summary Review
6. Site Logistics Working Group Report Out
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

Initial Ed Program and Space Summary Review

Space Summary Introduction

Standardized MSBA Document Format

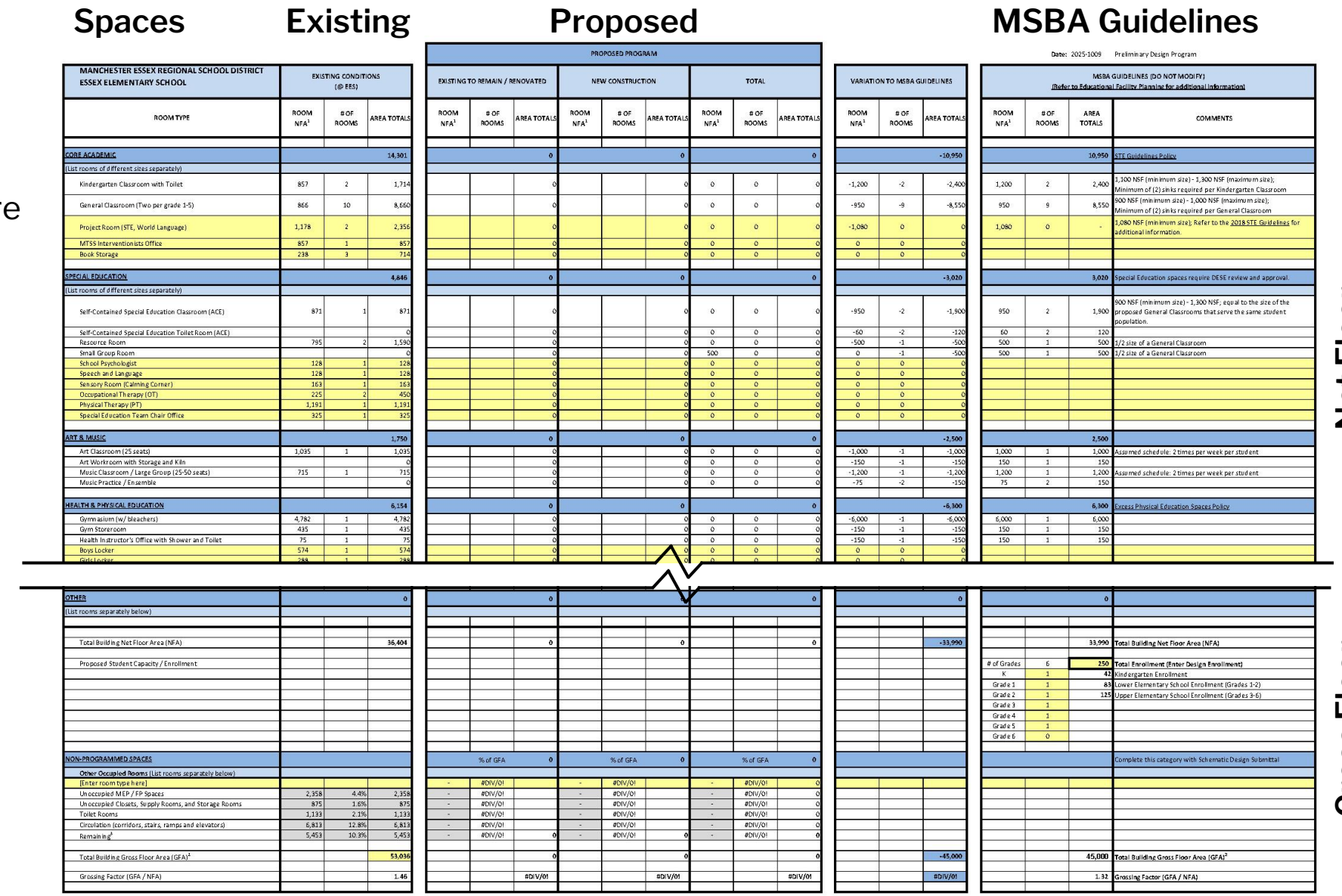
Updated Throughout Entire Project

Critical Impact on Reimbursement

Three Enrollment Options (165, 250 & 515 Students)

Tracks Building Areas

- Net Floor Area (NFA) is useable floor space inside the room
- Gross Floor Area (GFA) includes MEP, Storage, Toilets, Circulation and Walls



Spaces	Existing	Proposed							MSBA Guidelines			
MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT ESSEX ELEMENTARY SCHOOL	EXISTING CONDITIONS (@ EES)			PROPOSED PROGRAM EXISTING TO REMAIN / RENOVATED			NEW CONSTRUCTION			TOTAL			VARIATION TO MSBA GUIDELINES			Date: 2025-1009 Preliminary Design Program MSBA GUIDELINES (DO NOT MODIFY) (Refer to Educational Facility Planning for additional information)			
ROOM TYPE	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	ROOM NFA[1]	# OF ROOMS	AREA TOTALS	COMMENTS
CORE ACADEMIC			14,301			0			0			0			-10,950			10,950	STE Guidelines Policy
(List rooms of different sizes separately)																			
Kindergarten Classroom with Toilet	857	2	1,714			0			0	0	0	0	-1,200	-2	-2,400	1,200	2	2,400	1,100 NSF (minimum size) - 1,300 NSF (maximum size); Minimum of (2) sinks required per Kindergarten Classroom
General Classroom (Two per grade 1-5)	866	10	8,660			0			0	0	0	0	-950	-9	-8,550	950	9	8,550	900 NSF (minimum size) - 1,000 NSF (maximum size); Minimum of (2) sinks required per General Classroom
Project Room (STE, World Language)	1,178	2	2,356			0			0	0	0	0	-1,080	0	0	1,080	0	-	1,080 NSF (minimum size); Refer to the 2018 STE Guidelines for additional information.
MTSS Interventionists Office	857	1	857			0			0	0	0	0	0	0	0				
Book Storage	238	3	714			0			0	0	0	0	0	0	0				
SPECIAL EDUCATION			4,846			0			0			0			-3,020			3,020	Special Education spaces require DESE review and approval.
(List rooms of different sizes separately)																			
Self-Contained Special Education Classroom (ACE)	871	1	871			0			0	0	0	0	-950	-2	-1,900	950	2	1,900	900 NSF (minimum size) - 1,300 NSF; equal to the size of the proposed General Classrooms that serve the same student population.
Self-Contained Special Education Toilet Room (ACE)			0			0			0	0	0	0	-60	-2	-120	60	2	120	
Resource Room	795	2	1,590			0			0	0	0	0	-500	-1	-500	500	1	500	1/2 size of a General Classroom
Small Group Room			0			0			0	500	0	0	0	-1	-500	500	1	500	1/2 size of a General Classroom
School Psychologist	128	1	128			0			0	0	0	0	0	0	0				
Speech and Language	128	1	128			0			0	0	0	0	0	0	0				
Sensory Room (Calming Corner)	163	1	163			0			0	0	0	0	0	0	0				
Occupational Therapy (OT)	225	2	450			0			0	0	0	0	0	0	0				
Physical Therapy (PT)	1,191	1	1,191			0			0	0	0	0	0	0	0				
Special Education Team Chair Office	325	1	325			0			0	0	0	0	0	0	0				
ART & MUSIC			1,750			0			0			0			-2,500			2,500	
Art Classroom (25 seats)	1,035	1	1,035			0			0	0	0	0	-1,000	-1	-1,000	1,000	1	1,000	Assumed schedule: 2 times per week per student
Art Workroom with Storage and Kiln			0			0			0	0	0	0	-150	-1	-150	150	1	150	
Music Classroom / Large Group (25-50 seats)	715	1	715			0			0	0	0	0	-1,200	-1	-1,200	1,200	1	1,200	Assumed schedule: 2 times per week per student
Music Practice / Ensemble			0			0			0	0	0	0	-75	-2	-150	75	2	150	
HEALTH & PHYSICAL EDUCATION			6,154			0			0			0			-6,300			6,300	Excess Physical Education Spaces Policy
Gymnasium (w/ bleachers)	4,782	1	4,782			0			0	0	0	0	-6,000	-1	-6,000	6,000	1	6,000	
Gym Storeroom	435	1	435			0			0	0	0	0	-150	-1	-150	150	1	150	
Health Instructor's Office with Shower and Toilet	75	1	75			0			0	0	0	0	-150	-1	-150	150	1	150	
Boys Locker	574	1	574			0			0	0	0	0	0	0	0				
Girls Locker	288	1	288			0			0	0	0	0	0	0	0				
OTHER			0			0			0			0			0			0	
(List rooms separately below)																			
Total Building Net Floor Area (NFA)			36,404			0			0			0			-33,990			33,990	Total Building Net Floor Area (NFA)
Proposed Student Capacity / Enrollment																# of Grades	6	250	Total Enrollment (Enter Design Enrollment)
																K	1	42	Kindergarten Enrollment
																Grade 1	1	83	Lower Elementary School Enrollment (Grades 1-2)
																Grade 2	1	125	Upper Elementary School Enrollment (Grades 3-6)
																Grade 3	1		
																Grade 4	1		
																Grade 5	1		
																Grade 6	0		
NON-PROGRAMMED SPACES				% of GFA		0	% of GFA		0	% of GFA		0							Complete this category with Schematic Design Submittal
Other Occupied Rooms (List rooms separately below)																			
[Enter room type here]				-	#DIV/0!		-	#DIV/0!		-	#DIV/0!	0							
Unoccupied MEP / FP Spaces	2,358	4.4%	2,358	-	#DIV/0!		-	#DIV/0!		-	#DIV/0!	0							
Unoccupied Closets, Supply Rooms, and Storage Rooms	875	1.6%	875	-	#DIV/0!		-	#DIV/0!		-	#DIV/0!	0							
Toilet Rooms	1,133	2.1%	1,133	-	#DIV/0!		-	#DIV/0!		-	#DIV/0!	0							
Circulation (corridors, stairs, ramps and elevators)	6,813	12.8%	6,813	-	#DIV/0!		-	#DIV/0!		-	#DIV/0!	0							
Remaining[3]	5,453	10.3%	5,453	-	#DIV/0!	0	-	#DIV/0!	0	-	#DIV/0!	0							
Total Building Gross Floor Area (GFA)[2]			53,036			0			0			0			-45,000			45,000	Total Building Gross Floor Area (GFA)[2]
Grossing Factor (GFA / NFA)			1.46		#DIV/0!			#DIV/0!			#DIV/0!				#DIV/0!			1.32	Grossing Factor (GFA / NFA)

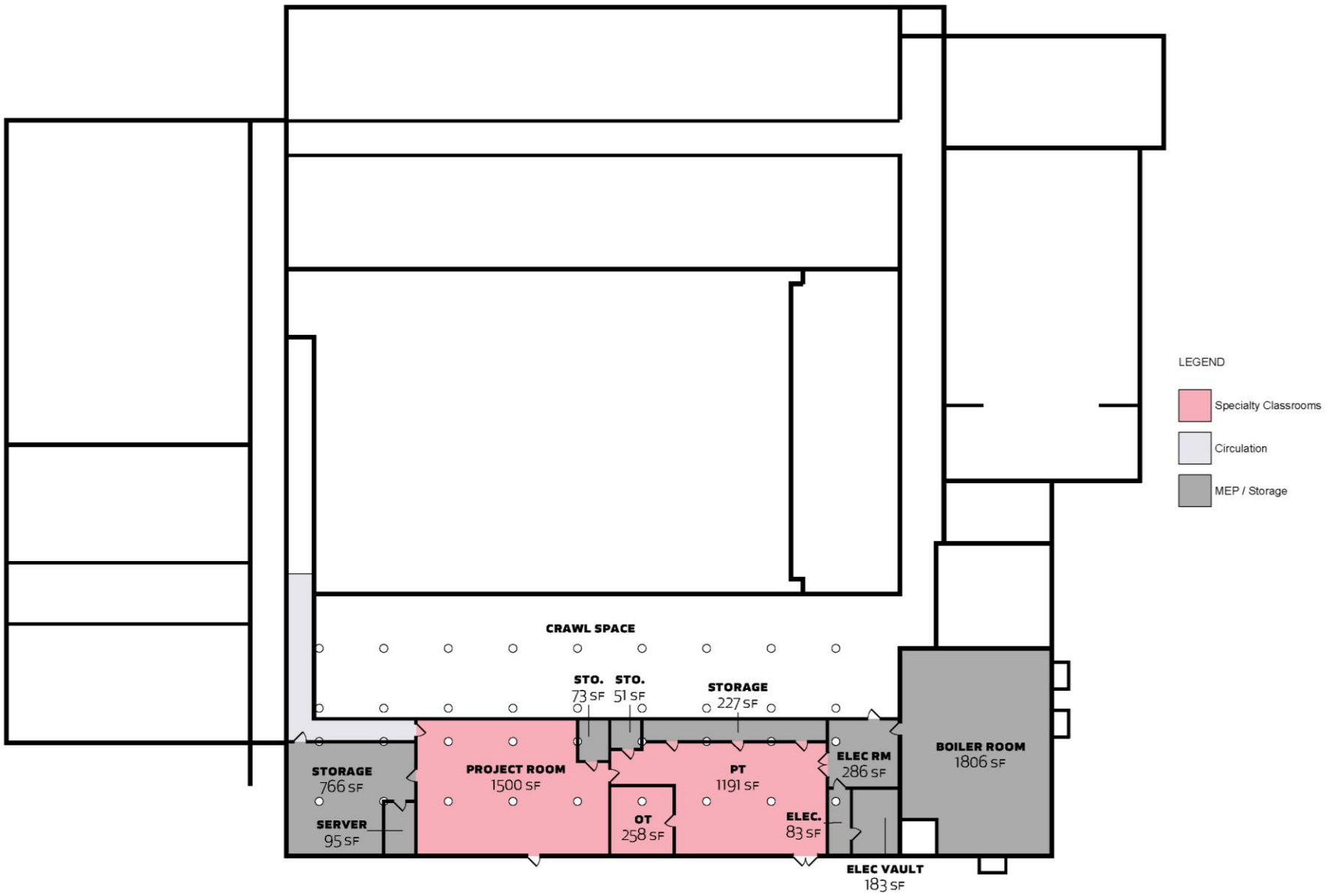
Net Floor Area (NFA)

Gross Floor Area (GFA)

Existing Floor Plans – First Floor



Existing Floor Plans - Basement



SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250930
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - JCJ Invoice No. 1 | ($27,000.00)
   - D+W Invoice No. 5 ($46,225.50)
   - Minuteman EDDM | ($3,128.42)
4. Community Meeting Report Out
5. Initial Ed Program and Space Summary Review
6. Site Logistics Working Group Report Out
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

Site Selection Working Group Report Out

Identified Sites

Statement of interest includes:

- Current Essex Elementary School
- Current Manchester Memorial Elementary School

Search of other potential sites in Essex:

Town of Essex owned parcels	112
Minimum 9.75 acres	16
Street access & utilities	7
Not used by other town function	1

→ **30 Apple St**

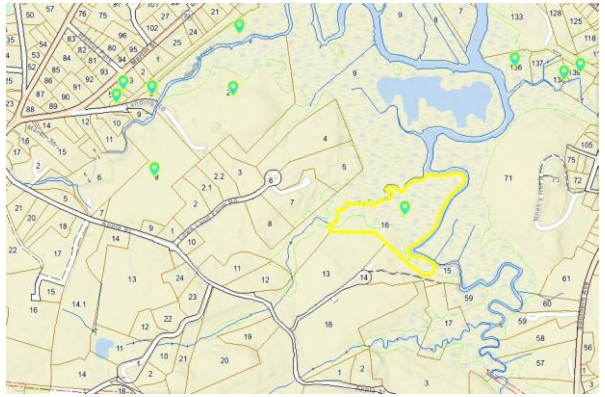
Town Hall, Spring Street Cemetery, Essex ES, Centennial Grove, DPW Transfer Station, Public Water Supply

Identified Sites

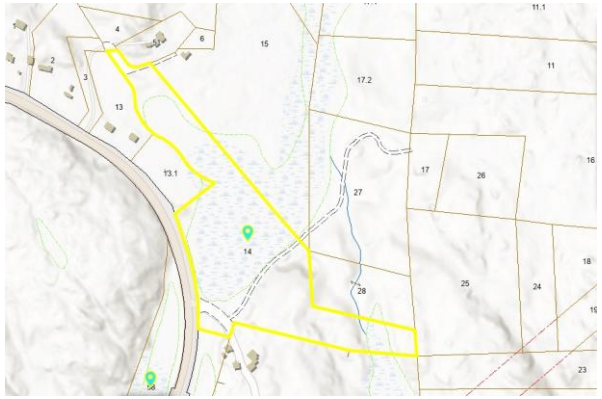
Sites Lacking Infrastructure - Road Access and/or Town Sewer & Water



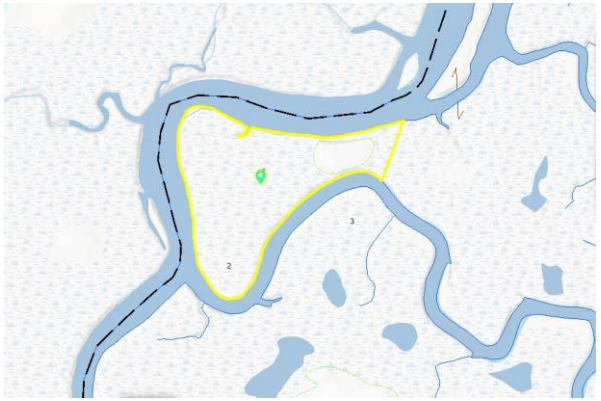
0-4 Conomo Point Rd (4 parcels)



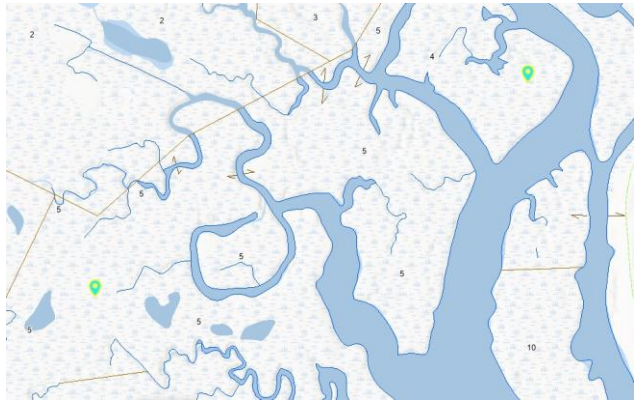
0 Apple St Rear



0 Southern Ave

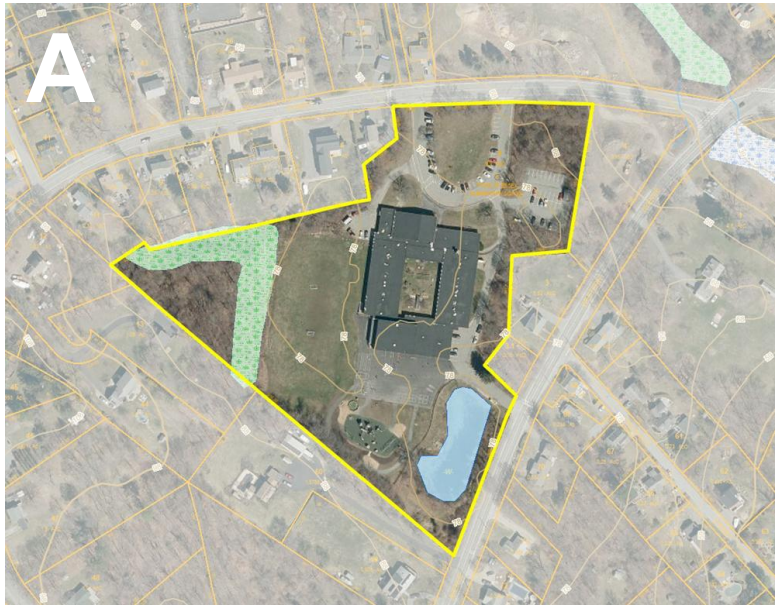


0 PODS Island



0 Hardy’s Creek Marsh (2 parcels)

Identified Sites



Current Essex Elementary School

12 Story Street, Essex MA



Current Manchester Memorial Elementary School

43 Lincoln Street, Manchester MA



Apple Street Site

30 Apple Street, Essex MA

Current Essex Elementary School -



Considerations:

Site Development

- Developed site utilities available currently supporting existing school. Capacities to be determined pending option selected (renovation, addition, or new construction).
- Site is adequately sized.
- Existing EES drawings show previous additions supported on footing foundations, no piles. Some exposed ledge visible. Geotechnical studies to acquire additional information.
- Recognized Environ. Condition (REC) - Oil release in Boiler Room; Business Environmental Risks (BERs) - Asbestos Containing Materials, Lead Based Paints, Urban Fill Soils
- Pond and wetland on site. MassDEP regulations for bank, and 100-ft buffer to wetlands. No additional town bylaws. No flood plain. Likely straightforward regulatory process.
- New building and site layout can be configured for future options.
- Project scope expected to have high level of MSBA reimbursement, similar to past MMES project
- Multiple site access points for construction. Likely lose play field during construction.

Current Essex Elementary School -



Considerations Continued:

Site Access
- Road widths currently acceptable for buses to existing EES
- Sidewalks on adjacent streets.
- Busing status quo

Community
- Current school site and grade configuration meet the Regional Agreement.
- Walking distance to Town Hall/Burnham Library and Memorial Park.
- Established identity for the community

Education
- Students likely lose play field during construction
- Potential construction phasing disruptions for options including renovations and additions.

Schedule
- No apparent schedule obstacles

Current Manchester Memorial ES



Considerations:

Site Development

- Developed site utilities in place to support existing school
- Site is adequately sized, however the MMES project fully built-out site leaving limited options for expansion.
- Existing MMES geotechnical report indicates ground improvement for footing support
- No identified environmental contaminants.
- Numerous jurisdictional areas (wetlands, flood plain, river/riverfront).
    - Site floodplain elevation includes rain garden and tennis courts. These areas also within 200-ft outer riparian zone, restricting area to be paved.
- Dense site already fully built-out with limited expansion options
- Additional work impact recent MMES project scope thereby reducing level of MSBA reimbursement.
- Construction activities on occupied school site with very limited available space.

Current Manchester Memorial ES



Considerations Continued:

Site Access
- Sidewalks on adjacent streets.
- Not walkable for students from Essex.
- Road widths currently acceptable for buses to MMES.
- Longer bus rides for some students from Essex to the MMES site
- Driveway to Summer St. will become service access only

Community
- Consolidation to MMES site would leave Essex without in-town K-4 per Regional Agreement
- Walking distance to Central St and adjacent to MS/HS
- Increased site density & vehicular traffic for school operations
- Loss of tennis courts likely to accommodate increased parking needs

Education
- Addition and/or renovation to MMES impact school operations and site circulation

Schedule
- Timeline to revise Regional Agreement and the regulatory process.

Apple Street Site



Considerations:

Site Development

- Simplified or no construction phasing for school operations
- New building and site layout can be configured for future options/growth.
- Off site utility developments needed are not MSBA Reimbursable:
  - Water on Apple St that will likely need increased capacity.
  - No sewer or drainage observed within Apple St.; Sewer Pump station in Landing Rd. likely needs upgraded capacity.
- No existing available geotechnical subsurface condition information. Geotechnical studies to acquire information.
- Recognized Environmental Condition (REC)- No groundwater monitoring program at the unlined Essex Landing Landfill; Business Environmental Risks (BERs) - Pesticides, former flower farm
- River/riverfront/flood plain on site to be managed with MEPA thresholds. No additional town bylaws.
- Two points of access available, with Landing Rd likely more appropriate for construction activity (verify bridge load capacity for construction vehicles).
- Noise of DPW adjacent to school.

Apple Street Site



Considerations Continued:

Site Access

- Existing road width to widen to support bus traffic, improve sightlines and safety for pedestrians and bikers
  - Adjust or rebuild two bridges
  - Move existing utility poles
  - Affect on resident properties
  - Not MSBA Reimbursable
- No sidewalks on Apple St or Landing Rd.
- Similar bus routing as current EES
- Existing challenges with buses maneuvering on Apple St.

Community

- No direct walking route or connecting sidewalks to town center (no positive aspects adjacent to DPW)
- Introducing school operations into smaller proportioned residential community

Education

- No disruption to existing schools
- Simplified or no construction phasing for school operations

Schedule

- Regulatory approval process, time, and cost for upgraded infrastructure.
- Past Town meetings regarding land acquisition have been unsuccessful twice.

Site Evaluation

Legend		
		Not Preferable
		Neutral
		Advantageous

DRAFT







ESSEX ELEMENTARY SCHOOL PROJECT SITE ALTERNATIVES		SITE A CURRENT ESSEX ES	SITE B CURRENT MMES	SITE C APPLE STREET
		12 STORY ST	43 LINCOLN ST	30 APPLE ST
General	Location	ESSEX	MANCHESTER	ESSEX
	Size	9.75 ACRES	11.313 ACRES	11.50 ACRES
Site Development	Town Owned			
	Adequate Buildable Area - (Current Site 9.75 Acres)			
	Utilities Access			
	Subsurface Conditions – Geotechnical (Bearing Capacity, Organics, Ledge)			
	Subsurface Conditions – Environmental Contaminants			
	Regulatory - Wetlands, Rivers and Streams, Flood Zones			
	Future Development Options and Flexibility			
	Reimbursement potential from MSBA (Offsite, Budget cap)			
	Construction Complexity – Access, Laydown, Phasing			
Site Access	Infrastructure - Bridges, Road Surface			
	Walkability - Distances, Sidewalks			
	Safety - Road Width, Sight Lines			
	Busing			
Community	Compatible with District Agreement			
	Access to other Community Resources			
	Minimize Impact on Neighbors			
Education	Meets needs of Educational Program			
	Construction Impact on Existing School Activities			
Schedule	No significant schedule risks - "Shovel Ready"			

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250930
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - JCJ Invoice No. 1 | ($27,000.00)
   - D+W Invoice No. 5 ($46,225.50)
   - Minuteman EDDM | ($3,128.42)
4. Community Meeting Report Out
5. Initial Ed Program and Space Summary Review
6. Site Logistics Working Group Report Out
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250930
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - JCJ Invoice No. 1 | ($27,000.00)
   - D+W Invoice No. 5 ($46,225.50)
   - Minuteman EDDM | ($3,128.42)
4. Community Meeting Report Out
5. Initial Ed Program and Space Summary Review
6. Site Logistics Working Group Report Out
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250930
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - JCJ Invoice No. 1 | ($27,000.00)
   - D+W Invoice No. 5 ($46,225.50)
   - Minuteman EDDM | ($3,128.42)
4. Community Meeting Report Out
5. Initial Ed Program and Space Summary Review
6. Site Logistics Working Group Report Out
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 5 20250930
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - JCJ Invoice No. 1 | ($27,000.00)
   - D+W Invoice No. 5 ($46,225.50)
   - Minuteman EDDM | ($3,128.42)
4. Community Meeting Report Out
5. Initial Ed Program and Space Summary Review
6. Site Logistics Working Group Report Out
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

MEETING AGENDA

Meeting Date:	October 28, 2025
Meeting Time:	6:00PM – 8:00PM
Project Name:	Essex Elementary School
Project Number:	202306980020
Meeting Purpose:	School Building Committee Meeting
Location:	This meeting will be a hybrid meeting (both in-person and remote) at Essex Elementary School Cafeteria

Meeting Link: https://us06web.zoom.us/j/85349809336

---

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
    - SBC Meeting No. 7 20251014
3. Invoices & Commitments for Review and Approval (Vote Expected)
4. Removal of Apple Street from Site Selection (Vote Expected)
5. Space Summary & Education Program Progress
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

DORE + WHITTIER

Project:	Essex Elementary School	Project No:	
Subject:	School Building Committee Meeting	Meeting Date:	10/28/2025
Location:	Hybrid (Essex Elementary School Cafeteria & Zoom)	Time:	6:00 PM
Distribution:	Attendees, Project File	Prepared By:	J. Greco

Present	Name (* Voting Member)	Affiliation
√	Michelle Cresta*	Director of Finance & Operations
√	Pam Beaudoin*	Superintendent
√	Kim Provost*	Principal
√	Theresa Whitman*	SBC Co-Chair
	John Binieris*	SBC Co-Chair
√	Andy Oldeman*	Manchester Finance Committee / Mechanical Engineer
√	Charlie Hay*	Architect School Building Experience
√	Gordon Brewster*	Engineer, Sr. Proj. Manager, Owner's PM, former Member of MERMHS & Memorial building
√	Tyler Virden*	Project Executive -Wise Construction / Paren
√	Annie Cameron*	Former SC Member and Memorial SBC Member
	Ariel Fernando Brian*	Architect - CBT
√	Jen Hocherman*	Architect - Partner SV Design
√	Michael Gerhardt*	Civil Engineer / Parent
√	Timonthy McDonald*	Architect - Onion Flats
√	Henry Ottenginer	Manchester Conservation Committee / Education Background
	David Pereen	Resident / Plumbing & Fire
√	Lisa O'Donnell	Design & Construction / Essex Planning Board
	Steve Hunt	Facilities Manager
√	Emily Dwyer*	EES Teacher
√	Kim Field	EES Teacher
√	Rachelle Rousseau	EES Teacher
	Mike Burton	Project Director / Partner - DWMP
√	Christina Dell Angelo	Project Executive - DWMP
√	John Albright	Project Manager - DWMP
	Rachel Rincon	Assistant Project Manager - DWMP
	Jacob Greco	Assistant Project Manager - DWMP
√	James LaPosta	Principal - JCJ Architecture
√	Fawn Pellegrini	Senior Project Manager - JCJ Architecture
√	Jeff Elliott	Project Architect - JCJ Architecture
√	Emily Czarnecki	Principal (Interiors) – JCJ Architecture

√	Mike Pirollo	Principal – MLP Integrated Design
	Eric Haggstrom	Sustainability Director – JCJ Architecture
	Kelley Tapia	Soden Sustainability
√	Brendhan Zubricki	Essex Town Manager

Item No.	Action Item	Ball in Court
6.5	Send out the full space summaries	Project Team
6.5	Send out the educational program	P. Beaudoin

- **Please click here for the presentation**
  - **This will be referenced in the meeting minutes with slide numbers called out to refer to.**
- **Below is a summation of key points, please view the recording here for full transcript and chapter summaries.**

Item No.		Description
8.1	**Call to Order & Intro:** Called to order by T. Whitman at 6:05pm, please refer to the attendee list.	Record
8.2	**Approval of October 14 - 2025, Meeting Minutes (Vote Expected):** **Roll Call Vote:** A motion to approve October 14, 2025, Meeting Minutes made by A. Cameron and seconded by H. Oettinger • **Yes: 11 | No: 0 | Absent/Abstain: 5**	Record

DORE + WHITTIER

	<table><tr><td>Name</td><td>Yes/No/Abstain & Absent</td></tr><tr><td>Michelle Cresta</td><td>Yes</td></tr><tr><td>Pam Beaudoin</td><td>Yes</td></tr><tr><td>Kim Provost</td><td>Absent</td></tr><tr><td>John Binieris</td><td>Absent</td></tr><tr><td>Theresa Whitman</td><td>Yes</td></tr><tr><td>Andy Oldeman</td><td>Yes</td></tr><tr><td>Charlie Hay</td><td>Yes</td></tr><tr><td>Gordon Brewster</td><td>Yes</td></tr><tr><td>Tyler Virden</td><td>Absent</td></tr><tr><td>Annie Cameron</td><td>Yes</td></tr><tr><td>Ariel Fernando Brian</td><td>Absent</td></tr><tr><td>Jen Hocherman</td><td>Absent</td></tr><tr><td>Michael Gerhardt</td><td>Yes</td></tr><tr><td>Timonthy McDonald</td><td>Yes</td></tr><tr><td>Henry Oettinger</td><td>Yes</td></tr><tr><td>Steve Hunt</td><td>Advisor – No Vote</td></tr><tr><td>Emily Dwyer</td><td>Yes</td></tr><tr><td>Kim Field</td><td>Advisor – No Vote</td></tr><tr><td>Rachelle Rousseau</td><td>Advisor – No Vote</td></tr><tr><td>David Pereen</td><td>Advisor – No Vote</td></tr><tr><td>Lisa O'Donnell</td><td>Advisor – No Vote</td></tr><tr><td></td><td></td></tr></table>	
8.3	**Invoices & Commitments for Review and Approval (Vote Expected):** There were no invoices for approval at this meeting.	Record
8.4	**Removal of Apple Street from Site Selection (Vote Expected):**	Record

- C. Dell Angelo noted that the SBCreviewed this topic in depth for weeks and the project team had reviewed and provided the completed matrix.
    - J. Elliott noted JCJ updated the environmental impact of the site on the criteria matrix for Apple Street to yellow based on the previous SBC meeting discussion and recommendation.
- C. Dell Angelo noted that at the straw poll vote at the last meeting, the SBC agreed to remove Apple Street from the site and the ask now is to make an official vote.
- A. Cameron asked what the SBC and project team will need to provide to the MSBA to prove that they have done enough work to eliminate this option.
    - C.Dell Angelo noted that we believe what the project team have compiled so far, based on the criteria matrix, and the discussion, is sufficient and as part of the PDP submission to the MSBA.
    - A. Cameron noted she understands at this high level point in the project that costs cannot be understood with the magnitude of changes that would need to occur to make Apple Street viable. Given the information that has been presented, A. Cameron believes that the MSBA and the Town will support the removal of Apple Street.
    - P. Beaudoin noted that the MSBA wants to ensure the District studies the options to determine the most cost effective and fiscally responsible project, and based on the data provided, it seems Apple Street has the most cost implications related to site selection.

Name	Yes/No/Abstain & Absent
Michelle Cresta	Yes
Pam Beaudoin	Yes
Kim Provost	Absent
John Binieris	Absent
Theresa Whitman	Yes
Andy Oldeman	Yes
Charlie Hay	Yes
Gordon Brewster	Yes
Tyler Virden	Yes

	<table><tr><td>Annie Cameron</td><td>Yes</td></tr><tr><td>Ariel Fernando Brian</td><td>Absent</td></tr><tr><td>Jen Hocherman</td><td>Yes</td></tr><tr><td>Michael Gerhardt</td><td>Yes</td></tr><tr><td>Timonthy McDonald</td><td>Yes</td></tr><tr><td>Henry Oettinger</td><td>Yes</td></tr><tr><td>Steve Hunt</td><td>Advisor – No Vote</td></tr><tr><td>Emily Dwyer</td><td>Yes</td></tr><tr><td>Kim Field</td><td>Advisor – No Vote</td></tr><tr><td>Rachelle Rousseau</td><td>Advisor – No Vote</td></tr><tr><td>David Pereen</td><td>Advisor – No Vote</td></tr><tr><td>Lisa O'Donnell</td><td>Advisor – No Vote</td></tr></table> **Roll Call Vote:** A motion to remove Site C, Apple Street, as a potential site for the Essex Elementary School Project was made by G. Brewster and seconded by H. Oettinger • **Yes: 13 | No: 0 | Absent/Abstain: 3** Discussion: • A. Cameron noted that there will be a narrative created to share with both boards of selectmen to explain why this choice was made ○ A. Cameron noted she has a draft that will be reviewed by both P. Beaudoin and T. Whitman	
8.5	**Space Summary & Education Program Progress** • C. Dell Angelo shared that the project team has previously outlined as part of the PDP deliverables, that the District needs to develop the Educational Program, which drives the development of the three space summaries, based on the three enrollment configurations. At our last meeting, we reviewed the introduction of the two deliverables.C.Dell Angelo added that the space summaries will be shared with the SBC by Thursday this week and they will be asked for its acceptance at the 11/6/2025 meeting. • J. Elliott reviewed the space summaries slides showing the original Manchester Memorial School version, as well as the draft	Record

version of the proposed new Essex Elementary School with variations from the MSBA guidelines (Slide 8 - 10).

- R. Russo asked why the kindergarten classes are not listed.
  - J. Elliott noted that there are two classrooms for kindergarten, they were just not shown on the high variations from the MSBA guidelines slide. J. Elliott noted that they are included in the overall space summaries.
  - P. Beaudoin noted that this is just showing the line items with variations.
- C. Hay noted that it seems like the special educationline is way over and was wondering since it is a District wide program could they be moved to Manchester?
  - P. Beaudoin noted that Manchester is running out of space currently for special education and the RISE program is the largest of the programs. She noted they used to be in Essex but now they are in Manchester due to ADA accessibility. She added that 23% of the district population is involved in special education
  - C. Dell Angelo noted that we have seen this is change in schools on other projects and that recently there has been an increase in the creation of and need for special education space.
- P. Beaudoin asked if the space summary included the PT/multipurpose room.
  - J. Elliott noted yes, it is around 1,200 square feet.
- A. Cameron noted that it seems the Essex project is a larger percentage than the MSBA guidelines compared to the Manchester version.
  - T. Whitman noted it would be helpful to see the justifications for this space
  - C.Dell Angelo said that the educational program that will be reviewed by the MSBA is the driver and justification for the space.
- A. Cameron noted that it should be considered that some of these spaces may be outsourced in the future.
  - P. Beaudoin noted that special education space needs have consistently gone up and they expect them to keep increasing in the future.
- A. Cameron asked how much space is really needed for the addition to the full K-5 at Manchester Memorial grade configuration?

- P. Beaudoin noted that there would be a need for an increase in around 6 classrooms plus Pre-K along with any configurations required for the common space to fit everyone.

- C. Hay asked if there has been any analysis on the core/common spaces in the Manchester building?
  - J. Elliott noted there would be an increase needed of around 13,000 square feet.
- T. Whitman asked where the physical impact is shown for the EES K-3 grade configuration for the students that go to Manchester Memorial?
  - P. Beaudoin said they can physically take on grades 4 & 5 at Manchester Memorial but there will be educational impacts
- G. Brewster asked that for the K-5 option at Manchester would they need to add 40,000 square feet?
  - J. Elliott noted that it is correct and the existing building would have very little renovation.
- M. Gerhardt noted some observations such as there is a 63% increase over the MSBA guidelines for the proposed EES K-5 option and the Manchester project was only 31%. He added that based on the shown space summaries the Manchester Memorial had 230 square feet/student and the proposed Essex Elementary School is currently at 290 square feet/student
  - J. Elliott noted that some of the larger spaces are the same size but serve a lower number of students, which skews the student/SF numbers.
- M. Gerhardt noted when he does the math, he is missing some 6,000 square feet for the Essex Elementary School K-5.
  - J. Elliott noted that the MSBA template does not always use the full 1.5x grossing factor for every square foot.
- M. Gerhardt asks if the square footage over the guidelines is completely non-reimbursable?
  - J. Elliott noted that the MSBA will track all the deviations, compare it to the educational program, and ask the District questions to decide whether they will reimburse some of the spaces or not. He added they will reimburse more than just the 45,000 square foot guideline shown but that the template does not show what those values are. The final reimbursement number will be incorporated into the final project cost.

-
    - C. Dell Angelo noted they will work closely with the MSBA and DESE and when the educational program shows a strong need for the space the MSBA can and will likely reimburse the spaces.
  - M. Gerhardt asks if it is realistic that grades 4 and5 could fit into the Manchester building?
    - P. Beaudoin noted that if that is the case they will need 16 to 18 general classrooms so some programs will have to be displaced, and space will have to be used differently than it was designed for if large group spaces have to be taken.
    - T. Whitman noted it is important to show that there will be impact to the Manchester program if grades 4 and5 are moved over.
  - P. Beaudoin asked based on the projected square footage for EES would the school be designed as a single story building, or stacked like Manchester and how does this affect the square footage totals?
    - J. Elliott noted it does not affect it greatly and the 1.5x grossing factor considers circulation for both horizontal and vertical spaces. He noted that EES could very well be two stories creatingupper and lower schools, he added this is very common.
  - A. Oldeman noted that he has seen any special education that has to be outsourced often ends up being a higher operating cost for the District rathern than keeping in house.
- T. Whitman asked to confirm that the SBC will be voting on this at the next meeting.
  - C. Dell Angelo noted yes, and they will be sending all space summary documents Thursday, and the educational program on Monday. The SBC will be voting on whether to accept these at the next meeting, and the School Committee will vote on whether to accept the space summaries and whether to approve the educational program. C. Dell Angelo added to send any questions directly to the project team.
- C. Hay asked if there will be any more review of the space summaries by the project team to lower the number?
  - P. Beaudoin noted there may be some confusion around this as they are not coming up with the numbers, they are created by the educational program that drives what spaces are needed and the space summary templates creates the square footage.

DORE + WHITTIER

- C. Dell Angelo added that the MSBA provides the educational program template, and the District develops the information that is required for the District.

- J. Hocherman asked if there are standards across MSBA projects about what percentage of the square footage over the guidelines is normally accepted for reimbursement.
  - C. Dell Angelo notes yes, they can provide information.
- McDonald asked if there is a way to articulate the overage from what MSBA will not participate in and what that the District can afford?
  - T. Whitman thinks that is something that will not be known till they go till the voters as everyone will have a different number, but the job of the SBC is to create the most cost-effective school for the District.
- P. Beaudoin noted that as an educator the most important aspect should be the classrooms even if that means reducing the size of items such as the gym even though that is also needed.
- A. Cameron asked when the decisions to pull back scope due to cost will occur?
  - C. Dell Angelo noted we have not even started designing alternatives yet so we are not ready to discuss cost at this high level. C. Dell Angelo added that JCJ needs these space summary sheets to start developing design alternatives, and as the alternatives are reviewed with the SBC, there might be instances where one or more alternatives might be removed from the options within the PDP phase to winnow down the amount of options. C.Dell Angelo noted that at PSR they will really be focusing on around a smaller amount of options and at the end of PSR they will be choosing the preferredoption and that is when costs really start to be reviewed.
- J. LaPosta noted that this is a long process, and the space summary templates are not static, they will change throughout the process even after they are accepted at PDP. He noted that their job is to design the most efficient plan and the refining from the SBC will start as soon as designing starts. He added that the MSBA will not accept the project if it does not meet the educational program so they cannot refine too much too soon. J. LaPosta also said that a lot of efficiencies can be found for the buildings once they start being designed.
- T. Whitman asked to confirm what the SBC is accepting again.
  - C.Dell Angelo noted they are accepting the spaces that support the educational program, and this will not be finalized until the end of Schematic Design with the MSBA. C. Dell Angelo added that the educational program

	is really the document that is being approved by School Committee as if it were to change the School Committee will need to revote to approve it. • P. Beaudoin noted there are no classroom numbers or square footages included in the education program. • E. Dwyer provided an example from her experience on the Pentucket SBC about how the indoor track space was supported by their education program the SBC decided that it should not be included.	
8.6	**Schedule Update** • C. Dell Angelo provided an update to the schedule for the Preliminary Design Program (PDP) and the Preferred Schematic Report (PSR) (Slide 12). ○ T. Whitman asked if the open-door food truck could be scheduled on the day that the tour and community meeting. • R.Russo noted that the food truck comes right a dismal before the school tours and the community meeting.	Record
8.7	**Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting (Occurred after approval of meeting minutes)** • Please note that this agenda topic was taken out of order and reviewed at the beginning of the meeting after previous meeting minutes were approved. • B. Zubricki, the Town Administrator for Essex, joined the meeting to discuss the town shelter aspect of the proposed Essex Elementary School. ○ P. Beaudoin noted this is a general inquiry into the Town of Essex asking whether they have any changes to the current shelter plans for the Essex Elementary School. ○ B. Zubricki noted that the Town's emergency plan is for the Essex Elementary School to be the local shelter, and they would bring in Red Cross. However, Cape Ann general area is working to make Gordon College a widespread shelter. B. Zubricki noted that they would	Record

	need a generator, ability to cook, and a large space for gathering with heating and cooling capabilities. o J. Hocherman asked if this would impact on the structural aspect and cost of the project. o F. Pellegrini noted yes it would increase the category required for the structure. She added that they can make the school prepared for these things without designating the building as a certain level shelter. o B. Zubricki agreed with this path. o C.Dell Angelo noted she sent an email to the SBC with all the requirements that would be needed. o The committee agreed to move forward with the existing shelter in place capabilities.	
8.8	**Public Comment:** There was no public comment.	Record
8.9	**Reflections & Action Items** • P.Beaudoin noted that there have been conversation regarding the Town Meeting schedules as outlined within the MSBA project schedule for Fall 2026. P. Beaudoin stated it would be helpful to schedule a time to review this timeline with the Leadership team as well as certain chair members from boards within each Town. o T. Whitman agreed that the SBC should be involved and suggested that we empower P. Beaudoin to meet with the two Town Administrators for an initial conversation. The group supported this path. o C.Dell Angelo noted they could create a working group if that would be helpful o P. Beaudoin noted she will start first with an offline group and bring it forward if needed.	
8.10	**Adjourn:** **Roll Call Vote:** A motion to adjourn the meeting was made at 7:51pm by G. Brewster and seconded by A. Cameron • **Yes: 14 | No: 0 | Absent/Abstain: 2**	Record

Name	Yes/No/Abstain & Absent
Michelle Cresta	Yes
Pam Beaudoin	Yes
Kim Provost	Yes
John Binieris	Yes
Theresa Whitman	Yes
Andy Oldeman	Yes
Charlie Hay	Yes
Gordon Brewster	Yes
Tyler Virden	Yes
Annie Cameron	Yes
Ariel Fernando Brian	Yes
Jen Hocherman	Absent
Michael Gerhardt	Yes
Timonthy McDonald	Absent
Henry Oettinger	Yes
Steve Hunt	Advisor – No Vote
Emily Dwyer	Yes
Kim Field	Advisor – No Vote
Rachelle Rousseau	Advisor – No Vote
David Pereen	Advisor – No Vote
Lisa O'Donnell	Advisor – No Vote

Sincerely,
DORE + WHITTIER
Jacob Greco
Assistant Project Manager
Cc: Attendees, File
The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes.



Essex Elementary School Project

SBC Meeting No. 8

October 28, 2025 @ 6:00 PM

Manchester Essex Regional School District

DORE + WHITTIER

JCJ ARCHITECTURE

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 7 20251014
3. Invoices & Commitments for Review and Approval (Vote Expected)
4. Removal of Apple Street from Site Selection (Vote Expected)
5. Space Summary & Education Program Progress
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 7 20251014
3. Invoices & Commitments for Review and Approval (Vote Expected)
4. Removal of Apple Street from Site Selection (Vote Expected)
5. Space Summary & Education Program Progress
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 7 20251014
3. Invoices & Commitments for Review and Approval (Vote Expected)
4. Removal of Apple Street from Site Selection (Vote Expected)
5. Space Summary & Education Program Progress
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 7 20251014
3. Invoices & Commitments for Review and Approval (Vote Expected)
4. **Removal of Apple Street from Site Selection (Vote Expected)**
5. Space Summary & Education Program Progress
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

Site Evaluation

Legend	
	Not Preferable
	Neutral
	Advantageous







ESSEX ELEMENTARY SCHOOL PROJECT SITE ALTERNATIVES		SITE A CURRENT ESSEX ES	SITE B CURRENT MMES	SITE C APPLE STREET
		12 STORY ST	43 LINCOLN ST	30 APPLE ST
General	Location	ESSEX	MANCHESTER	ESSEX
	Size	9.75 ACRES	11.313 ACRES	11.50 ACRES
Site Development	Town Owned			
	Adequate Buildable Area - (Current Site 9.75 Acres)			
	Utilities Access			
	Subsurface Conditions – Geotechnical (Bearing Capacity, Organics, Ledge)			
	Environmental Contaminants			
	Regulatory - Wetlands, Rivers and Streams, Flood Zones			
	Future Development Options and Flexibility			
	Reimbursement potential from MSBA (Offsite, Budget cap)			
	Construction Complexity – Access, Laydown, Phasing			
Site Access	Infrastructure - Bridges, Road Surface			
	Walkability - Distances, Sidewalks			
	Safety - Road Width, Sight Lines			
	Busing			
Community	Compatible with Regional Agreement			
	Access to other Community Resources			
	Minimize Impact on Neighbors			
Education	Meets needs of Educational Program			
	Construction Impact on Existing School Activities			
Schedule	No significant schedule risks - "Shovel Ready"			

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 7 20251014
3. Invoices & Commitments for Review and Approval (Vote Expected)
4. Removal of Apple Street from Site Selection (Vote Expected)
5. **Space Summary & Education Program Progress**
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

Space Summary – Variations from MSBA Guidelines

Manchester Memorial Elementary School: K-5, 335 Students

3 Core Classrooms	Increase total from 12 to 15 CRs (3 each, Grade 1-5) due to max class sizes. MSBA guideline based on 23 students per class.	3@ 950 NSF	2,850 NSF
2 PK Classrooms w/ Storage	District-wide integrated PK.	2 @ 1,200 NSF 1 @ 250 NSF	2,650 NSF
2 Project Rooms	MSBA has since revised guidelines to support 1,200 NSF of upper elementary STE.	2 @ 1,000 NSF	2,000 NSF
1 Self-Contained Special Education Classroom	Extra classroom to accommodate district-wide Intensive Reading and Written Language (IRWL) and the Supportive Alternative Individual Learning (SAIL).	1@ 950 NSF	950 NSF
2 Resource Rooms	IRWL and SAIL	2 @ 500 NSF	1,000 NSF
Gymnasium Increase	Bleacher seating.	1 @ 850 NSF	850 NSF
Book Storage	Program driven book storage.	1 @ 300 NSF	300 NSF

MSBA Guidelines **58,932 GFA** (x1.5 Grossing Factor)
Built Project **77,102 GFA**

Space Summary – Variations from MSBA Guidelines

Essex Elementary School: 250 Students, K-5

1 Core Classrooms	Increase total from 9 to 10 CRs (2 each, Grade 1-5) due to max class sizes. MSBA guideline based on 23 students per class.	1@ 950 NSF	950 NSF
2 PK Classrooms w/ Storage	District-wide integrated PK.	2 @ 1,200 NSF 1 @ 250 NSF	2,650 NSF
1Project (STE) and 1 World Language	MSBA guidelines allow for 1,200 NSF of upper elementary STE but not included in total below.	1 @ 1,080 NSF 1 @ 120 NSF 1 @ 950 NSF	2,150 NSF
MTSS Interventionists w/ Small Group	857 NSF existing lacks Small Group rooms.	2 @ 500 NSF 2 @ 250 NSF	1,500 NSF
Break-Out	Existing building lacks Break-Out spaces.	3@ 500 NSF	1,500 NSF
Special Education	RISE and ACE each with K-2 and 3-5 rooms, Small Group Rooms, OT, PT, and supporting spaces.	+ 5,325 NSF	5,325 NSF
Gymnasium Increase	Bleacher seating.	1 @ 850 NSF	850 NSF

MSBA Guidelines **45,000 GFA** (x1.5 Grossing Factor)
Existing **53,036 GFA** (7,759 GFA Basement)
Currently Proposed **73,673 GFA**

Space Summary – Grade Configurations

		Existing	MSBA Guidelines	Proposed
K-3 at **EES**	**165 Students**	53,036 GFA	29,700 GFA	60,777 GFA
K-5 at **EES**	**250 Students**	53,036 GFA	45,000 GFA	73,673 GFA
K-5 at **MMES**	**515 Students**	77,102 GFA	79,782 GFA	119,001 GFA

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 7 20251014
3. Invoices & Commitments for Review and Approval (Vote Expected)
4. Removal of Apple Street from Site Selection (Vote Expected)
5. Space Summary & Education Program Progress
6. **Schedule Update**
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

Schedule Update/PDP

10/30/25-Draft Ed Program and Space Summaries to SBC

11/6/25 SBC Meeting- Accept Ed Program and Space Summary, Preliminary Evaluation of Alternatives

11/20/25 Comm Meeting #2-Site and Alternatives Review

11/25/25 SBC Meeting-Review Community Meeting #2 Feedback, Further Evaluation of Alternatives

12/9/25 Comm Meeting #3-Memorial ES with a tour and rerun of meetings #1 and #2

12/15/25 SBC Meeting-Final Evaluation of Alternatives with Preliminary Costs

12/19-12/30 Draft PDP to SBC

1/6/26 SBC Meeting-PDP Approval to MSBA, Initial Grade Configuration Discussion

Schedule Update/PSR

1/22/26 SBC Meeting-Alternatives with Grade Configuration Discussion

1/28/26 Comm Meeting #4-Share PDP results and Evaluation of Alternatives with Grade Configuration

2/9/26 SBC Meeting-Review Comm Meeting Feedback, Review Alternatives and Grade Configuration

2/24/26 SBC Meeting-Confirm Preferred Alternatives for Pricing

3/10/26 SBC Meeting-Preferred Alternates if Necessary

3/24/26 SBC Meeting-Final Review of Alternatives and Grade Configuration

3/30/26 Comm Meeting #5-Review Preferred Options

4/14/26 SBC Meeting-Review Comm Meeting #4 Feedback and Approval of Preferred Solution

4/28/26 SBC Meeting-Approved PSR Submission to MSBA

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 7 20251014
3. Invoices & Commitments for Review and Approval (Vote Expected)
4. Removal of Apple Street from Site Selection (Vote Expected)
5. Space Summary & Education Program Progress
6. Schedule Update
7. **Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting**
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 7 20251014
3. Invoices & Commitments for Review and Approval (Vote Expected)
4. Removal of Apple Street from Site Selection (Vote Expected)
5. Space Summary & Education Program Progress
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. **Public Comment**
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 7 20251014
3. Invoices & Commitments for Review and Approval (Vote Expected)
4. Removal of Apple Street from Site Selection (Vote Expected)
5. Space Summary & Education Program Progress
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. **Reflections & Actions Items**
10. Adjourn

SBC Meeting Agenda – October 14, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 7 20251014
3. Invoices & Commitments for Review and Approval (Vote Expected)
4. Removal of Apple Street from Site Selection (Vote Expected)
5. Space Summary & Education Program Progress
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

MEETING AGENDA

Meeting Date:	November 6, 2025
Meeting Time:	6:00PM – 8:00PM
Project Name:	Essex Elementary School
Project Number:	202306980020
Meeting Purpose:	School Building Committee Meeting
Location:	This meeting will be a hybrid meeting (both in-person and remote) at Essex Elementary School Cafeteria

Meeting Link: https://us06web.zoom.us/j/85349809336

---

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
    - SBC Meeting No. 8 20251028
3. Invoices & Commitments for Review and Approval (Vote Expected)
    - DWMP Invoice No. 5 | $45,225.50
    - JCJ Invoice No. 2 | $29,025.00
4. Space Summary & Education Program Acceptance (Vote Expected)
5. Preliminary Evaluation of Alternatives Review
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

DORE + WHITTIER

Project:	Essex Elementary School	Project No:	
Subject:	School Building Committee Meeting	Meeting Date:	11/06/2025
Location:	Hybrid (Essex Elementary School Cafeteria & Zoom)	Time:	6:00 PM
Distribution:	Attendees, Project File	Prepared By:	

Present	Name (* Voting Member)	Affiliation
√	Michelle Cresta*	Director of Finance & Operations
√	Pam Beaudoin*	Superintendent
√	Kim Provost*	Principal
√	Theresa Whitman*	SBC Co-Chair
	John Binieris*	SBC Co-Chair
√	Andy Oldeman*	Manchester Finance Committee / Mechanical Engineer
√	Charlie Hay*	Architect School Building Experience
√	Gordon Brewster*	Engineer, Sr. Proj. Manager, Owner's PM, former Member of MERMHS & Memorial building
	Tyler Virden*	Project Executive -Wise Construction / Paren
√	Annie Cameron*	Former SC Member and Memorial SBC Member
	Ariel Fernando Brian*	Architect - CBT
	Jen Hocherman*	Architect - Partner SV Design
√	Michael Gerhardt*	Civil Engineer / Parent
√	Timonthy McDonald*	Architect - Onion Flats
√	Henry Ottenginer*	Manchester Conservation Committee / Education Background
	David Pereen	Resident / Plumbing & Fire
√	Lisa O'Donnell	Design & Construction / Essex Planning Board
	Steve Hunt*	Facilities Manager
√	Emily Dwyer*	EES Teacher
√	Kim Field	EES Teacher
√	Rachelle Rousseau	EES Teacher
	Mike Burton	Project Director / Partner - DWMP
√	Christina Dell Angelo	Project Executive - DWMP
√	John Albright	Project Manager - DWMP
	Rachel Rincon	Assistant Project Manager - DWMP
	Jacob Greco	Assistant Project Manager - DWMP
√	James LaPosta	Principal - JCJ Architecture
√	Fawn Pellegrini	Senior Project Manager - JCJ Architecture
√	Jeff Elliott	Project Architect - JCJ Architecture
	Emily Czarnecki	Principal (Interiors) – JCJ Architecture

	Mike Pirollo	Principal – MLP Integrated Design
	Eric Haggstrom	Sustainability Director – JCJ Architecture
	Kelley Tapia	Soden Sustainability

Item No.	Action Item	Ball in Court

- **Please click here for the presentation**
  - **This will be referenced in the meeting minutes with slide numbers called out to refer to.**
- **Below is a summation of key points, please view the recording here for full transcript and chapter summaries.**

Item No.		Description
9.1	**Call to Order & Intro:** Called to order by T.Whitman at 6:00pm, please refer to the attendee list.	Record
9.2	**Approval of October 28 - 2025, Meeting Minutes (Vote Expected):** • T. Whitman noted that there were late revisions submitted for the minutes so they will be tabled until the next SBC meeting.	Record

DORE + WHITTIER

9.3	**Invoices & Commitments for Review and Approval (Vote Expected):** - T. Whitman noted that the Minuteman Press invoice was added late so it will be approved at the next SBC meeting. **Roll Call Vote:** A motion to approve the following invoices was made by E. Dwyer and seconded by A. Cameron • DWMP Invoice No. 6 | $46,485.50 • JCJ Invoice No. 2 | $29,846.21 Discussion: - G. Brewster asked if the invoices have been reviewed? o P.Beaudoin noted yes.	Record

Name	Yes/No/Abstain & Absent
Michelle Cresta	Absent
Pam Beaudoin	Yes
Kim Provost	Yes
John Binieris	Yes
Theresa Whitman	Yes
Andy Oldeman	Yes
Charlie Hay	Yes
Gordon Brewster	Yes
Tyler Virden	Absent
Annie Cameron	Yes
Ariel Fernando Brian	Absent
Jen Hocherman	Absent
Michael Gerhardt	Yes
Timonthy McDonald	Absent
Henry Oettinger	Yes
Emily Dwyer	Yes
Steve Hunt	Advisor – No Vote
Kim Field	Advisor – No Vote
Rachelle Rousseau	Advisor – No Vote
David Pereen	Advisor – No Vote
Lisa O'Donnell	Advisor – No Vote

	• **Yes: 11 | No: 0 | Absent/Abstain: 5**	
9.4	**Space Summaries & Educational Program Acceptance (Vote Expected)** • C. Dell Angelo noted that she shared the space summaries last week and P. Beaudoin also provided the educational program. C. Dell Angelo added that both of those emails outlined important factors to consider while reviewing the documents. C. Dell Angelo noted that the goal tonight is for the SBC to accept these documents and from there they will go to School Committee for their acceptance of the space summaries and their approval of the educational program. ○ G. Brewster noted that originally, he struggled with understanding what was shared last week but after the information provided, he now understands how these numbers were generated. G. Brewster added that they are not the final numbers but how it is a starting point to reach the final square foot number. G. Brewster also noted he read a portion of the education program and was impressed with what he read. • P. Beaudoin noted that if anyone has questions about the education program, they should ask. P. Beaudoin noted that at a high level it is not about how many spaces there are and their sizes but is about how they use the spaces that they have and need. ○ A. Cameron noted the historic challenge has been that Essex is not a perfect 2/3rds to Manchester's whole so this could create issues such as needing 1.5 classrooms, which you cannot do, so you need to provide two. ○ A. Cameron asked if the admin still asserts that the classroom and small group instruction space that we designed at Memorial is still applicable in this school? • P. Beaudoin noted that is a modern education versus 1950's building design ○ A. Cameron asked how many revisions there has been since the Manchester Memorial education plan? • P.Beaudoin noted that the curriculum layout is still the same. The main changes are using breakout space and neighborhood-based classroom language. P. Beaudoin added that there are a lot more small group spaces needed, and flexibility is still a key.	

- A.Cameron agreed that there is a lot of language for flexible space. A. Cameron asked how you draw a limit through design and education to prevent overbuilding of these spaces?
  - E. Dwyer noted that one thing that was supported well in the educational program was the piece about differentiation. E. Dwyer added that sometimes you teach in large groups while at other times it is small groups and even within the smaller groups the students may learn better through visual or oral speech. E. Dwyer continued that there is a varying dynamic within the classroom and students gain value from having breakout time with teachers separate from the large classroom. E. Dwyer said that this is even more of an expectation now in education than it was five years ago.
  - P. Beaudoin stated that the underlying content from the education program came from the notes provided by the Director of Special Education, Director of Curriculum, K. Provost, staff, & the visioning sessions. P. Beaudoin noted that the educational program is really just a compiled narrative of this. P. Beaudoin said that even in spaces such as the cafeteria they have to accommodate students that cannot function in spaces that are large and loud. P. Beaudoin noted that this is not a specific space ask but is a type of space ask.
  - J. LaPosta noted that the statistics nationally mirror what Essex is seeing regarding the needs of students. He said that a lot of what the design input does is to not actually add space to the building but how the space is utilized. J. LaPosta noted that the use of specific furniture is greatly impactful along with the interior finish designs & colors of the spaces. Lastly, he noted that the implementation of systems such as audio enhancement can be very useful.

- A. Cameron asked if they currently have world language as it is in the educational program and how does the MSBA reimburse a program the district currently does not have?

- P. Beaudoin noted it is a program they used to have but it was cut due to funding and has always been a part of the program. P. Beaudoin does not think the MSBA will have an issue with it because it has always been a part of the programming in the past and will be in the future. P. Beaudoin added that they may not need their own classroom but will need a teacher planning space at the very least.

- A. Cameron asked about teacher planning rooms and if they are necessary as she does not think they are currently used often.
  - P. Beaudoin said that they are used by the teachers heavily as it acts as a "defacto" home base and stated that district wide there is a lack of space for teachers to work together, and this is an important item. P. Beaudoin said that the educators make the schools run and it is important for them to have adequate space
  - E. Dwyer shared an example of how when she works and collaborates with other teachers, they have to use one of their classrooms and create space to work. However, every week they have to restart & reset up the work because the classroom has to be utilized by the students the majority of the time.
    - K. Provost added that at the elementary level it is even more unproductive because they are using chairs and tables meant for small children not adults.
  - R. Russo noted it would be beneficial to have a shared space where they can store shared resources for their programs instead of everything living in their classrooms.
  - T. Whitman added that those adult spaces can be utilized for students also and are essentially flex space.
- A. Cameron asked if there is any scenario where they would not extend the Pre-K program to include two classrooms in the Essex Elementary School Project?
  - P. Beaudoin noted she could not recommend that and this year they have three classrooms and could have four classrooms if there was enough space. P. Beaudoin added that if the district has to go to universal Pre-K they will actually be under spaced even with the new classrooms.

- A. Cameron asked how the Manchester Memorial library commons have been functioning and if there is anything that would be done differently?
  - P. Beaudoin noted that she does not think so and it serves its purpose, but she does not think the school is utilizing the outdoor space associated with it enough. P. Beaudoin noted that school is still growing into the building and its space so she hopes that it will become utilized more.
- A. Cameron asked to clarify that project rooms are separate and different from art rooms.
  - P. Beaudoin noted yes, the project rooms can be signed out by classes to work on prolonged projects or be used for small presentations as some examples but are not designated for art classes.
- E. Dwyer noted that she has some questions about the details of the program specifics.
  - P. Beaudoin asked her to reach out separately to review the detailed aspects if the questions are not building & space related.
  - T. Whitman noted that it is okay for those discussions to take place outside the meeting as long as the SBC agrees that it is fine for changes to occur after they accept it.
    - C. Dell Angelo noted this is acceptable, common, as it is always changing, and that the project team can provide a summary of any changes that occur.

- M. Gerhardt asked if it was realistic that the Manchester Memorial School could actually handle the absorption of Essex's grades 4 & 5 without any changes?
  - P. Beaudoin noted yes, they can fit the kids in, but the building will not be used as it was designed. P. Beaudoin noted that they created a document that illustrates that classroom changes that would be needed.
  - A. Cameron asked if the quality of education will drop in this scenario?
    - P.Beaudoin noted yes, it would be overcrowded and is the worst option of the three for child development.
  - C. Dell Angelo added a reminder that the space summaries will be further refined and will not be locked in until the schematic design package is submitted. C. Dell Angelo noted that in the next agenda topic they will seem some of the first proposed options but added that based on the criteria these

will be graded on some options will be removed and some may expand into multiple different iterations or versions. C. Dell Angelo said that some of the options may not meet the educational program and therefor will be removed by the committee.
    - M. Gerhardt noted that is his point and asked if there should be a space summary, that is K-3 at Essex with an expansion of 4 & 5 at Manchester? M. Gerhardt noted that it seems like they are missing a piece.
    - C. Dell Angelo responded by explaining that the three space summaries are based on the three agreed upon enrollment configurations with the MSBA. These are laid out through the statement of interest and the feasibility study agreement.
- C. Hay noted he does not think that the space summaries are flawed and it may be that not putting an addition on the Manchester Memorial building is flawed. He added that this will all be fleshed out during the discussions around those options.
    - P. Beaudoin noted that it may just be that the original assertion that this is a feasible grande configuration is flawed.
- M. Gerhardt asked if they accept these space summaries and move forward with them is the SBC now taking off the option of expansion at the Manchester memorial building for the Essex K-3 grade configuration?
    - C. Hay answered by saying no and that these options will be fully vetted and reviewed for three more phases so everything will be considered.
    - J. LaPosta added as a reminder that any work at the Manchester Memorial building would not be reimbursable by the MSBA.
- T. Whitman asked to clarify if what she understands is correct. T. Whitman noted that the space summary is MSBA's template for reimbursable space, but any addition for that configuration, any editing or modifications you need to do at the Memorial School for just the forth & fifth grades to go over there wouldn't be reimbursable. Therefore, it's okay that they're not included in that space summary, because the SBC is not arguing that they would be reimbursable in any way?
    - J. LaPosta noted that in the MSBA's eyes the project for the K-3 grade configuration is only about the Essex students in those grades. The MSBA will not

	care what the District decides to do with the students in grades 4 & 5. J. LaPosta noted they will have an exception to undoing work they paid for at the Manchester Memorial Building and they may want money back. • M. Gerhardt asked what if they do not do any construction to the building, would the MSBA have any issues with reworking the educational plan that they just funded a building for? ▪ P. Beaudoin noted the MSBA does not approve or fund the educational plan they approve and fund the physical building. The purpose of the educational plan is to keep the project team in check and give them a basis for the design. ▪ C. Hay noted that the program they sold for Manchester is gone for the MSBA and they currently only care bout the Essex educational plan. • C. Dell Angelo noted that this is why there are three grade configurations or plans that need to be studied and that it is up to the District to figure out the best option. • C. Hay noted that every District and Town has a different view on education and how to teach so the MSBA does not care how you teach they just care about the space summaries, and the educational program is a roadmap to get to those space summaries. ○ T. Whitman asked if the grade configuration option to keep grades K-3 at an Essex site and move grades 4 & 5 to Manchester with no additions or work to the Manchester Memorial building will meet the educational program? • P. Beaudoin said that the only option that will meet with the educational program is the full K-5 school on the current Essex site. P. Beaudoin noted that this is because their program consists of the regional agreement and this is the only option that does not deviate from that. P. Beaudoin noted that they are not deviating from that either unless there is a cost-efficient reason to cause the committee to vote in that direction. • C. Dell Angelo noted she talked to the MSBA about the three design configurations and asked if it is viable to take of the Manchester Memorial site at the PDP phase due to information gathered so far.	

C. Dell Angelo noted that the MSBA heard from the district that there was a large contingent of the community that wanted it to be reviewed so it has to be carried till PSR and that is when it can be eliminated if necessary.
    - C. Hay noted that no one should worry about carrying the Manchester Memorial options through PDP because once the project is into the PSR they can start removing options.
- A. Cameron asked if the current special education programs will have a large lifespan to support these new spaces
    - P. Beaudoin noted they have longevity and if the cohort changes, they could morph, but she does not predict that and sees these programs increasing in need.
    - K. Provost noted that legally you cannot run the K-5 program in one room due to age restrictions so that is why they often take up multiple rooms.
- P. Beaudoin reviewed the graphic she passed out showing the configuration of the Manchester memorial building if Essex grades 4 & 5 were added in.
- P. Beaudoin noted there is a whole community section in the educational program and noted she built in the goal of adding community track and field space.
    - A. Cameron said it is good to throw everything in and see what can actually be done.

Roll Call Vote: A motion to accept the presented space summaries and educational plan to be sent to the school committee for their acceptance and approval respectively made by P. Beaudoin and seconded by H. Oettinger.

Discussion: No further discussion.

Name	Yes/No/Abstain & Absent
Michelle Cresta	Absent
Pam Beaudoin	Yes
Kim Provost	Yes
John Binieris	Yes
Theresa Whitman	Yes
Andy Oldeman	Yes

	<table><tr><td>Charlie Hay</td><td>Yes</td></tr><tr><td>Gordon Brewster</td><td>Yes</td></tr><tr><td>Tyler Virden</td><td>Absent</td></tr><tr><td>Annie Cameron</td><td>Yes</td></tr><tr><td>Ariel Fernando Brian</td><td>Absent</td></tr><tr><td>Jen Hocherman</td><td>Absent</td></tr><tr><td>Michael Gerhardt</td><td>Yes</td></tr><tr><td>Timonthy McDonald</td><td>Yes</td></tr><tr><td>Henry Oettinger</td><td>Yes</td></tr><tr><td>Emily Dwyer</td><td>Yes</td></tr><tr><td>Steve Hunt</td><td>Advisor – No Vote</td></tr><tr><td>Kim Field</td><td>Advisor – No Vote</td></tr><tr><td>Rachelle Rousseau</td><td>Advisor – No Vote</td></tr><tr><td>David Pereen</td><td>Advisor – No Vote</td></tr><tr><td>Lisa O'Donnell</td><td>Advisor – No Vote</td></tr></table> **Yes: 12 | No: 0 | Absent/Abstain: 4**	

9.5	**Preliminary Evaluation of Alternatives Review**
	
	• J. Elliott reviewed the preliminary evaluation of alternatives including the seven proposed options for the three different grade configurations along with the draft evaluation matrix (Slide 10 - 18). Please view the presentation to see each induvial option along with the associated facts and considerations.
	  ○ C. Hay asked if there should be another option showing an addition at Manchester Memorial?
	  • J. Elliott noted that the MSBA's project would just be the K-3 at Essex and would not include the work done in Manchester.
	  • P. Beaudoin noted that if there was an addition at the Manchester Memorial for the EES K-3 option it would have to be a completely separate district-led project and not included with the Essex MSBA project.
	  • C. Dell Angelo agreed but said it would be an important consideration to be included for that EES K-3 option.
		Record

- P. Beaudoin noted that these options are not on here because they are viable, the goal is to decide if they are or not.
- E. Dwyer asked with renovations how does something such as abatement work?
  - J. Elliott said it would be done during the summer or multiple summers. There would be multiple phases with the exact quantity that is unknown at this time.
- A. Cameron asked how major system upgrades happen during the addition/renovations?
  - J. Elliott noted it would be completed during summers.
  - J. LaPosta said that it can also be done in phases but that adds cost.
- J. LaPosta added that unlike the code upgrade option, the addition/renovation options allow for adjacency changes and rework within the walls of the building.
- M. Gerhardt noted that the new construction options seem to infringe on wetland areas and asked if the project team is engaging anyone to review it.
  - J. Elliott noted yes, they are conducting wetland flagging and will review this, J. Elliot noted that if the new option cannot go in the shown location it would have to become a multi-phased new construction option instead of just the two phases listed
- A. Oldeman asked what the gross area of Manchester Memorial was?
  - C. Dell Angelo noted 77,000 square feet
- C. Dell Angelo noted that all the playgrounds will need to be expanded in the full K-5 at Manchester Memorial along with all the base building additions.
- T. Whitman noted that the expanded car park on option B1.1 looks like it would create issues with the Manchester Con Com and the storm water management plan.
- C. Dell Angelo noted that on option B1.1 any of the existing buildings that are touched by the MSBA will implement a cost recovery from the original project, and it will reduce their grant.

- T. Whitman noted that at the most recent school committee meetings the currently proposed grade configurations were shared and the final comment from the committee was "why is this even being reviewed and when can it be removed?". T. Whitman noted that the school committee may conduct their own vote to not amend the regional agreement in parallel to the SBCs process.

- C.Dell Angelo asked the SBC members to review the evaluation criteria matrix as homework and let the project team know of any additions and/or changes.
- J. LaPosta noted the most helpful and productive route now is to finalize the criteria matrix to be able to evaluate the alternatives.
- P. Beaudoin asked if she is correct if the addition at the Manchester Memorial is within 20,000 total square feet of the new building at the Essex site?
    - J. Elliott noted it is close to that; the fully new construction option of K-5 at Essex's current site would be around 33,000 square feet larger than the K-5 addition at the Manchester memorial building.
    - A. Cameron asked if option B1.1 really accommodates everything needed?
    - P. Beaudoin noted yes but it is still going to be a tight fit.
    - M. Gerhardt noted that what happens is that you do not have to build a whole new cafeteria or gymnasium and that is why so much square footage is saved.
    - P. Beaudoin added that the common spaces would not fit the full student population anymore.
    - A. Cameron noted that for option B1.1 if one or two developments occurred there would be severe lack of space as there is no room for another addition at the Manchester Memorial site.
        - J. Elliott noted that is a good point and there would be no room for a future 20% expansion.
- T. McDonald asked about the structure of the building, the ceiling height, the classroom size and layout for options A0.1/A0.2. T. McDonald asked when a study of how this would really work is presented?
    - J. LaPosta noted this would all occur in the next phase, the PSR.
- A. Oldeman noted that these are the required steps per the MSBA and they have to go through them. A. Oldeman said that at the Memorial project the code upgrade was actually more expensive.
- P. Beaudoin noted she has received questions about how the SBC and project team will study the impact of traffic of adding more students to the Manchester memorial building. P. Beaudoin also asked if the building would look very institutional.
    - J. LaPosta noted their goal is to always make the best building they can and they will review the traffic.
- M. Gerhardt asked if a criteria item could be that a follow-up project would be needed?
    - C. Dell Angelo noted yes everything can be a criteria item and that would be an important one.

9.6	**Schedule Update**
	
	• C. Dell Angelo reviewed the upcoming schedule for PDP and PSR (Slide 19)
	  ○ T. Whitman noted that if grade configurations are decided in March that would not be enough time to add it to the spring town meeting.
	  • C. Dell Angelo noted that there would not need to be a town meeting to vote for that unless the school committee votes to amend the regional agreement.
	  ○ C. Hay noted he is uneasy with providing costs at this high level.
	  • C.Dell Angelo noted that they have to provide costs in the PDP document which will be public, but they can present ranges to the public in community meetings or even just different amounts of dollar signs.
	  • J. LaPosta noted that it is really for comparative use between the options to help get a better understanding of the range for each option.
	  • C. Dell Angelo added that the cost estimators are extremely conservative at this level also.
		Record

9.7	**Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting** There was no other topics	Record
9.8	**Public Comment:** There was no public comment	Record
9.9	**Reflections & Action Items**	

DORE + WHITTIER

<table>
<tr><td></td><td>

- T.Whitman noted that she saw a presentation in a meeting last night by 1623 Studios and thinks that they could be a benefit for the project and could conduct a video building tour.

</td><td></td></tr>
<tr><td>9.10</td><td>

Adjourn:

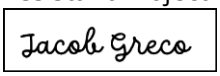
Roll Call Vote: A motion to adjourn the meeting was made at 7:59pm by A. Oldeman and seconded by E. Dwyer

<table>
<tr><td>Name</td><td>Yes/No/Abstain & Absent</td></tr>
<tr><td>Michelle Cresta</td><td>Absent</td></tr>
<tr><td>Pam Beaudoin</td><td>Yes</td></tr>
<tr><td>Kim Provost</td><td>Yes</td></tr>
<tr><td>John Binieris</td><td>Yes</td></tr>
<tr><td>Theresa Whitman</td><td>Yes</td></tr>
<tr><td>Andy Oldeman</td><td>Yes</td></tr>
<tr><td>Charlie Hay</td><td>Yes</td></tr>
<tr><td>Gordon Brewster</td><td>Yes</td></tr>
<tr><td>Tyler Virden</td><td>Absent</td></tr>
<tr><td>Annie Cameron</td><td>Yes</td></tr>
<tr><td>Ariel Fernando Brian</td><td>Absent</td></tr>
<tr><td>Jen Hocherman</td><td>Absent</td></tr>
<tr><td>Michael Gerhardt</td><td>Yes</td></tr>
<tr><td>Timonthy McDonald</td><td>Yes</td></tr>
<tr><td>Henry Oettinger</td><td>Yes</td></tr>
<tr><td>Emily Dwyer</td><td>Yes</td></tr>
<tr><td>Steve Hunt</td><td>Advisor – No Vote</td></tr>
<tr><td>Kim Field</td><td>Advisor – No Vote</td></tr>
<tr><td>Rachelle Rousseau</td><td>Advisor – No Vote</td></tr>
<tr><td>David Pereen</td><td>Advisor – No Vote</td></tr>
<tr><td>Lisa O'Donnell</td><td>Advisor – No Vote</td></tr>
</table>

Yes: 12 | No: 0 | Absent/Abstain: 4

</td><td>Record</td></tr>
</table>

Sincerely,
DORE + WHITTIER
Jacob Greco
Assistant Project Manager



Cc: Attendees, File
The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes.



Essex Elementary School Project

SBC Meeting No. 9

November 6, 2025 @ 6:00 PM

Manchester Essex Regional School District

DORE + WHITTIER

JCJ ARCHITECTURE

SBC Meeting Agenda – November 6, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 8 20251028
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 6 | $46,485.50
   - JCJ Invoice No. 2 | $29,846.21
4. Space Summary & Education Program Acceptance (Vote Expected)
5. Preliminary Evaluation of Alternatives Review
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – November 6, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 8 20251028
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 6 | $46,485.50
   - JCJ Invoice No. 2 | $29,846.21
4. Space Summary & Education Program Acceptance (Vote Expected)
5. Preliminary Evaluation of Alternatives Review
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – November 6, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 8 20251028
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 6 | $46,485.50
   - JCJ Invoice No. 2 | $29,846.21
4. Space Summary & Education Program Acceptance (Vote Expected)
5. Preliminary Evaluation of Alternatives Review
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – November 6, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 8 20251028
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 6 | $46,485.50
   - JCJ Invoice No. 2 | $29,846.21
4. Space Summary & Education Program Acceptance (Vote Expected)
5. Preliminary Evaluation of Alternatives Review
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

Space Summary – Variations from MSBA Guidelines

Manchester Memorial Elementary School: K-5, 335 Students

3 Core Classrooms	Increase total from 12 to 15 CRs (3 each, Grade 1-5) due to max class sizes. MSBA guideline based on 23 students per class.	3@ 950 NSF	2,850 NSF
2 PK Classrooms w/ Storage	District-wide integrated PK.	2 @1,200 NSF 1 @ 250 NSF	2,650 NSF
2 Project Rooms	MSBA has since revised guidelines to support 1,200 NSF of upper elementary STE.	2 @1,000 NSF	2,000 NSF
1 Self-Contained Special Education Classroom	Extra classroom to accommodate district-wide Intensive Reading and Written Language (IRWL) and the Supportive Alternative Individual Learning (SAIL).	1@ 950 NSF	950 NSF
2 Resource Rooms	IRWL and SAIL	2 @ 500 NSF	1,000 NSF
Gymnasium Increase	Bleacher seating.	1 @ 850 NSF	850 NSF
Book Storage	Program driven book storage.	1 @ 300 NSF	300 NSF

MSBA Guidelines **58,932 GFA**
Built Project **77,102 GFA**

(x1.5 Grossing Factor)

Space Summary – Variations from MSBA Guidelines

Essex Elementary School: 250 Students, K-5

1 Core Classrooms	Increase total from 9 to 10 CRs (2 each, Grade 1-5) due to max class sizes. MSBA guideline based on 23 students per class.	1@ 950 NSF	950 NSF
2 PK Classrooms w/ Storage	District-wide integrated PK.	2 @ 1,200 NSF 1 @ 250 NSF	2,650 NSF
1Project (STE) and 1 World Language	MSBA guidelines allow for 1,200 NSF of upper elementary STE but not included in total below.	1 @ 1,080 NSF 1 @ 120 NSF 1 @ 950 NSF	2,150 NSF
MTSS Interventionists w/ Small Group	857 NSF existing lacks Small Group rooms.	2 @ 500 NSF 2 @ 250 NSF	1,500 NSF
Break-Out	Existing building lacks Break-Out spaces.	3@ 500 NSF	1,500 NSF
Special Education	RISE and ACE each with K-2 and 3-5 rooms, Small Group Rooms, OT, PT, and supporting spaces.	+ 5,325 NSF	5,325 NSF
Gymnasium Increase	Bleacher seating.	1 @ 850 NSF	850 NSF

MSBA Guidelines 45,000 GFA
Existing 53,036 GFA
Currently Proposed 73,673 GFA

(x1.5 Grossing Factor)

Space Summary – Grade Configurations

		Existing	MSBA Guidelines	Proposed
K-3 at **EES**	**165 Students**	53,036 GFA	29,700 GFA	60,777 GFA
K-5 at **EES**	**250 Students**	53,036 GFA	45,000 GFA	73,673 GFA
K-5 at **MMES**	**515 Students**	77,102 GFA	79,782 GFA	119,001 GFA

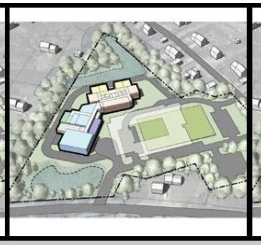
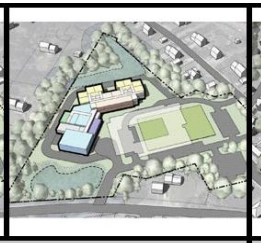
SBC Meeting Agenda – November 6, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 8 20251028
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 6 | $46,485.50
   - JCJ Invoice No. 2 | $29,846.21
4. Space Summary & Education Program Acceptance (Vote Expected)
5. Preliminary Evaluation of Alternatives Review
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

Design Alternatives






ESSEX ELEMENTARY SCHOOL PROJECT EVALUATION OF DESIGN ALTERNATIVES		SITE A CURRENT ESSEX ES						SITE B CURRENT MMES
		A0.1	A0.2	A1.1	A1.2	A2.1	A2.2	B1.1
		Code Upgrade/ Base Repair	Code Upgrade/ Base Repair	Addition/ Renovation	Addition/ Renovation	New Construction	New Construction	Addition/ Renovation
General	Enrollment	165	250	165	250	165	250	515
	Grade Configuration	K-3	K-5	K-3	K-5	K-3	K-5	K-5
	Renovated Area	53,036 GFA	53,036 GFA	53,036 GFA	53,036 GFA	0	0	77,102 GFA
	New Area	0	0	7,741 GFA	20,637 GFA	60,777 GFA	73,673 GFA	41,899 GFA
	Total Area	53,036 GFA	53,036 GFA	60,777 GFA	73,673 GFA	60,777 GFA	73,673 GFA	119,001 GFA
	Construction Phases	TBD	TBD	TBD	TBD	2	2	TBD

Design Alternatives

OPTION A0.1
165 STUDENTS
K-3
CODE UPGRADE/BASE REPAIR
53,036 GFA RENOVATION

OPTION A0.2
250 STUDENTS
K-5
CODE UPGRADE/BASE REPAIR
53,036 GFA RENOVATION

CONSIDERATIONS
- EXISTING BUILDING IS SMALLER THAN TARGET
- CORE CLASSROOMS ARE UNDERSIZED
- GYM IS UNDERSIZED
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- SWING SPACE
  A0.1: MOVING GRADES 4-5 TO MMES CREATES SWING SPACE (4 CLASSROOMS)
  A0.2: MODULAR CLASSROOMS WILL BE REQUIRED TO PROVIDE SWING SPACE
- K-3 REQUIRES MODIFICATION TO THE REGIONAL AGREEMENT



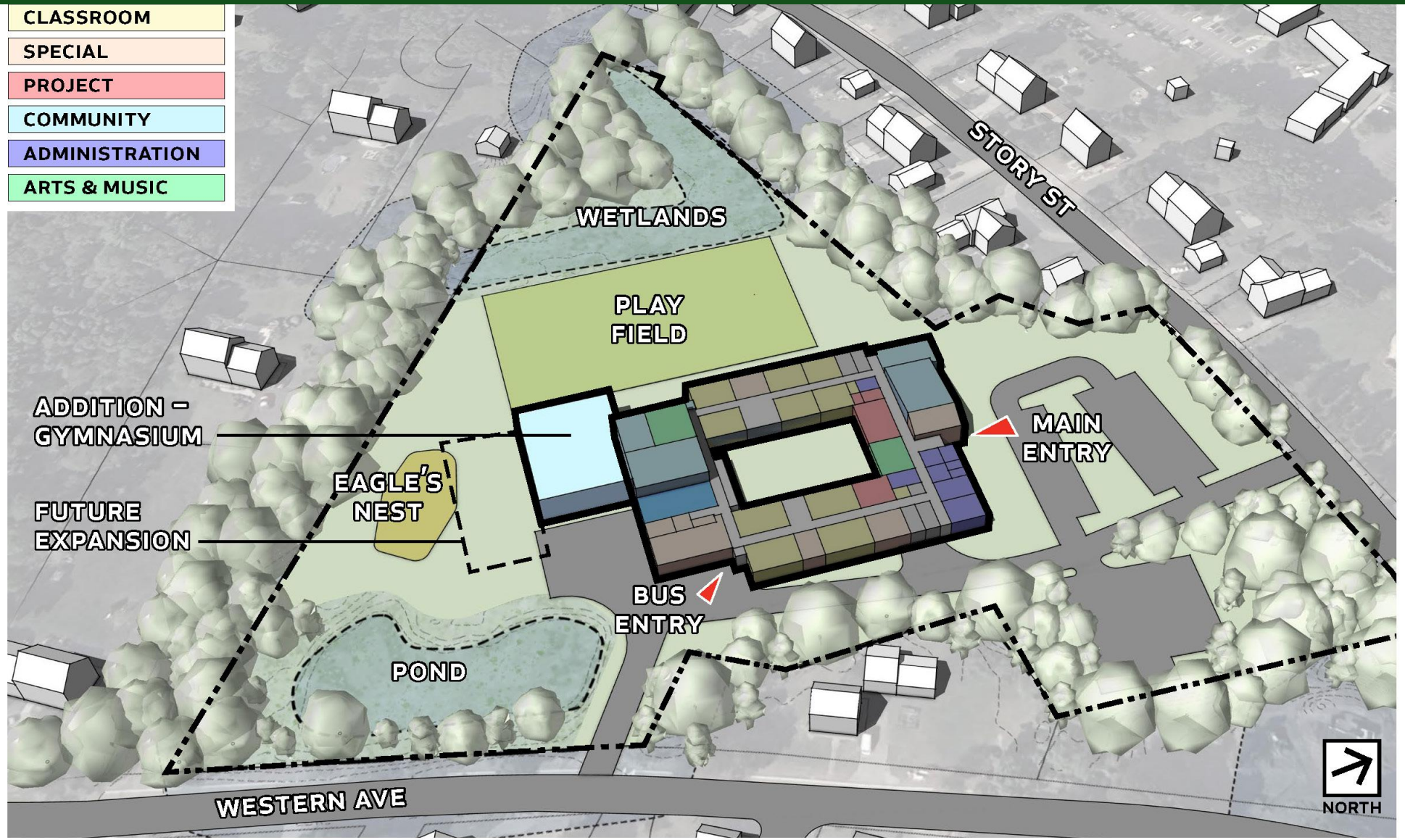
Design Alternatives

OPTION A1.1

165 STUDENTS
K-3
ADDITION/RENOVATION

53,036 GFA RENOVATION
7,741 GFA ADDITION

TOTAL: 60,777 GFA



CONSIDERATIONS

- FULL-SIZE GYM COULD BE ACCOMMODATED IN AN ADDITION
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- MOVING GRADES 4-5 TO MMES CREATES SWING SPACE (4 CLASSROOMS)
- K-3 REQUIRES MODIFICATION TO THE REGIONAL AGREEMENT

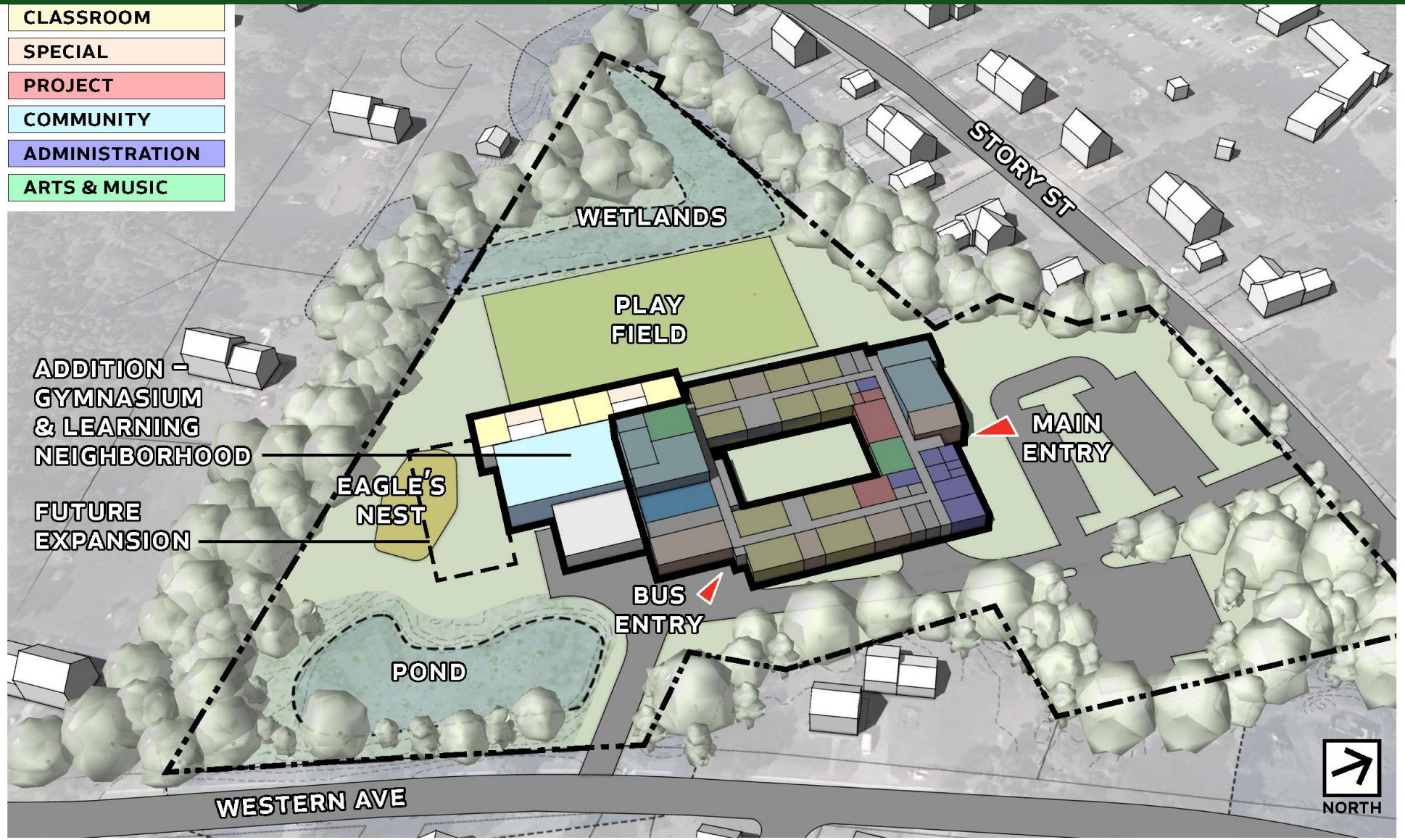
Design Alternatives

OPTION A1.2

250 STUDENTS
K-5
ADDITION/RENOVATION

53,036 GFA RENOVATION
20,637 GFA ADDITION

TOTAL: 73,673 GFA



CONSIDERATIONS

- FULL-SIZE GYM COULD BE ACCOMMODATED IN AN ADDITION
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- SWING SPACE (4 CLASSROOMS) COULD BE ACCOMMODATED IN AN ADDITION

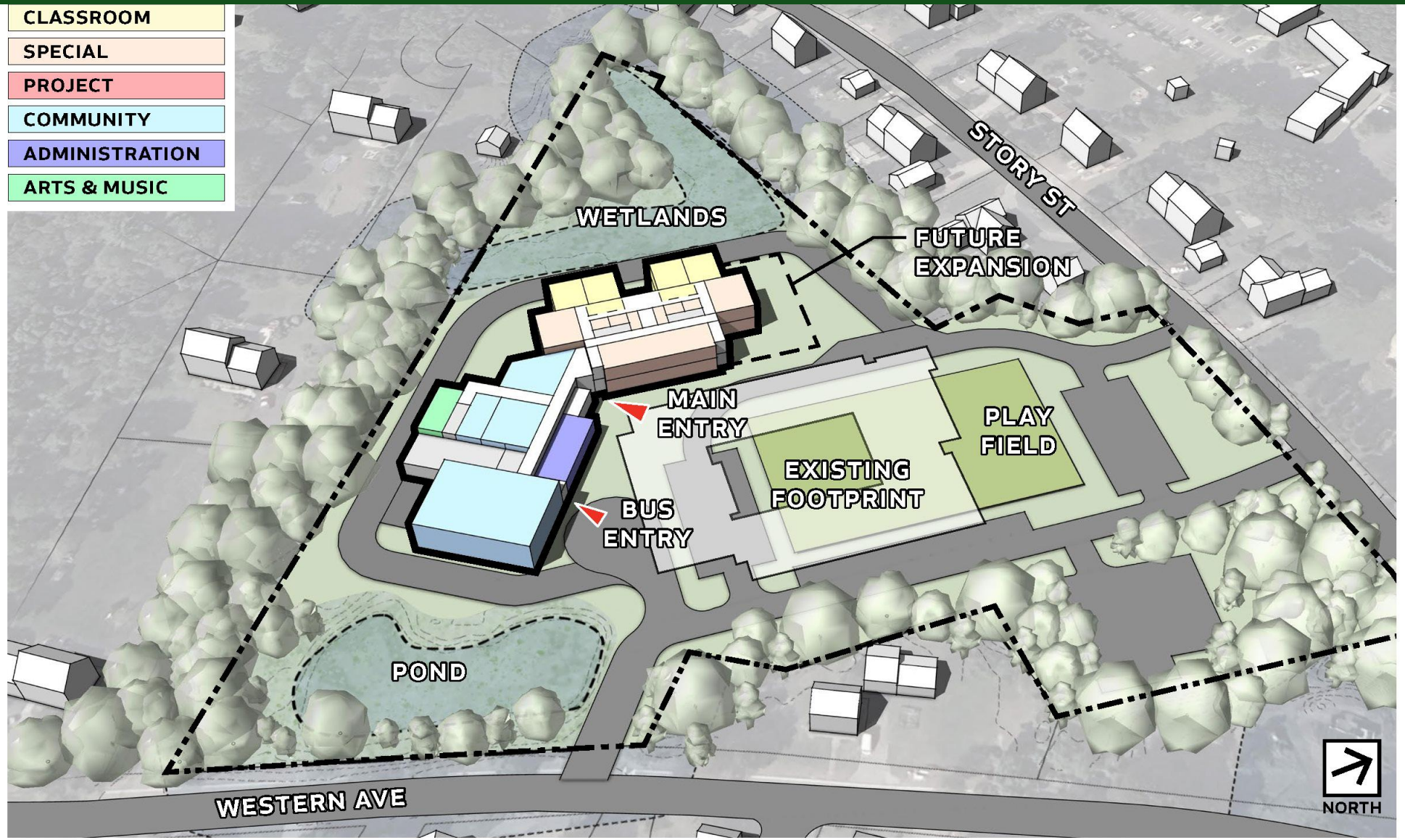
Design Alternatives

OPTION A2.1

165 STUDENTS
K-3
NEW

60,777 GFA NEW

TOTAL: 60,777 GFA



CONSIDERATIONS

- SITE LAYOUT PROVIDES FULL PERIMETER ACCESS AND IMPROVED SIGHT LINES
- DESIRED ROOM SIZES AND ADJACENCIES CAN BE PROVIDED
- ACCESS TO COMMUNITY SPACES EASILY CONTROLLED
- LEARNING NEIGHBORHOOD INTEGRATE SPECIAL EDUCATION AND INTERVENTIONISTS
- K-3 REQUIRES MODIFICATION TO THE REGIONAL AGREEMENT

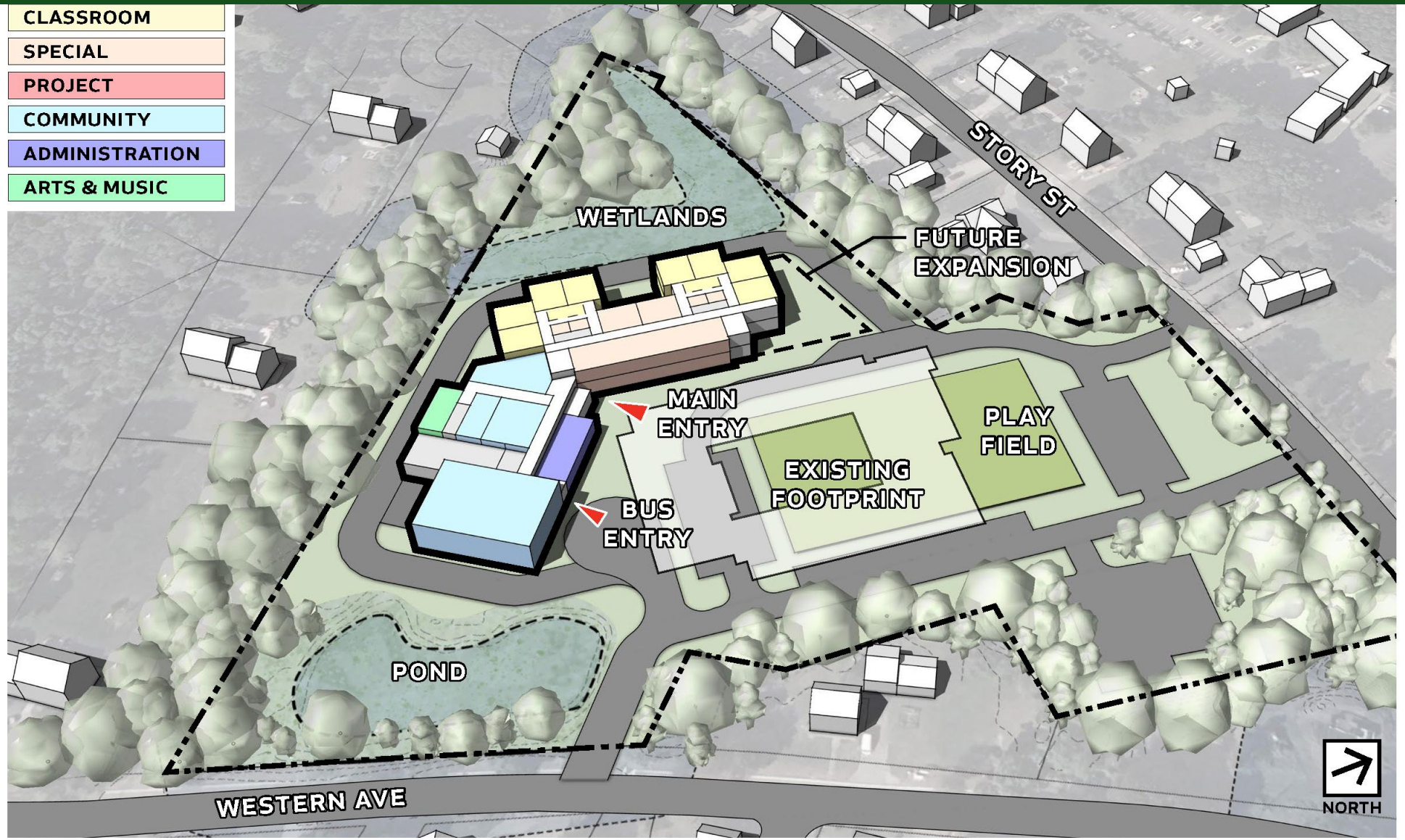
Design Alternatives

OPTION A2.2

250 STUDENTS
K-5
NEW

73,673 GFA NEW

TOTAL: 73,673 GFA



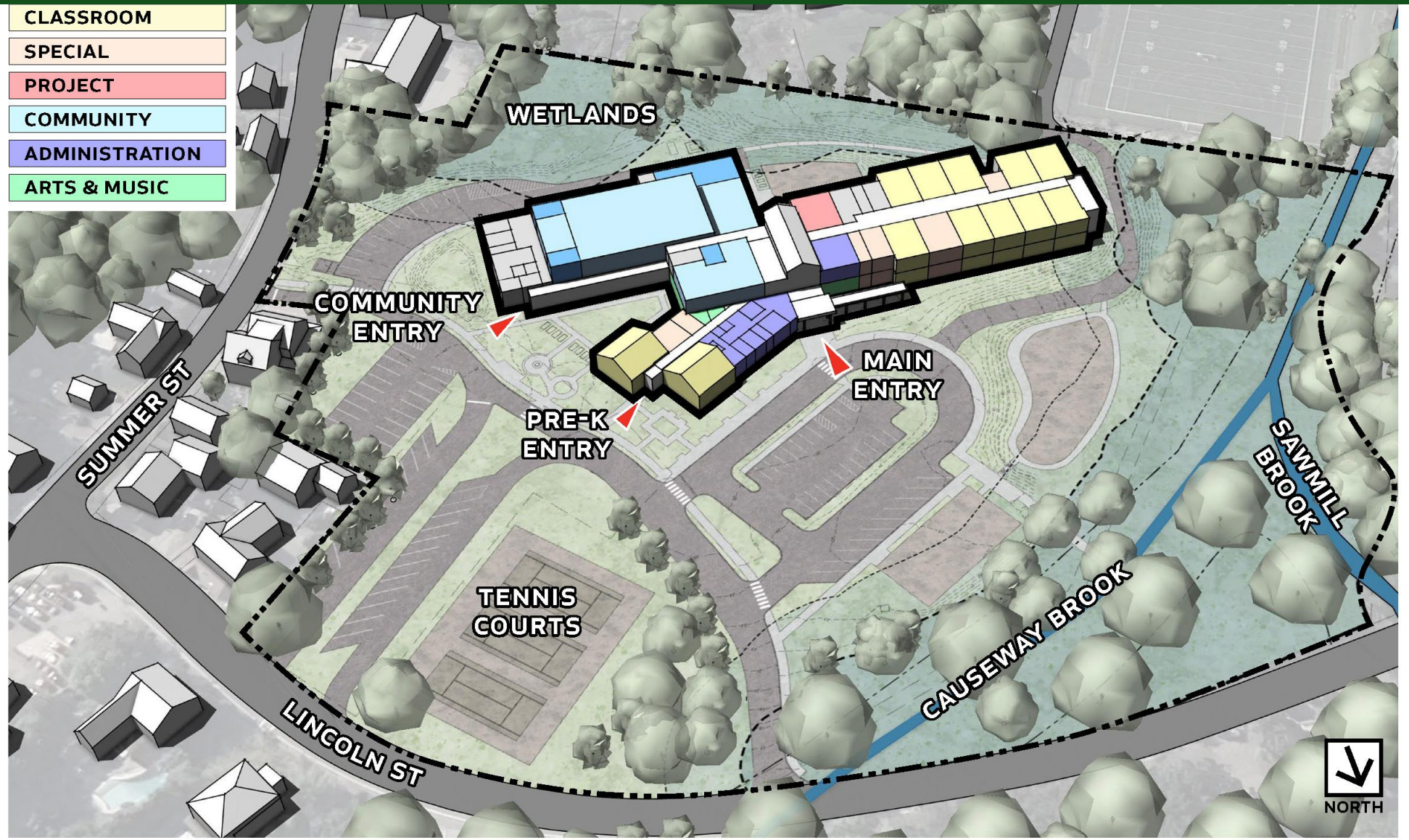
CONSIDERATIONS

- SITE LAYOUT PROVIDES FULL PERIMETER ACCESS AND IMPROVED SIGHT LINES
- DESIRED ROOM SIZES AND ADJACENCIES CAN BE PROVIDED
- ACCESS TO COMMUNITY SPACES EASILY CONTROLLED
- LEARNING NEIGHBORHOOD INTEGRATE SPECIAL EDUCATION AND INTERVENTIONISTS

Design Alternatives

EXISTING MMES
335 STUDENTS
K-5

77,102 GFA EXISTING



Design Alternatives

OPTION B1.1

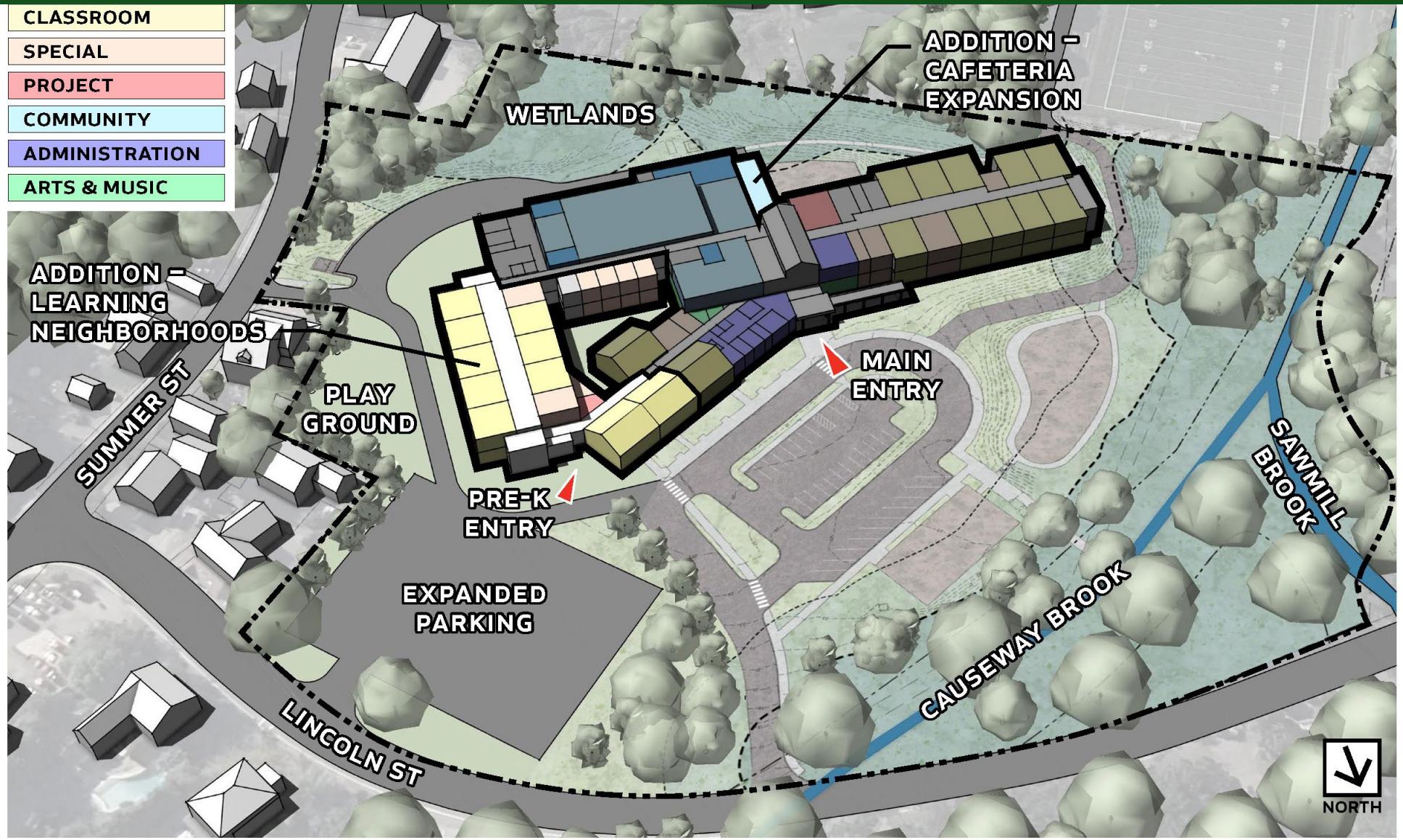
515 STUDENTS
K-5
ADDITION/RENOVATION

77,102 GFA EXISTING/RENO
41,899 GFA NEW

TOTAL: 119,001 GFA

CONSIDERATIONS

- SITE AMENITIES WILL BE LIMITED SUCH AS PLAY SPACE AND PARKING CAPACITY
- REMOVAL OF TENNIS COURTS LIKELY
- NO FUTURE EXPANSION POTENTIAL
- BUILDING CODE AREA LIMITATIONS REQUIRES FIRE WALLS SEPARATING ADDITIONS
- COMMUNITY ENTRY AND NEAR-BY PARKING COMPROMISED BY ADDITION LOCATION
- NUMEROUS ISSUES ASSOCIATED WITH ELIMINATING A SCHOOL IN ESSEX (TRAVEL, BUSING, AFTERSCHOOL PROGRAMS, REGIONAL AGREEMENT, ETC.)



Design Alternatives

Legend	
0	Highly Undesirable
1	Undesirable
2	Neutral
3	Desirable
4	Highly Desirable



ESSEX ELEMENTARY SCHOOL PROJECT EVALUATION OF DESIGN ALTERNATIVES		SITE A CURRENT ESSEX ES						SITE B CURRENT MMES
		A0.1	A0.2	A1.1	A1.2	A2.1	A2.2	B1.1
		Code Upgrade/ Base Repair	Code Upgrade/ Base Repair	Addition/ Renovation	Addition/ Renovation	New Construction	New Construction	Addition/ Renovation
General	Enrollment	165	250	165	250	165	250	515
	Grade Configuration	K-3	K-5	K-3	K-5	K-3	K-5	K-5
	Renovated Area	53,036 GFA	53,036 GFA	53,036 GFA	53,036 GFA	0	0	77,102 GFA
	New Area	0	0	7,741 GFA	20,637 GFA	60,777 GFA	73,673 GFA	41,899 GFA
	Total Area	53,036 GFA	53,036 GFA	60,777 GFA	73,673 GFA	60,777 GFA	73,673 GFA	119,001 GFA
	Construction Phases	TBD	TBD	TBD	TBD	2	2	TBD
Education	Meets Needs of Educational Program							
	Equity across the District							
	Future Growth and Expansion							
	Flexible and Adaptable Spaces							
	Construction Impact on Existing School Activities							
Community	Compatible with Regional Agreement							
	Heart of Essex Community / Sense of Place							
	Community Use Opportunities							
Site	Regulatory - Wetlands, Rivers & Streams, Flood Zones							
	Neighborhood Traffic Impact							
	Bus and Parent Drops - Safety & Efficiency							
	Parking Capacity							
	Play and Athletics Fields							
Building	Existing Facility Deficiencies Addressed							
	Entries Visible / Unobstructed Sight Lines							
Cost & Schedule	Cost Effective							
	Maximize MSBA Grant Reimbursement							
	Phasing Minimizes Construction Duration							
	Swing Space not Required							
	Construction Access and Staging							
	Reduce Operational Costs over Lifespan of Building							

DRAFT

SBC Meeting Agenda – November 6, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 8 20251028
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 6 | $46,485.50
   - JCJ Invoice No. 2 | $29,846.21
4. Space Summary & Education Program Acceptance (Vote Expected)
5. Preliminary Evaluation of Alternatives Review
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

Schedule Update/PDP

10/30/25-Draft Ed Program and Space Summaries to SBC

11/6/25 SBC Meeting- Accept Ed Program and Space Summary, Preliminary Evaluation of Alternatives

11/20/25 Comm Meeting #2-Site and Alternatives Review

11/25/25 SBC Meeting-Review Community Meeting #2 Feedback, Further Evaluation of Alternatives

12/9/25 Comm Meeting #3-Memorial ES with a tour and rerun of meetings #1 and #2

12/15/25 SBC Meeting-Final Evaluation of Alternatives with Preliminary Costs

12/19-12/30 Draft PDP to SBC

1/6/26 SBC Meeting-PDP Approval to MSBA, Initial Grade Configuration Discussion

Schedule Update/PSR

1/22/26 SBC Meeting-Alternatives with Grade Configuration Discussion

1/28/26 Comm Meeting #4-Share PDP results and Evaluation of Alternatives with Grade Configuration

2/9/26 SBC Meeting-Review Comm Meeting Feedback, Review Alternatives and Grade Configuration

2/24/26 SBC Meeting-Confirm Preferred Alternatives for Pricing

3/10/26 SBC Meeting-Preferred Alternates if Necessary

3/24/26 SBC Meeting-Final Review of Alternatives and Grade Configuration

3/30/26 Comm Meeting #5-Review Preferred Options

4/14/26 SBC Meeting-Review Comm Meeting #4 Feedback and Approval of Preferred Solution

4/28/26 SBC Meeting-Approved PSR Submission to MSBA

SBC Meeting Agenda – November 6, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 8 20251028
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 6 | $46,485.50
   - JCJ Invoice No. 2 | $29,846.21
4. Space Summary & Education Program Acceptance (Vote Expected)
5. Preliminary Evaluation of Alternatives Review
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – November 6, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 8 20251028
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 6 | $46,485.50
   - JCJ Invoice No. 2 | $29,846.21
4. Space Summary & Education Program Acceptance (Vote Expected)
5. Preliminary Evaluation of Alternatives Review
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – November 6, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 8 20251028
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 6 | $46,485.50
   - JCJ Invoice No. 2 | $29,846.21
4. Space Summary & Education Program Acceptance (Vote Expected)
5. Preliminary Evaluation of Alternatives Review
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – November 6, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 8 20251028
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - DWMP Invoice No. 6 | $46,485.50
   - JCJ Invoice No. 2 | $29,846.21
4. Space Summary & Education Program Acceptance (Vote Expected)
5. Preliminary Evaluation of Alternatives Review
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

MEETING AGENDA

Meeting Date:	November 25, 2025
Meeting Time:	6:00PM – 8:00PM
Project Name:	Essex Elementary School
Project Number:	202306980020
Meeting Purpose:	School Building Committee Meeting
Location:	This meeting will be a hybrid meeting (both in-person and remote) at Essex Elementary School Cafeteria

Meeting Link: https://us06web.zoom.us/j/85349809336

---

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
    - SBC Meeting No. 8 20251028
    - SBC Meeting No. 9 20251106
3. Invoices & Commitments for Review and Approval (Vote Expected)
    - Minuteman Press Invoice | $3,127.81
4. Community Meeting #2 Feedback
5. Sustainability Working Group Update
6. Work Plan Review (Vote Expected)
7. Further Evaluate Alternatives
8. Schedule Update
9. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
10. Public Comment
11. Reflections & Actions Items
12. Adjourn

DORE + WHITTIER

Project:	Essex Elementary School	Project No:	
Subject:	School Building Committee Meeting	Meeting Date:	11/25/2025
Location:	Hybrid (Essex Elementary School Cafeteria & Zoom)	Time:	6:00 PM
Distribution:	Attendees, Project File	Prepared By:	

Present	Name (* Voting Member)	Affiliation
√	Michelle Cresta*	Director of Finance & Operations
√	Pam Beaudoin*	Superintendent
√	Kim Provost*	Principal
	Theresa Whitman*	SBC Co-Chair
	John Binieris*	SBC Co-Chair
√	Andy Oldeman*	Manchester Finance Committee / Mechanical Engineer
	Charlie Hay*	Architect School Building Experience
√	Gordon Brewster*	Engineer, Sr. Proj. Manager, Owner's PM, former Member of MERMHS & Memorial building
√	Tyler Virden*	Project Executive -Wise Construction / Paren
√	Annie Cameron*	Former SC Member and Memorial SBC Member
√	Ariel Fernando Brian*	Architect - CBT
	Jen Hocherman*	Architect - Partner SV Design
	Michael Gerhardt*	Civil Engineer / Parent
√	Timonthy McDonald*	Architect - Onion Flats
√	Henry Ottenginer*	Manchester Conservation Committee / Education Background
	David Pereen	Resident / Plumbing & Fire
√	Lisa O'Donnell	Design & Construction / Essex Planning Board
	Steve Hunt*	Facilities Manager
√	Emily Dwyer*	EES Teacher
√	Kim Field	EES Teacher
√	Rachelle Rousseau	EES Teacher
	Mike Burton	Project Director / Partner - DWMP
√	Christina Dell Angelo	Project Executive - DWMP
√	John Albright	Project Manager - DWMP
√	Rachel Rincon	Assistant Project Manager - DWMP
√	Jacob Greco	Assistant Project Manager - DWMP
√	James LaPosta	Principal - JCJ Architecture
√	Fawn Pellegrini	Senior Project Manager - JCJ Architecture
√	Jeff Elliott	Project Architect - JCJ Architecture
	Emily Czarnecki	Principal (Interiors) – JCJ Architecture

	Mike Pirollo	Principal – MLP Integrated Design
√	Eric Haggstrom	Sustainability Director – JCJ Architecture
	Kelley Tapia	Soden Sustainability

Item No.	Action Item	Ball in Court
10.7	Project team to send out filled in Criteria Matrix	DWMP/JCJ

- **Please click here for the presentation**
  - **This will be referenced in the meeting minutes with slide numbers called out to refer to.**
- **Below is a summation of key points, please view the recording here for full transcript and chapter summaries.**

Item No.		Description
10.1	**Call to Order & Intro:** Called to order by P. Beaudoin at 6:03pm, please refer to the attendee list.	Record
10.2	**Approval of October 28, 2025 & November 6, 2025, Meeting Minutes (Vote Expected):** ~~**Roll Call Vote:**~~ A motion to approve the October 28, 2025 & November 6 - 2025, Meeting Minutes was made by E. Dwyer and seconded by H. Oettinger. Discussion: None.	Record

DORE + WHITTIER

<table>
<tr>
<td></td>
<td>Roll Call Vote:
<table>
<tr><td>Name</td><td>Yes/No/Abstain & Absent</td></tr>
<tr><td>Michelle Cresta</td><td>Yes</td></tr>
<tr><td>Pam Beaudoin</td><td>Yes</td></tr>
<tr><td>Kim Provost</td><td>Yes</td></tr>
<tr><td>John Binieris</td><td>Absent</td></tr>
<tr><td>Theresa Whitman</td><td>Absent</td></tr>
<tr><td>Andy Oldeman</td><td>Yes</td></tr>
<tr><td>Charlie Hay</td><td>Absent</td></tr>
<tr><td>Gordon Brewster</td><td>Yes</td></tr>
<tr><td>Tyler Virden</td><td>Yes</td></tr>
<tr><td>Annie Cameron</td><td>Yes</td></tr>
<tr><td>Ariel Fernando Brian</td><td>Yes</td></tr>
<tr><td>Jen Hocherman</td><td>Absent</td></tr>
<tr><td>Michael Gerhardt</td><td>Absent</td></tr>
<tr><td>Timonthy McDonald</td><td>Yes</td></tr>
<tr><td>Henry Oettinger</td><td>Yes</td></tr>
<tr><td>Emily Dwyer</td><td>Yes</td></tr>
<tr><td>Steve Hunt</td><td>Advisor – No Vote</td></tr>
<tr><td>Kim Field</td><td>Advisor – No Vote</td></tr>
<tr><td>Rachelle Rousseau</td><td>Advisor – No Vote</td></tr>
<tr><td>David Pereen</td><td>Advisor – No Vote</td></tr>
<tr><td>Lisa O'Donnell</td><td>Advisor – No Vote</td></tr>
</table>
Yes: 11 | No: 0 | Absent/Abstain: 5
</td>
<td></td>
</tr>
<tr>
<td>10.3</td>
<td>Invoices & Commitments for Review and Approval (Vote Expected):

<s>Roll Call Vote:</s> A motion to approve the following invoices was made by G. Brewster and seconded by H. Oettinger
Minuteman Press Invoice | $3,127.81

Discussion: None.

Roll Call Vote:
<table>
<tr><td>Name</td><td>Yes/No/Abstain & Absent</td></tr>
</table>
</td>
<td>Record</td>
</tr>
</table>

	<table><tr><td>Michelle Cresta</td><td>Yes</td></tr><tr><td>Pam Beaudoin</td><td>Yes</td></tr><tr><td>Kim Provost</td><td>Yes</td></tr><tr><td>John Binieris</td><td>Absent</td></tr><tr><td>Theresa Whitman</td><td>Absent</td></tr><tr><td>Andy Oldeman</td><td>Yes</td></tr><tr><td>Charlie Hay</td><td>Absent</td></tr><tr><td>Gordon Brewster</td><td>Yes</td></tr><tr><td>Tyler Virden</td><td>Yes</td></tr><tr><td>Annie Cameron</td><td>Yes</td></tr><tr><td>Ariel Fernando Brian</td><td>Yes</td></tr><tr><td>Jen Hocherman</td><td>Absent</td></tr><tr><td>Michael Gerhardt</td><td>Absent</td></tr><tr><td>Timonthy McDonald</td><td>Yes</td></tr><tr><td>Henry Oettinger</td><td>Yes</td></tr><tr><td>Emily Dwyer</td><td>Yes</td></tr><tr><td>Steve Hunt</td><td>Advisor – No Vote</td></tr><tr><td>Kim Field</td><td>Advisor – No Vote</td></tr><tr><td>Rachelle Rousseau</td><td>Advisor – No Vote</td></tr><tr><td>David Pereen</td><td>Advisor – No Vote</td></tr><tr><td>Lisa O'Donnell</td><td>Advisor – No Vote</td></tr></table> • **Yes: 11 | No: 0 | Absent/Abstain: 5**	
10.4	**Community Meeting No. 2 Feedback** • C. Dell Angelo noted that ~~the~~ community meeting No. 2 was conducted last week. The attendance was lower than the ~~first~~first, most likely due to the fact that the Apple Street site location was removed from the options. Community Meeting No. 3 will be held at Manchester Memorial Elementary School on December 9th with school tours before it. • G. Brewster noted that it was a good meeting although lightly attended	Record
10.5	**Sustainability Working Group Update**	Record

- E. Haggstrom ~~reviewed~~ shared an update from the sustainability working group including recommended incentives targets, an overview of LEED, and other general topics (Slides 7 - 26).
    - T. McDonald commented that aside from the operational energy ~~savings~~savings, the optimized stretch code is important when connected to the climate targets that the state is trying to reach by changing the code. It is a different perspective now than when the Manchester Memorial project was underway.
        - E. Haggstrom noted that the code has been developed more in MA to be more stringent since the Manchester Memorial Elementary School (MMES) Project as it is built around the state's goal of reaching decarbonization by 2050. The stretch code in MA really sets the baseline for what the building will have, whereas the Opt-In Stretch Code will add another layer that will help the building be all electric and get the needed incentives.
    - A.Cameron noted that Essex is no longer doing the stretch code and asked if this is something the town should change in the coming years.
        - E. Haggstrom noted the town does not have to change anything at a municipal level, but the MSBA does require th~~e~~at the stretch code t~~o get~~be met.
    - A. Brain asked if a mixed fuel pathway is taken, will they still get the incentive points?~~.~~
        - E. Haggstrom noted yes, but all utility incentives would be gone, and it has been found that all electric is the most cost-effective option.
    - G. Brewster asked why the Essex project would be buying the charging stations when Manchester purchased them separately after the project was completed.
        - E. Haggstrom noted that they want to include it in the design to see what the most cost-effective option will be, either including it in the project or purchasing them separately after the project as Manchester did.
    - G. Brewster noted on the current Essex site there are multiple ~~different types of~~ construction options being proposed and asked how this affects the LEED evaluation.
        - E. Haggstrom noted that it depends on how much addition is included in the addition/renovation options as they will have to bring any renovated building up to the stretch code, but the LEED approach will be very similar.

- T. McDonald asked what the EUI target ~~was~~ for the Manchester Memorial Project was and noted that the Essex building may be 20% to 30% more efficient with today's technology.
    - E. Haggstrom noted he does not know what the EUI was for the MMES but does not think the Essex project will be significantly higher than Manchester Memorial as it is a very efficient building. The Essex project will be targeting an EUI of 25.
- T. Virden asked if there are any towns or cities where the grid may not be able to meet the requirements of these new projects.
    - E. Haggstrom noted he has ~~s~~ not run into any grid issues or them not being able to support the needs
    - A. Oldeman added that sometimes the services do have to be upgraded to support a new building and that may be an easy lift or more complicated and expensive as it differs on every project.
- A. Oldeman noted that although air source heat pumps have been making advancements, they are still not guaranteed to be as reliable as some older options are like a gas fired water heater.
- A. Brain noted that LEED version 5 has new points for climate resiliency and thinks those may be easy points to obtain if the project updates to that version. A. Brain also noted that it would be good for the project to target a LEED Gold and if it ended up being LEED Silver that would still be okay and asked if there was any incentive from the state to get LEED Gold.
    - E. Haggstrom noted ~~no~~ there is no incentive from the state for LEED Gold and the process decided on by the working group was to target LEED Silver as they did in Manchester with a possibility for LEED Gold if certain pieces fall correctly.
- A. Cameron noted that all this discussion about the LEED scorecard is for 12 Story Street and asked if this should be a consideration on the criteria matrix as it would be harder to achieve the same points at the MMES site.
    - J. Elliott noted they did add a line to the matrix criteria under site for~~:~~ "meets sustainability goals". In Manchester there is a footprint issue which could complicate the process but for the majority of the other criteria they do not see a differentiator.

DORE + WHITTIER

10.6	**Work Plan Review (Vote Expected)** • C. Dell Angelo noted this agenda item is part of the checklist process needed to submit the Preliminary Design Program and is an approval of the Microsoft Project Schedule for the project. A motion to approve the work plan for the Preliminary Design Program was made by E. Dwyer and seconded by G. Brewster Discussion: None Roll Call Vote:	Record

Name	Yes/No/Abstain & Absent
Michelle Cresta	Yes
Pam Beaudoin	Yes
Kim Provost	Yes
John Binieris	
Theresa Whitman	
Andy Oldeman	Yes
Charlie Hay	
Gordon Brewster	Yes
Tyler Virden	Yes
Annie Cameron	Yes
Ariel Fernando Brian	Yes
Jen Hocherman	
Michael Gerhardt	
Timonthy McDonald	Yes
Henry Oettinger	Yes
Emily Dwyer	Yes
Steve Hunt	Advisor – No Vote
Kim Field	Advisor – No Vote
Rachelle Rousseau	Advisor – No Vote
David Pereen	Advisor – No Vote
Lisa O'Donnell	Advisor – No Vote

- **Yes: 11 | No: 0 | Absent/Abstain: 5**

10.7	**Further Evaluation of Alternatives**
	
	• J. Elliot reviewed the current Preliminary Design Alternatives and updates that have been made since the last meeting where they were shown (Slides 29 - 39).
	  ○ K .Field asked why the bus looks like it is pulling in the same direction as the cars are pulling out on option A0.1.
	  • J. Elliott noted it is two-way traffic, but it will have to be reviewed further for sight lines and turn radius.
	  ○ C. Dell Angelo noted that the project team can make an attempt to fill out the criteria matrix and can share it with the committee to be reviewed at the next meeting.
	  ○ P. Beaudoin ~~noted~~ shared that if the project moves forward at the MMES site, the students from Essex would need five (5) buses due to the elimination of all the current walking students.
	  ○ H. Oettinger asked if any of the Essex site options have routes where the buses and parent pick-up/drop-off do not intersect.
	  • J. Elliott noted that the existing access points could remain which would keep them separate.
	  • J. LaPosta noted that these are just diagrams on how they would be. T~~t~~he intersections would have to be designed further.
	  ○ E. Dwyer commented that some of these traffic arrows are going in the wrong direction and most of the plans should have the bus arrows reversed.
		Record

10.8	**Schedule Update** • C.Dell Angelo reviewed the upcoming meetings and schedule (Slides 41-42)	Record
10.9	**Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting** There was no other topics	Record

<table>
<tr><td></td><td></td><td></td></tr>
<tr><td>10.10</td><td>Public Comment:

There was no public comment</td><td>Record</td></tr>
<tr><td>10.11</td><td>Reflections & Action Items

• C.Dell Angelo noted the current action item is for the project team to send out a filled-out criteria matrix to the SBC prior to the next SBC Meeting.</td><td>Record</td></tr>
<tr><td>10.12</td><td>Adjourn:

~~Roll Call Vote:~~ A motion to adjourn the meeting was made at 7:13 pm by A. Cameron and seconded by H. Oettinger.

Roll Call Vote:~~–~~

<table>
<tr><td>Name</td><td>Yes/No/Abstain & Absent</td></tr>
<tr><td>Michelle Cresta</td><td>Yes</td></tr>
<tr><td>Pam Beaudoin</td><td>Yes</td></tr>
<tr><td>Kim Provost</td><td>Yes</td></tr>
<tr><td>John Binieris</td><td>Absent</td></tr>
<tr><td>Theresa Whitman</td><td>Absent</td></tr>
<tr><td>Andy Oldeman</td><td>Yes</td></tr>
<tr><td>Charlie Hay</td><td>Absent</td></tr>
<tr><td>Gordon Brewster</td><td>Yes</td></tr>
<tr><td>Tyler Virden</td><td>Yes</td></tr>
<tr><td>Annie Cameron</td><td>Yes</td></tr>
<tr><td>Ariel Fernando Brian</td><td>Yes</td></tr>
<tr><td>Jen Hocherman</td><td>Absent</td></tr>
<tr><td>Michael Gerhardt</td><td>Absent</td></tr>
<tr><td>Timonthy McDonald</td><td>Yes</td></tr>
<tr><td>Henry Oettinger</td><td>Yes</td></tr>
</table>
</td><td>Record</td></tr>
</table>

	Emily Dwyer	Yes
	Steve Hunt	Advisor – No Vote
	Kim Field	Advisor – No Vote
	Rachelle Rousseau	Advisor – No Vote
	David Pereen	Advisor – No Vote
	Lisa O'Donnell	Advisor – No Vote

- **Yes: 11 | No: 0 | Absent/Abstain: 5**

Sincerely,
DORE + WHITTIER
Jacob Greco
Assistant Project Manager

Jacob Greco

Cc: Attendees, File
The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes.



Essex Elementary School Project

SBC Meeting No. 10

November 25, 2025 @ 6:00 PM

Manchester Essex Regional School District

DORE + WHITTIER

JCJARCHITECTURE

SBC Meeting Agenda – November 25, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 8 20251028
   - ➢ SBC Meeting No. 9 20251106
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Minuteman Press Invoice | $3,127.81
4. Community Meeting #2 Feedback
5. Sustainability Working Group Update
6. Work Plan Review
7. Further Evaluate Alternatives
8. Schedule Update
9. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
10. Public Comment
11. Reflections & Actions Items
12. Adjourn

SBC Meeting Agenda – November 25, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 8 20251028
   - ➢ SBC Meeting No. 9 20251106
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Minuteman Press Invoice | $3,127.81
4. Community Meeting #2 Feedback
5. Sustainability Working Group Update
6. Work Plan Review
7. Further Evaluate Alternatives
8. Schedule Update
9. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
10. Public Comment
11. Reflections & Actions Items
12. Adjourn

SBC Meeting Agenda – November 25, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 8 20251028
   - ➢ SBC Meeting No. 9 20251106
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Minuteman Press Invoice | $3,127.81
4. Community Meeting #2 Feedback
5. Sustainability Working Group Update
6. Work Plan Review
7. Further Evaluate Alternatives
8. Schedule Update
9. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
10. Public Comment
11. Reflections & Actions Items
12. Adjourn

SBC Meeting Agenda – November 25, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 8 20251028
   - ➢ SBC Meeting No. 9 20251106
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Minuteman Press Invoice | $3,127.81
4. Community Meeting #2 Feedback
5. Sustainability Working Group Update
6. Work Plan Review
7. Further Evaluate Alternatives
8. Schedule Update
9. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
10. Public Comment
11. Reflections & Actions Items
12. Adjourn

SBC Meeting Agenda – November 25, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 8 20251028
   - ➢ SBC Meeting No. 9 20251106
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Minuteman Press Invoice | $3,127.81
4. Community Meeting #2 Feedback
5. Sustainability Working Group Update
6. Work Plan Review
7. Further Evaluate Alternatives
8. Schedule Update
9. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
10. Public Comment
11. Reflections & Actions Items
12. Adjourn

- **Essex Elementary School**
- Manchester Essex Regional School District

- Sustainability Working Group Report Out

- November 25, 2025



Overview

1. Goals of the Sustainability Working Group
2. Recommended Incentives Target
3. Introduction to LEED
4. Preliminary Draft LEED Scorecard
   Story Street Site
5. Review of Point Targets by Category
6. MMES Site Challenges
7. Open Discussion
8. Next Steps

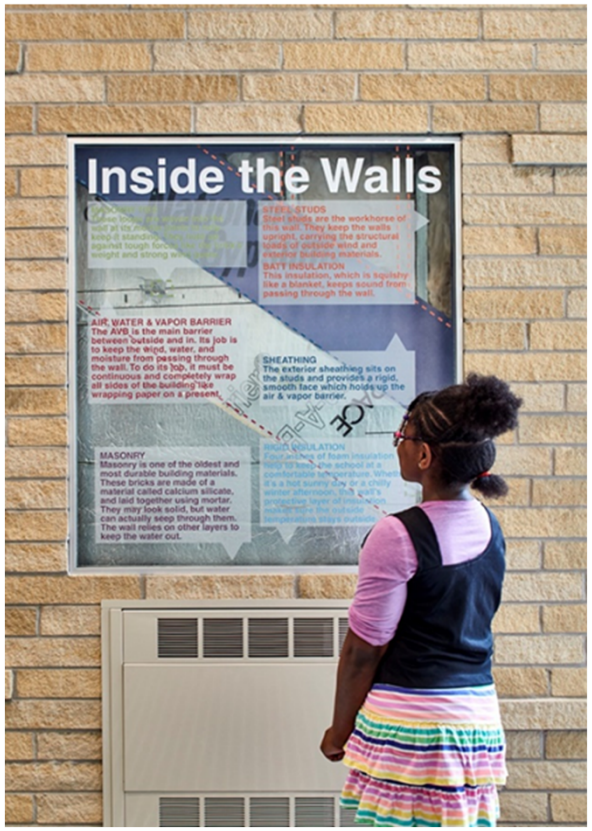


Goals of the Sustainability Working Group

- **Prioritize Learning**
  - Create spaces that **improve learning outcomes**
  - Provide **healthy indoor environments**
  - Offer **training** opportunities for students, staff, and teachers

- **Maximize Value to the District**
  - Minimize first-cost, operational, and maintenance costs
  - Maximize available incentives

- **Align with Manchester Memorial**

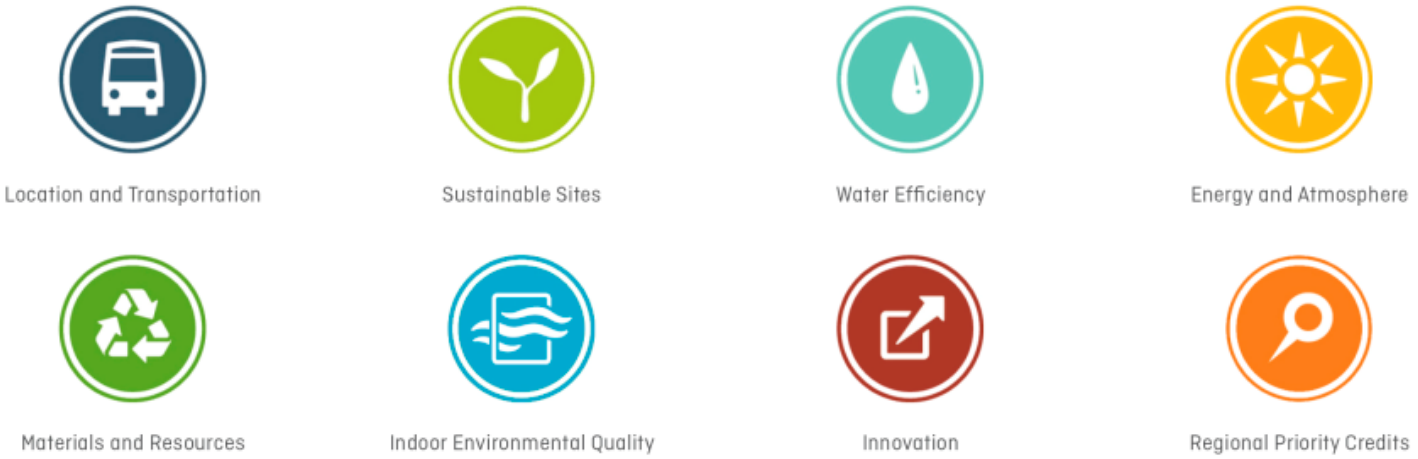


Recommended Incentive Targets

- **Required:**
  - Achieve **Silver** using LEED-Schools v4.0 / v4.1
  - Achieve a minimum of 3 (out of 7) points in the following:
    - MR – Building Product Disclosure and Optimization, v4.1 – Material Ingredients (1 point)
    - EQ – Low Emitting Materials, v4.1 (1 point)
    - EQ – Indoor Air Quality Assessment, v4.0 (1 point)
  - Meet the MA DOER "Stretch Code Green Community" standards
  - Be "solar ready"

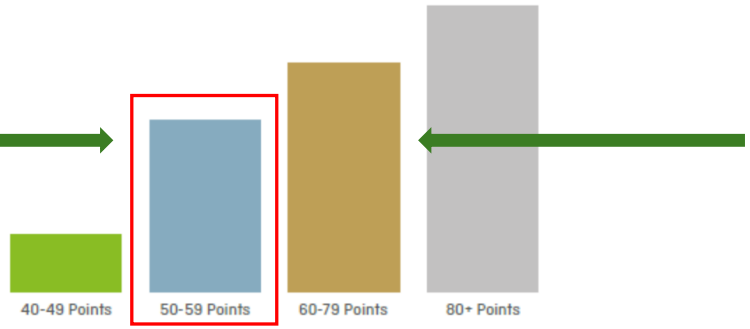
- **Recommendation**
  - Meet the MA DOER "Opt-In Specialized Stretch Energy Code" (All-electric pathway) - **3% Additional Reimbursement**
  - Earn 5 (out of 7) of the points listed above (MR/EQ) – **1% Additional Reimbursement**
  - Target Mass Saves Path 1 Incentives Program (preliminary EUI target of 25 and Full Electrification)

Introduction to LEED



The number of points that a project earns determines its level of LEED® certification.

Essex MSBA Minimum Target + Manchester Memorial (MMES) Target



Manchester Memorial (MMES) Achieved Gold!

Preliminary Draft Scorecard

LEED v4 for BD+C: Schools
Project Checklist

Project Name: New Construction - Essex Site
Project Address: 12 Story Street, Essex, MA 01929
Date: November 2025

Y	?	N			
		1	Credit	Integrative Process	1

Y	?	N		Location and Transportation	15
0	0	0	Credit	LEED for Neighborhood Development Location	15
1			Credit	Sensitive Land Protection	1
		2	Credit	High Priority Site	2
2		3	Credit	Surrounding Density and Diverse Uses	5
		4	Credit	Access to Quality Transit	4
		1	Credit	Bicycle Facilities	1
	1		Credit	Reduced Parking Footprint	1
1			Credit	Green Vehicles	1

Y	?	N		Sustainable Sites	12
Y			Prereq	Construction Activity Pollution Prevention	Required
Y			Prereq	Environmental Site Assessment	Required
1			Credit	Site Assessment	1
1		1	Credit	Site Development - Protect or Restore Habitat	2
1			Credit	Open Space	1
3			Credit	Rainwater Management	3
2			Credit	Heat Island Reduction	2
1			Credit	Light Pollution Reduction	1
	1		Credit	Site Master Plan	1
1			Credit	Joint Use of Facilities	1

Y	?	N		Water Efficiency	12
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
2			Credit	Outdoor Water Use Reduction	2
2	1	4	Credit	Indoor Water Use Reduction	7
		2	Credit	Cooling Tower Water Use	2
1			Credit	Water Metering	1

Y	?	N		Energy and Atmosphere	31
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
5	1		Credit	Enhanced Commissioning - MSBA	6
8	2	6	Credit	Optimize Energy Performance	16
1			Credit	Advanced Energy Metering - Code	1
		2	Credit	Demand Response	2
		5	Credit	Renewable Energy Production	3
		1	Credit	Enhanced Refrigerant Management	1
			Credit	~~Green Power and Carbon Offsets~~	2

Y	?	N		Materials and Resources	13
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
1	1	3	Credit	Building Life-Cycle Impact Reduction	5
1	1		Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
		2	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
1	1		Credit	Building Product Disclosure and Optimization - Material Ingredients	2
2			Credit	Construction and Demolition Waste Management	2

Y	?	N		Indoor Environmental Quality	16
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
Y			Prereq	Minimum Acoustic Performance	Required
2			Credit	Enhanced Indoor Air Quality Strategies	2
3			Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
1		1	Credit	Indoor Air Quality Assessment	2
		1	Credit	Thermal Comfort	1
1		1	Credit	Interior Lighting	2
		3	Credit	Daylight	3
		1	Credit	Quality Views	1
		1	Credit	Acoustic Performance	1

Y	?	N		Innovation	6
1			Credit	Innovation credit one: Sustainable Purchasing Lamps	1
1			Credit	Innovation credit two: LEED O+M Starter Kit	1
1			Credit	EP: BPDO - Material Ing (40 products from 10 manuf)	1
1			Credit	EP: Low Emitting	1
1			Credit	EP: BPDO - EPD	1
1			Credit	LEED Accredited Professional	1

Y	?	N		Regional Priority	4
1			Credit	Regional Priority: Open Space (1pt)	1
1			Credit	Regional Priority: Optimize Energy (8pts)	1
	1		Credit	Regional Priority: WBLCA (2pts)	1
		1	Credit	Regional Priority: Indoor Water (4pts)	1
				Alt: REC (2pts), High Priority Site (2pts)	

Y	?	N			
54	10	46	TOTALS	Possible Points:	110

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110

LEED Silver required per MSBA #61

- **Preliminary Draft Score Card**
- 12 Story Street Site

- **Initial Results:**
- Location and Transportation **4**
- Sustainable Sites **10**
- Water Efficiency **5**
- Energy and Atmosphere **14**
- Materials and Resources **5**
- Indoor Environmental Quality **8**
- Innovation **6**
- Regional Priority **2**

- **Proposed Target: 54 points** (Silver 50 - 59)

Scorecards are preliminary drafts for discussion purposes only. Design team will continue to evaluate and revise these scorecards as the design develops

Location & Transportation [4]

MMES ✅
- Sensitive Land Protection (1)

MMES ✅
- Surrounding Density & Diversity of Uses (2)

- Bicycle Facilities (Maybe 1)

MMES ✅
- Provide bike parking and bike lanes on site consistent with MMES

MMES ✅
- Provide shower and changing facilities consistent with MMES
- Team to continue to evaluate options for covered bike parking



MMES ✅
- Green Vehicles (1)
  - 10% of parking spaces to be EV Ready (Required by MA DOER Stretch Energy Code – MSBA Minimum)
  - Evaluate the cost difference between District providing charging stations or purchasing PPA after construction

MMES

Sustainable Sites [10]

MMES ✅
- Site Assessment (1) – Required by MSBA

MMES ✅
- Site Development – Protect or Restore Habitat (1)
  - *This point will not be possible for Addition/Renovation Options at Story St*

MMES ✅
- Open Space (1)

MMES ✅
- Rainwater Management (3)
  - System to be designed to accommodate 90th Percentile Storm (10-year storm)
  - Team continuing to evaluate use of Rain Gardens consistent with MMES

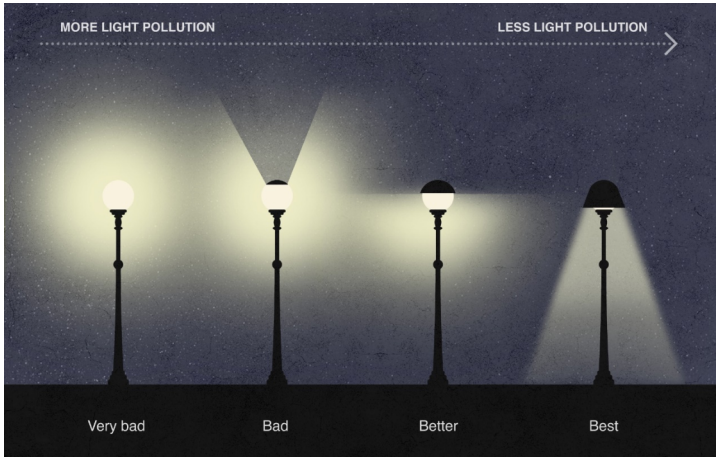


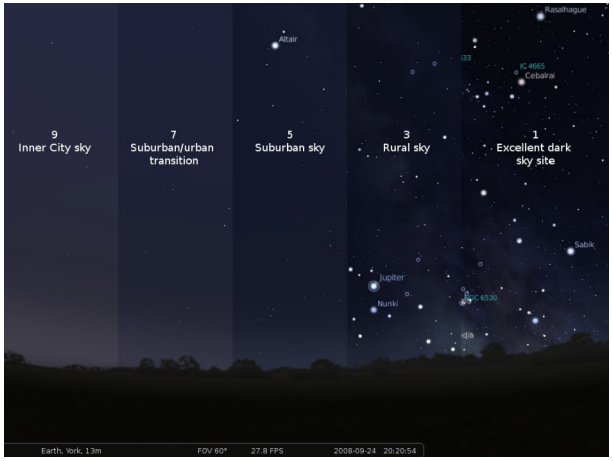
MMES

Sustainable Sites [10]

MMES ✅
- Heat Island Reduction (2)
  - Integrate roof and paving materials consistent with MMES

MMES ✅
- Light Pollution Reduction (1)





MMES ✅
- Joint Use of Facilities (1)

Water Efficiency [5]

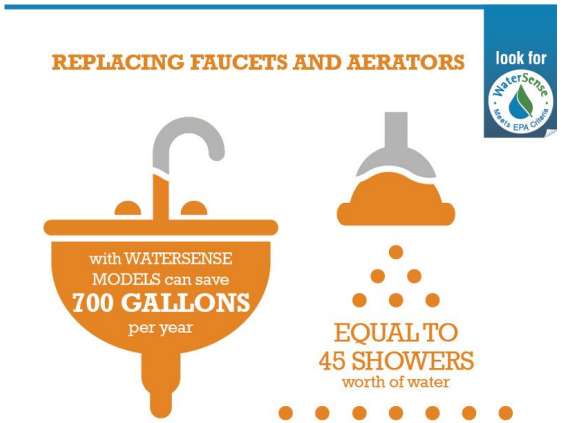
MMES ✅
- Outdoor Water Use Reduction (2)
  - No irrigation consistent with MMES

MMES ✅
- Indoor Water Use Reduction (2)
  - Utilize the same fixtures as MMES

MMES ✅
- Water Metering



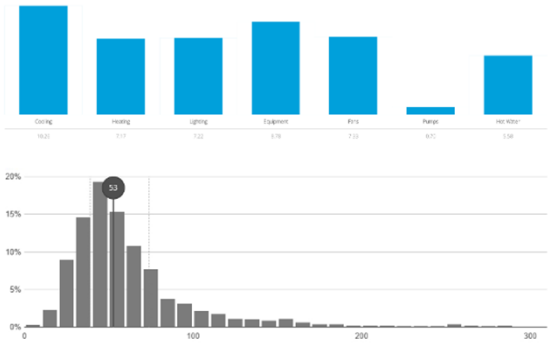


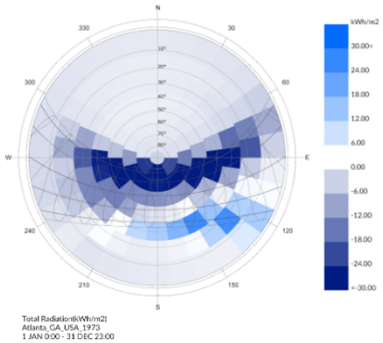


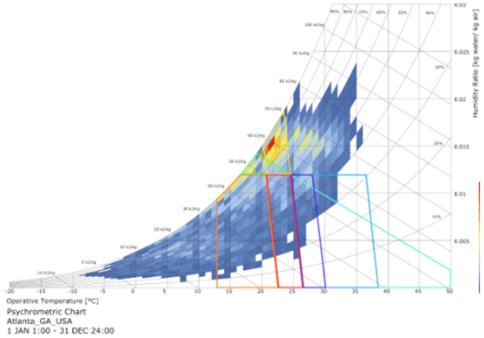
Energy and Atmosphere [14]

MMES ✅
- Enhanced Commissioning (5)
  - Required by MSBA

MMES ✅
- Optimize Energy Performance (8)
  - *LEED has raised their benchmark since completion of MMES making it harder to achieve. MMES achieved 11 points*







MMES ✅
- Advanced Energy Metering (1)

Materials and Resources [5]

- Building Life Cycle Impact Reduction (1)
  - JCJ can perform an initial Life Cycle Assessment evaluating Embodied Carbon
  - **Recommendation:** Target 5% reduction to Embodied Carbon to achieve (1) additional point and (1) bonus Rregional Priority point

- Building Product Disclosure and Optimization (BPDO) – Environmental Product Declarations (EPDs) (1)

MMES ✅

- BPDO – Material Ingredients (1)
  - Aligned with additional MSBA reimbursement incentive

MMES ✅

- Construction and Demolition Waste Management (2)

MMES ✅

Indoor Environmental Quality [8]

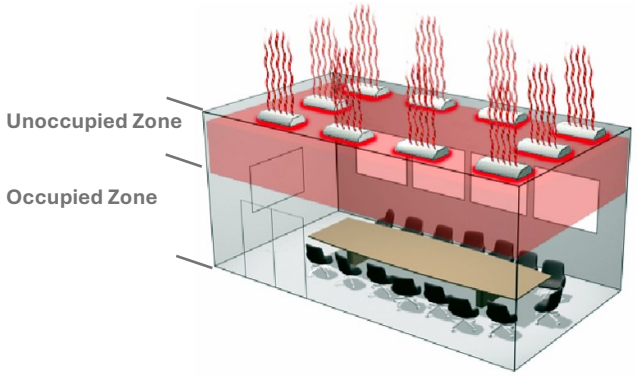
MMES ✅
- Enhanced Air Quality Strategies (2)

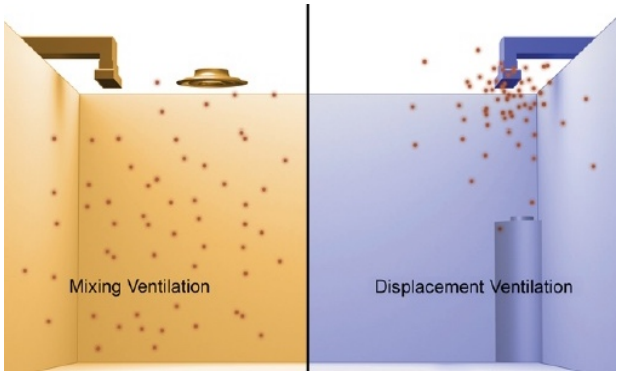
MMES ✅
- Low-Emitting Materials (3)
  - Aligned with additional MSBA reimbursement incentive

MMES ✅
- Construction Indoor Air Quality Management Plan

MMES ✅
- Indoor Air Quality Assessment (1)
  - Aligned with additional MSBA reimbursement incentive

MMES ✅
- Interior Lighting





Displacement Ventilation was implemented at MMES to provide improved energy efficiency and air quality

Innovation [6] & Regional Priority [2]

MMES ✅
- Sustainable Purchasing: Lamps (1)

MMES ✅
- LEED Operations & Maintentance (O+M) Starter Kit (1)
  - To expand on existing MMED O+M Starter Kit

MMES ✅
- Exceptional Peformance: BPDO – Material Ingredients (1)
- Exceptional Peformance: Low Emitting Materials (1)

MMES ✅
- Exceptional Performance: BPDO – EPD (1)

MMES ✅
- LEED Accredited Professional (1)



MMES ✅

MMES ✅
- Open Space (1)
- Optimize Energy Performance (8 pt minimum) (1)

Preliminary Draft Scorecard

LEED v4 for BD+C: Schools
Project Checklist

Project Name: Addition/Renovation - MMES Site
Project Address: 43 Lincoln Street, Manchester-by-the-Sea 01944
Date: November 2025

Y	?	N			
		1	Credit	Integrative Process	1

Y	?	N	Location and Transportation	15
0	0	0	Credit	LEED for Neighborhood Development Location	15
1			Credit	Sensitive Land Protection	1
		2	Credit	High Priority Site	2
2		3	Credit	Surrounding Density and Diverse Uses	5
		4	Credit	Access to Quality Transit	4
		1	Credit	Bicycle Facilities	1
	1		Credit	Reduced Parking Footprint	1
1			Credit	Green Vehicles	1

Y	?	N	Sustainable Sites	12
Y			Prereq	Construction Activity Pollution Prevention	Required
Y			Prereq	Environmental Site Assessment	Required
1			Credit	Site Assessment	1
		2	Credit	**Site Development – Protect or Restore Habit**	2
	1		Credit	**Open Space**	1
3			Credit	Rainwater Management	3
2			Credit	Heat Island Reduction	2
1			Credit	Light Pollution Reduction	1
	1		Credit	Site Master Plan	1
1			Credit	Joint Use of Facilities	1

Y	?	N	Water Efficiency	12
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
2			Credit	Outdoor Water Use Reduction	2
2	1	4	Credit	Indoor Water Use Reduction	7
		2	Credit	Cooling Tower Water Use	2
1			Credit	Water Metering	1

Y	?	N	Energy and Atmosphere	31
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
5	1		Credit	Enhanced Commissioning - MSBA	6
8	2	6	Credit	Optimize Energy Performance	18
1			Credit	Advanced Energy Metering - Code	1
		2	Credit	Demand Response	2
		5	Credit	Renewable Energy Production	3
		1	Credit	Enhanced Refrigerant Management	1
			Credit	~~Green Power and Carbon Offsets~~	2

Y	?	N	Materials and Resources	13
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
1		4	Credit	**Building Life-Cycle Impact Reduction**	5
1	1		Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
		2	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
1	1		Credit	Building Product Disclosure and Optimization - Material Ingredients	2
2			Credit	Construction and Demolition Waste Management	2

Y	?	N	Indoor Environmental Quality	16
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
Y			Prereq	Minimum Acoustic Performance	Required
2			Credit	Enhanced Indoor Air Quality Strategies	2
3			Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
1		1	Credit	Indoor Air Quality Assessment	2
		1	Credit	Thermal Comfort	1
1		1	Credit	Interior Lighting	2
		3	Credit	Daylight	3
		1	Credit	Quality Views	1
		1	Credit	Acoustic Performance	1

Y	?	N	Innovation	6
1			Credit	Innovation credit one: Sustainable Purchasing Lamps	1
1			Credit	Innovation credit two: LEED O+M Starter Kit	1
1			Credit	EP: BPDO - Material Ing (40 products from 10 manuf)	1
1			Credit	EP: Low Emitting	1
1			Credit	EP: BPDO - EPD	1
1			Credit	LEED Accredited Professional	1

Y	?	N	Regional Priority	4
	1		Credit	**Regional Priority: Open Space (1pt)**	1
1			Credit	~~Regional Priority: Optimize Energy (0pts)~~	1
		1	Credit	**Regional Priority: WBLCA (2pts)**	1
		1	Credit	Regional Priority: Indoor Water (4pts)	1
				Alt: REC (2pts), High Priority Site (2pts)	

51	10	49	TOTALS	Possible Points:	110

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110

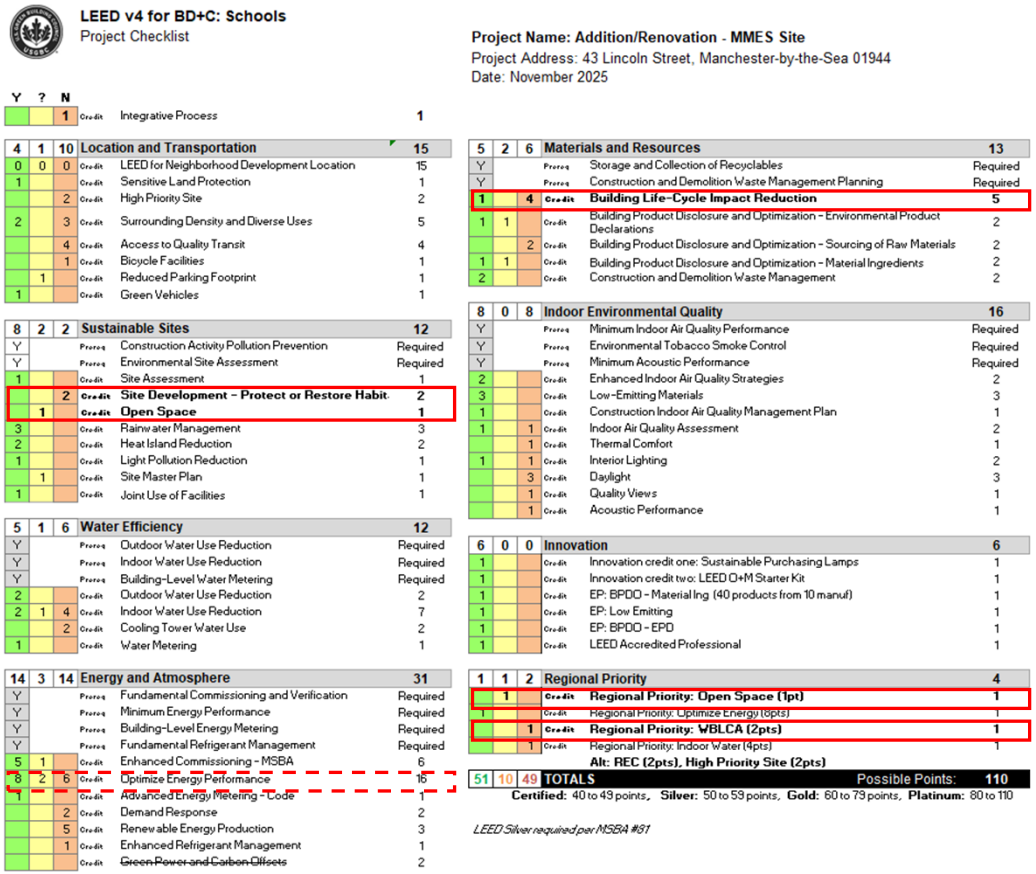
LEED Silver required per MSBA #81

- **Site Challenges:**

- Site Development – Protect or Restore Habitat
- Open Space & Regional Priority Point
- Rainwater Management
- Optimize Energy Performance & Incentive Programs
- Building Life-Cycle Impact Reduction & Regional Priority Point

Scorecards are preliminary drafts for discussion purposes only. Design team will continue to evaluate and revise these scorecards as the design develops

Preliminary Draft Scorecard



LEED v4 for BD+C: Schools
Project Checklist

Project Name: Addition/Renovation - MMES Site
Project Address: 43 Lincoln Street, Manchester-by-the-Sea 01944
Date: November 2025

Y	?	N			
		1	Credit	Integrative Process	1

4	1	10	**Location and Transportation**		15
0	0	0	Credit	LEED for Neighborhood Development Location	15
1			Credit	Sensitive Land Protection	1
		2	Credit	High Priority Site	2
2		3	Credit	Surrounding Density and Diverse Uses	5
		4	Credit	Access to Quality Transit	4
		1	Credit	Bicycle Facilities	1
	1		Credit	Reduced Parking Footprint	1
1			Credit	Green Vehicles	1

8	2	2	**Sustainable Sites**		12
Y			Prereq	Construction Activity Pollution Prevention	Required
Y			Prereq	Environmental Site Assessment	Required
1			Credit	Site Assessment	1
		2	Credit	**Site Development – Protect or Restore Habit**	2
	1		Credit	**Open Space**	1
3			Credit	Rainwater Management	3
2			Credit	Heat Island Reduction	2
1			Credit	Light Pollution Reduction	1
	1		Credit	Site Master Plan	1
1			Credit	Joint Use of Facilities	1

5	1	6	**Water Efficiency**		12
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
2			Credit	Outdoor Water Use Reduction	2
2	1	4	Credit	Indoor Water Use Reduction	7
		2	Credit	Cooling Tower Water Use	2
1			Credit	Water Metering	1

14	3	14	**Energy and Atmosphere**		31
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
5	1		Credit	Enhanced Commissioning - MSBA	6
8	2	6	Credit	Optimize Energy Performance	18
1			Credit	Advanced Energy Metering - Code	1
		2	Credit	Demand Response	2
		5	Credit	Renewable Energy Production	3
		1	Credit	Enhanced Refrigerant Management	1
			Credit	~~Green Power and Carbon Offsets~~	2

5	2	6	**Materials and Resources**		13
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
1		4	Credit	**Building Life-Cycle Impact Reduction**	5
1	1		Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
		2	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
1	1		Credit	Building Product Disclosure and Optimization - Material Ingredients	2
2			Credit	Construction and Demolition Waste Management	2

8	0	8	**Indoor Environmental Quality**		16
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
Y			Prereq	Minimum Acoustic Performance	Required
2			Credit	Enhanced Indoor Air Quality Strategies	2
3			Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
1		1	Credit	Indoor Air Quality Assessment	2
		1	Credit	Thermal Comfort	1
1		1	Credit	Interior Lighting	2
		3	Credit	Daylight	3
		1	Credit	Quality Views	1
		1	Credit	Acoustic Performance	1

6	0	0	**Innovation**		6
1			Credit	Innovation credit one: Sustainable Purchasing Lamps	1
1			Credit	Innovation credit two: LEED O+M Starter Kit	1
1			Credit	EP: BPDO - Material Ing (40 products from 10 manuf)	1
1			Credit	EP: Low Emitting	1
1			Credit	EP: BPDO - EPD	1
1			Credit	LEED Accredited Professional	1

1	1	2	**Regional Priority**		4
	1		Credit	**Regional Priority: Open Space (1pt)**	1
1			Credit	~~Regional Priority: Optimize Energy (6pts)~~	1
		1	Credit	**Regional Priority: WBLCA (2pts)**	1
		1	Credit	Regional Priority: Indoor Water (4pts)	1
				Alt: REC (2pts), High Priority Site (2pts)	

51	10	49	**TOTALS**	Possible Points: 110

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110

LEED Silver required per MSBA #81

- **Preliminary Draft Score Card**
- 43 Lincoln Street Site

- **Initial Results:**
- Location and Transportation **4**
- Sustainable Sites **8**
- Water Efficiency **5**
- Energy and Atmosphere **14**
- Materials and Resources **5**
- Indoor Environmental Quality **8**
- Innovation **6**
- Regional Priority **1**

- **Proposed Target: 51 points** (Silver 50 - 59)

Scorecards are preliminary drafts for discussion purposes only. Design team will continue to evaluate and revise these scorecards as the design develops

MMES Site Challenges

- Site Development – Protect or Restore Habitat
  - *This point will not be possible for Addition/Renovation Options at MMES Site*
- Open Space & Regional Priority Point
  - *This point will be challenging for the MMES Site*
- Rainwater Management
  - *Relocation and/or expansion of Rain Gardens at MMES site will be challenging given site constraints*
- Optimize Energy Performance & Incentive Programs
  - *Although MMES is very energy efficient, it was built prior to the adoption of the DOER Stretch Energy Code and the changes in Utility incentives which requires Full Electrification. The use of natural gas at MMES will add complexity and potential cost to achieve these credits and incentives. Addition/Renovation also adds complexity to the LEED credit process.*
- Building Life-Cycle Impact Reduction & Regional Priority Point
  - *Connection to existing MMES building may limit construction techniques due to compatibility with existing construction and may add additional complexity and cost. Team will continue to study this if this site is selected.*

Open Discussion



Next Steps

- Submit PDP to MSBA in Jan 2026
- Submit PSR to MSBA in April 2026
- Schematic Design Development occurs May through November 2026
  - Mass Save Program– Complete the MOU

    (Memorandum of Understanding)
  - Sustainability Working Group Meeting #3

    Early to mid Schematic Design

    Refinement of LEED scorecard to align with proposed site and design



MMES

Thank you!

Contact us for questions/follow-up.

Colleen Ryan Soden, LEED BD+C

Soden Sustainability: Director

E: colleen@sodensustainability.com

Kelley Tapia, AIA, WELL AP, LEED BD+C, Fitwel Ambassador

Soden Sustainability: Sustainability Architect

E: kelley@sodensustainability.com

Eric Haggstrom, AIA, LEED AP, Fitwel Ambassador

JCJ Architecture: Director of Sustainability

E: ehaggstrom@jcj.com

SBC Meeting Agenda – November 25, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 8 20251028
   - ➢ SBC Meeting No. 9 20251106
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Minuteman Press Invoice | $3,127.81
4. Community Meeting #2 Feedback
5. Sustainability Working Group Update
6. Work Plan Review
7. Further Evaluate Alternatives
8. Schedule Update
9. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
10. Public Comment
11. Reflections & Actions Items
12. Adjourn

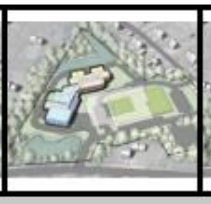
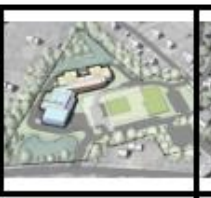
SBC Meeting Agenda – November 25, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 8 20251028
   - ➢ SBC Meeting No. 9 20251106
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Minuteman Press Invoice | $3,127.81
4. Community Meeting #2 Feedback
5. Sustainability Working Group Update
6. Work Plan Review
7. Further Evaluate Alternatives
8. Schedule Update
9. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
10. Public Comment
11. Reflections & Actions Items
12. Adjourn

Design Alternatives





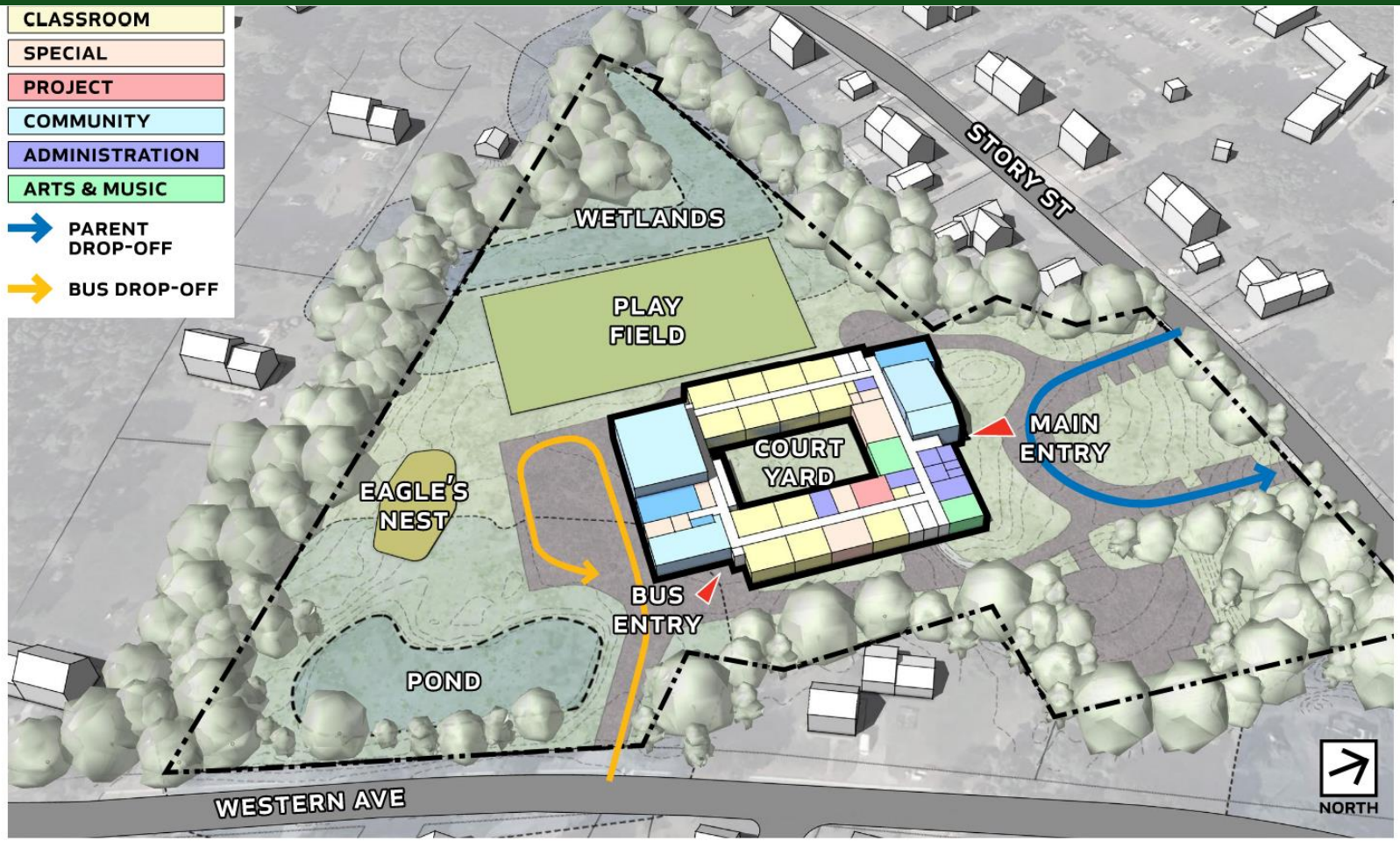




ESSEX ELEMENTARY SCHOOL PROJECT EVALUATION OF DESIGN ALTERNATIVES		SITE A CURRENT ESSEX ES						SITE B CURRENT MMES
		A0.1	A0.2	A1.1	A1.2	A2.1	A2.2	B1.1
		Code Upgrade/ Base Repair	Code Upgrade/ Base Repair	Addition/ Renovation	Addition/ Renovation	New Construction	New Construction	Addition/ Renovation
General	Enrollment (+ PRE-K)	165 + 30	250 + 30	165 + 30	250 + 30	165 + 30	250 + 30	515 + 60
	Grade Configuration	PRE-K - 3	PRE-K - 5	PRE-K - 3	PRE-K - 5	PRE-K - 3	PRE-K - 5	PRE-K - 5
	Renovated Area	53,036 GFA	53,036 GFA	53,036 GFA	53,036 GFA	0	0	77,102 GFA
	New Area	0	0	7,741 GFA	20,637 GFA	60,777 GFA	73,673 GFA	41,899 GFA
	Total Area	53,036 GFA	53,036 GFA	60,777 GFA	73,673 GFA	60,777 GFA	73,673 GFA	119,001 GFA
	Construction Phases	TBD	TBD	TBD	TBD	2	2	TBD

Design Alternatives

EXISTING ESSEX ELEMENTARY
K – 5
200 STUDENTS

53,036 GFA EXISTING

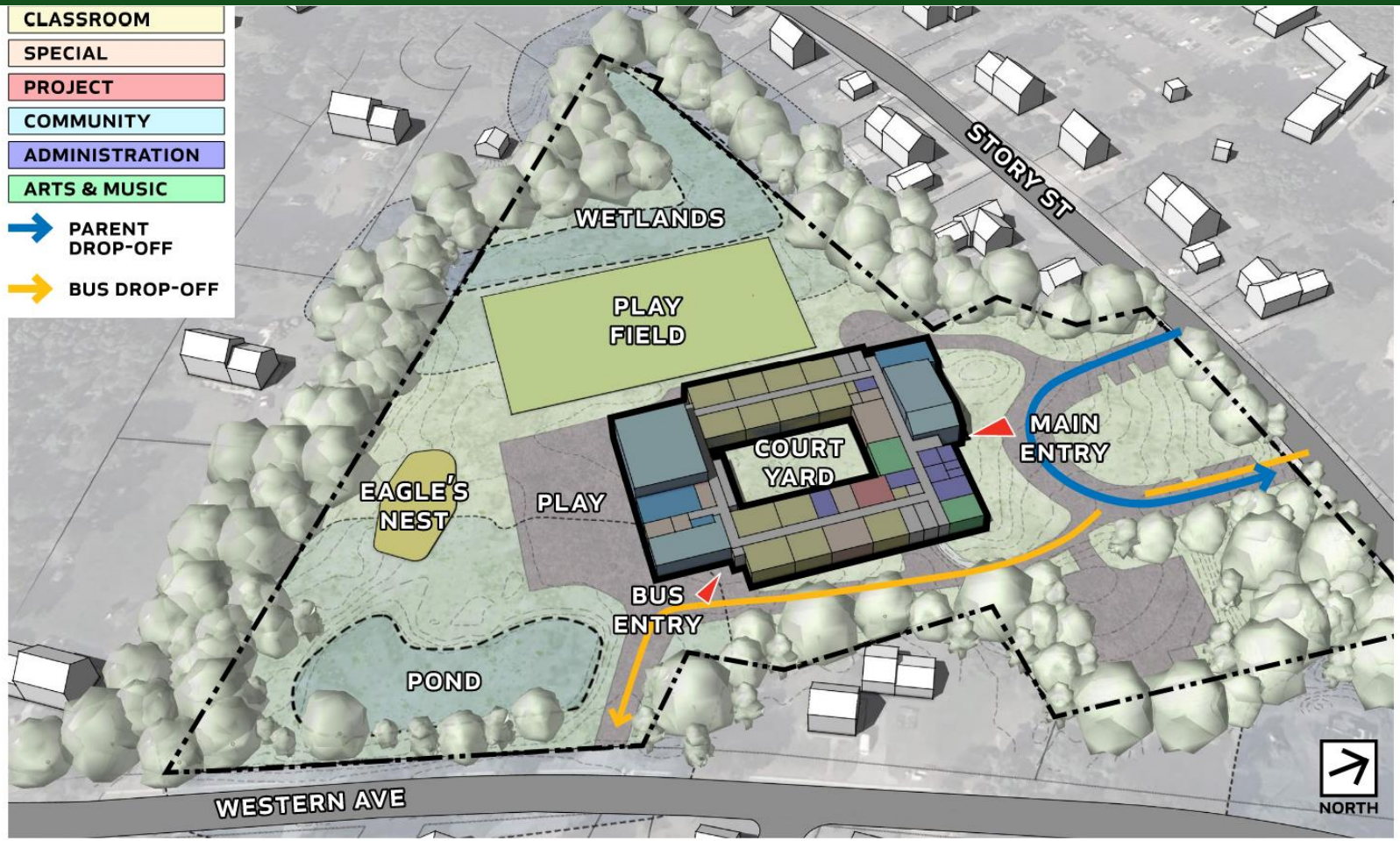


Design Alternatives

OPTION A0.1

PRE-K – 3
165 STUDENTS + 30 PRE-K
CODE UPGRADE/BASE REPAIR

53,036 GFA RENOVATION



CONSIDERATIONS

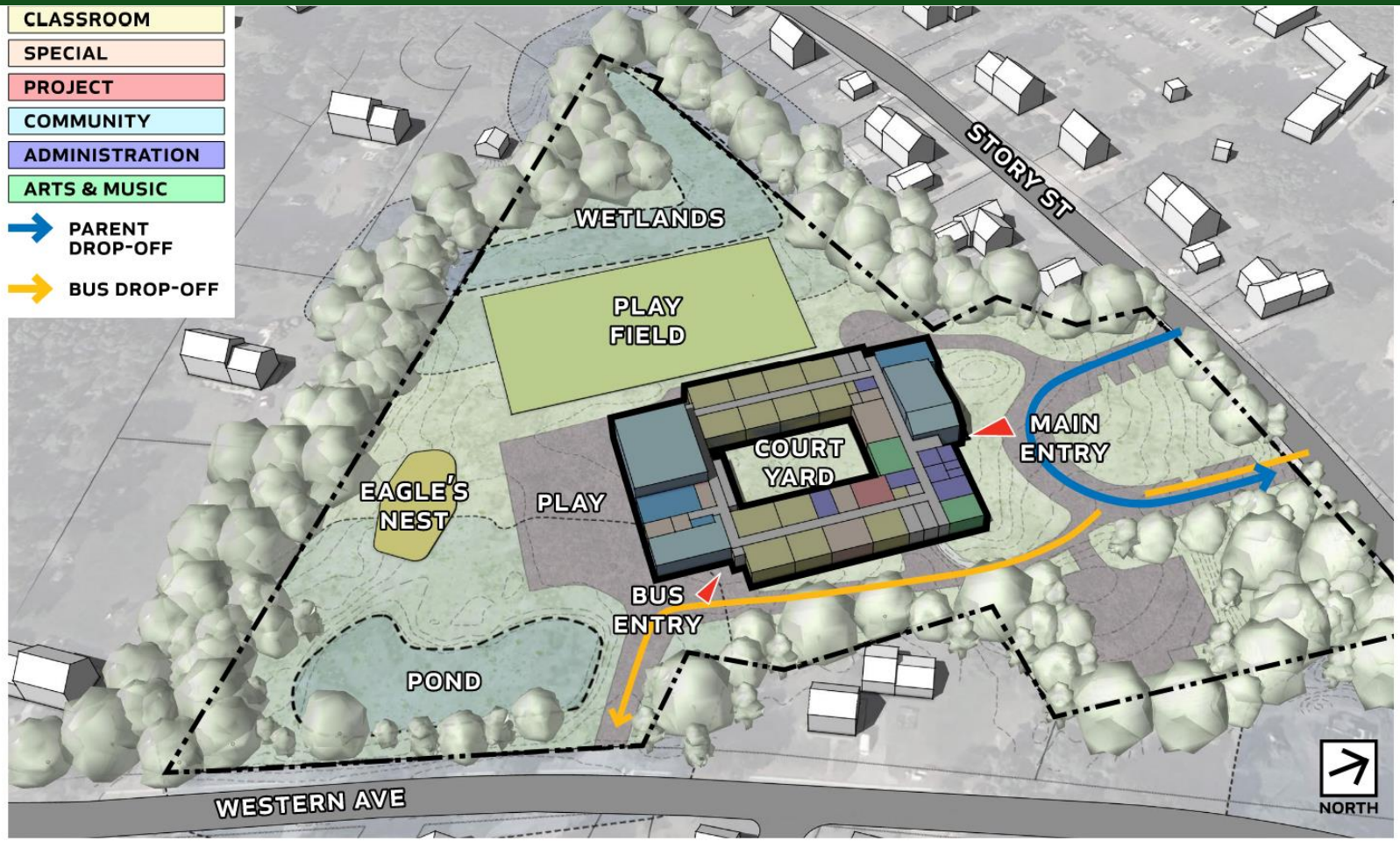
- EXISTING BUILDING IS SMALLER THAN TARGET
- CORE CLASSROOMS ARE UNDERSIZED
- GYM IS UNDERSIZED
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- MOVING GRADES 4-5 TO MMES CREATES SWING SPACE (4 CLASSROOMS)
- K-3 REQUIRES MODIFICATION TO THE REGIONAL AGREEMENT

Design Alternatives

OPTION A0.2

PRE-K – 5
250 STUDENTS + 30 PRE-K
CODE UPGRADE/BASE REPAIR

53,036 GFA RENOVATION



CONSIDERATIONS

- EXISTING BUILDING IS SMALLER THAN TARGET
- CORE CLASSROOMS ARE UNDERSIZED
- GYM IS UNDERSIZED
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- MODULAR CLASSROOMS WILL BE REQUIRED TO PROVIDE SWING SPACE

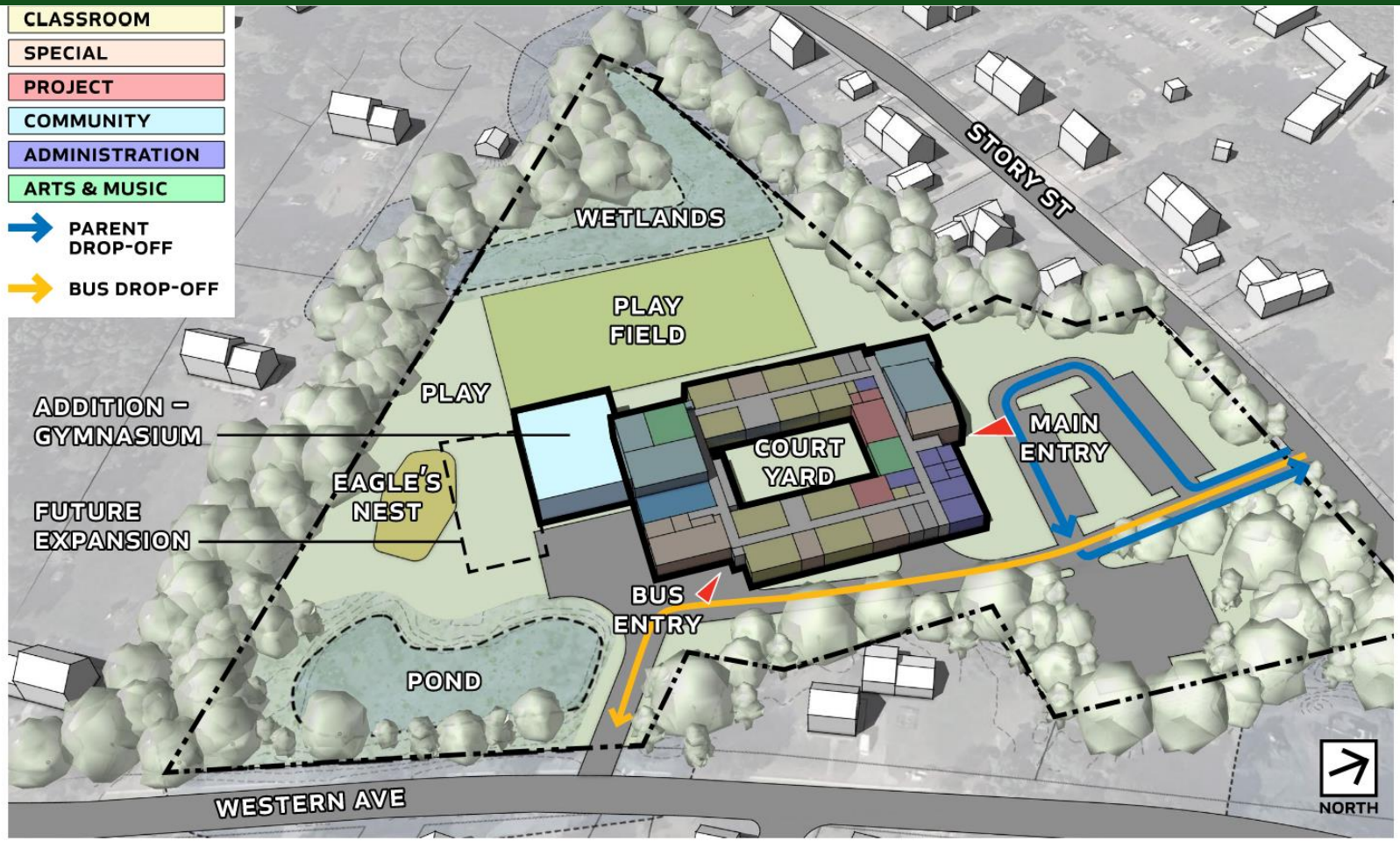
Design Alternatives

OPTION A1.1

PRE-K – 3
165 STUDENTS + 30 PRE-K
ADDITION/RENOVATION

53,036 GFA RENOVATION
7,741 GFA ADDITION

TOTAL: 60,777 GFA



CONSIDERATIONS

- FULL-SIZE GYM COULD BE ACCOMMODATED IN AN ADDITION
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- MOVING GRADES 4-5 TO MMES CREATES SWING SPACE (4 CLASSROOMS)
- K-3 REQUIRES MODIFICATION TO THE REGIONAL AGREEMENT

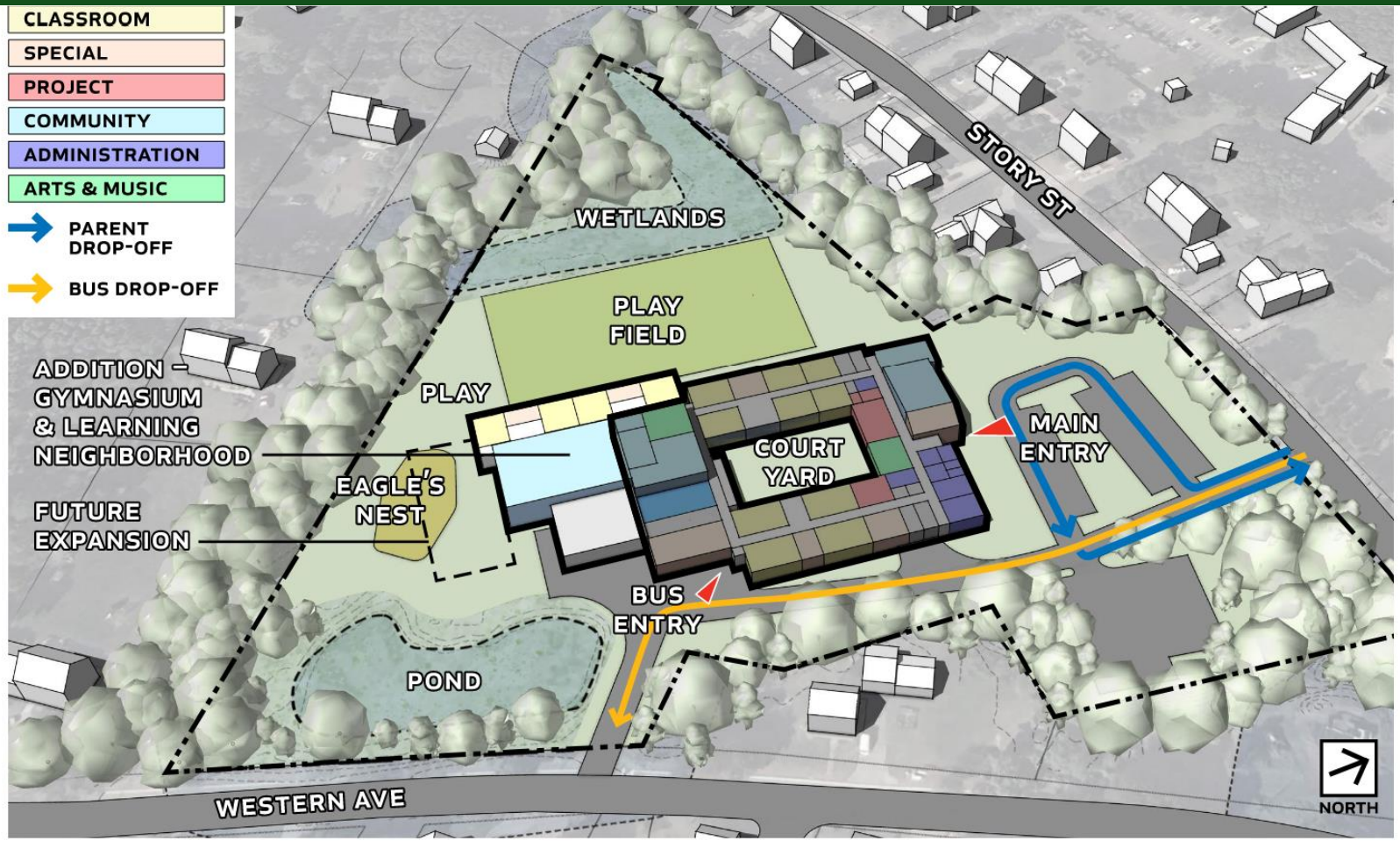
Design Alternatives

OPTION A1.2

PRE-K – 5
250 STUDENTS + 30 PRE-K
ADDITION/RENOVATION

53,036 GFA RENOVATION
20,637 GFA ADDITION

TOTAL: 73,673 GFA



CONSIDERATIONS

- FULL-SIZE GYM COULD BE ACCOMMODATED IN AN ADDITION
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- SWING SPACE (4 CLASSROOMS) COULD BE ACCOMMODATED IN AN ADDITION

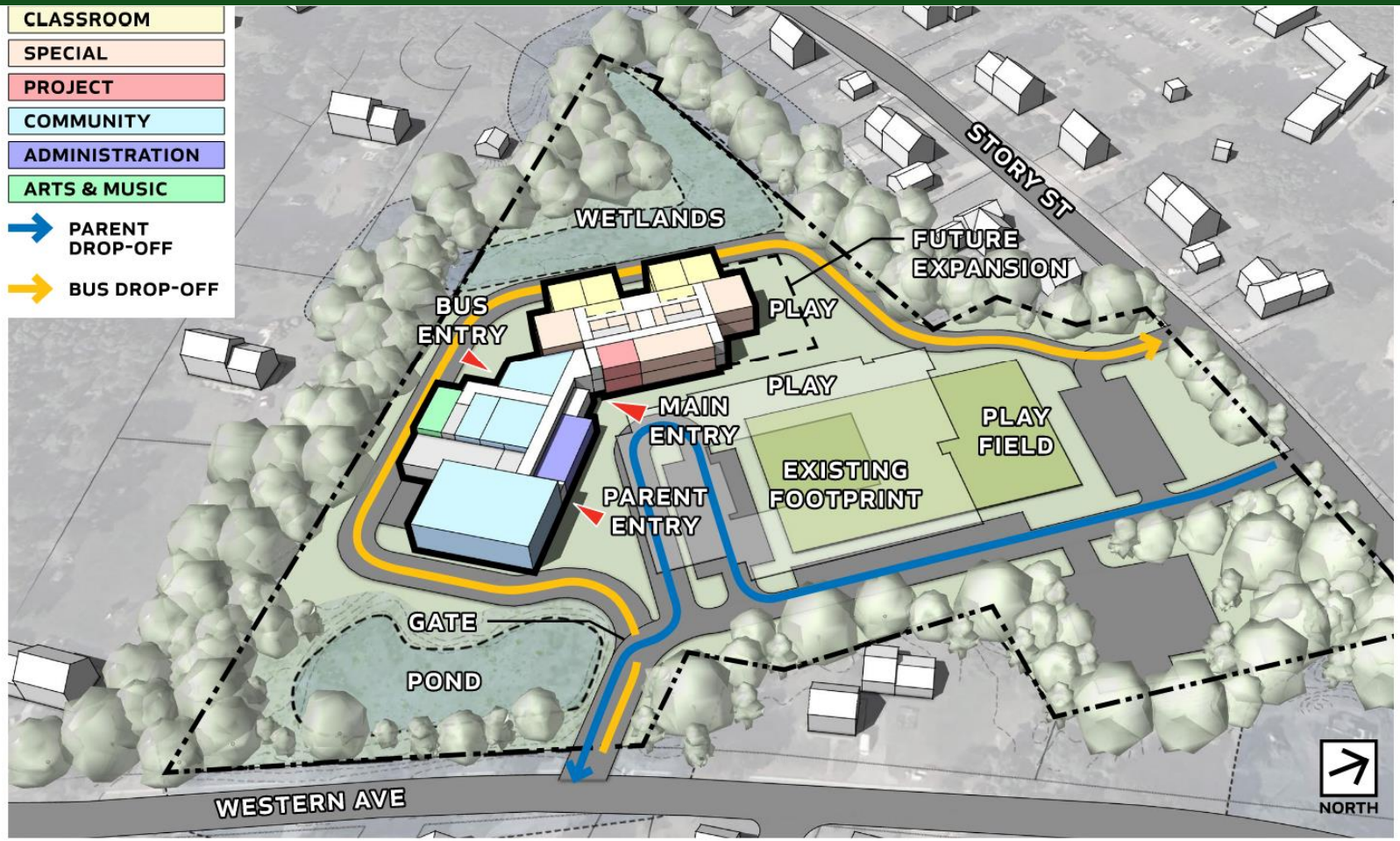
Design Alternatives

OPTION A2.1

PRE-K – 3
165 STUDENTS + 30 PRE-K NEW

60,777 GFA NEW

TOTAL: 60,777 GFA



CONSIDERATIONS

- SITE LAYOUT PROVIDES FULL PERIMETER ACCESS AND IMPROVED SIGHT LINES
- DESIRED ROOM SIZES AND ADJACENCIES CAN BE OPTIMIZED
- ACCESS TO COMMUNITY SPACES EASILY CONTROLLED
- TWO-STORY BUILDING REDUCES FOOTPRINT TO MAXIMIZE SITE POTENTIAL
- K-3 REQUIRES MODIFICATION TO THE REGIONAL AGREEMENT

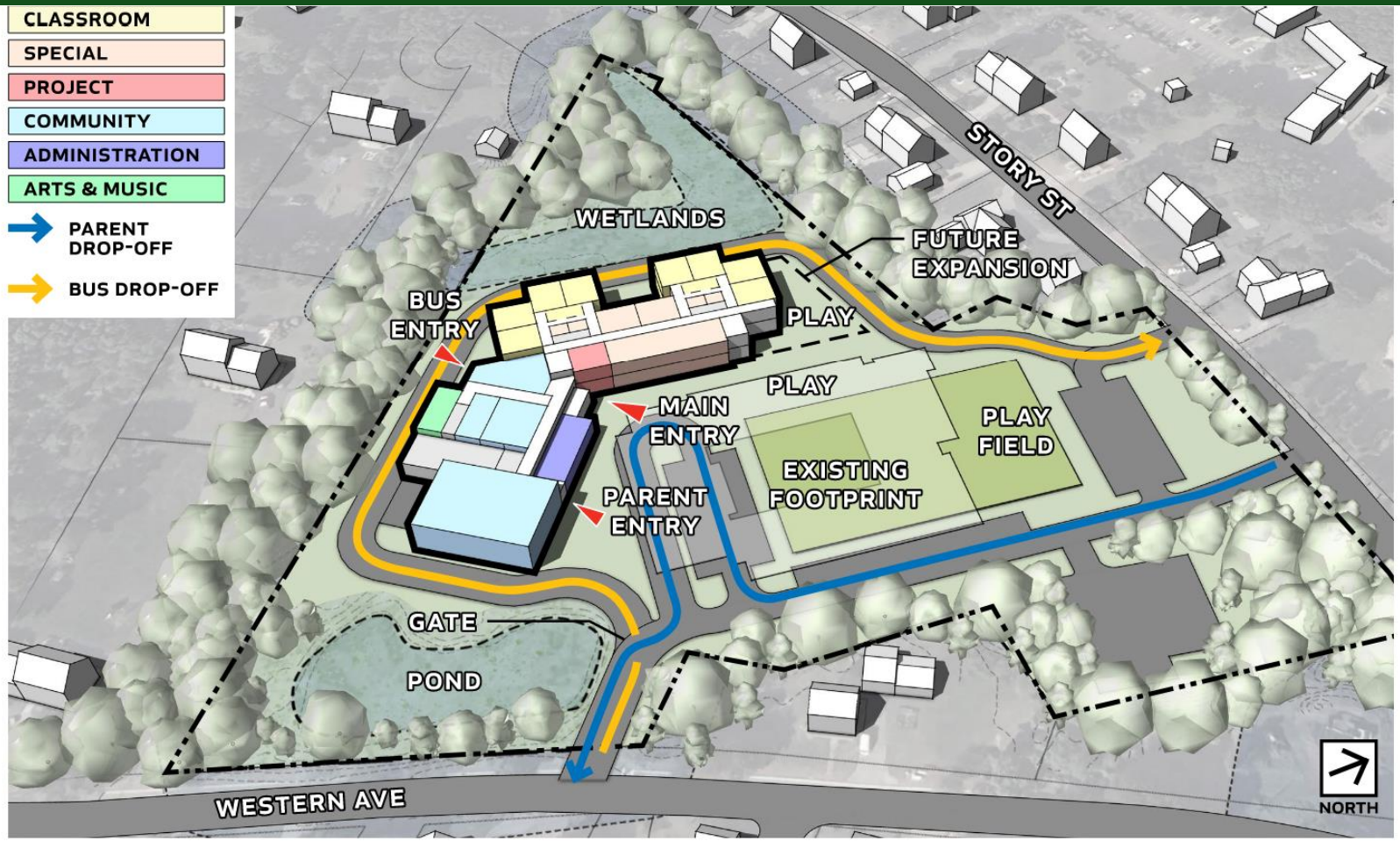
Design Alternatives

OPTION A2.2

PRE-K – 5
250 STUDENTS + 30 PRE-K NEW

73,673 GFA NEW

TOTAL: 73,673 GFA



CONSIDERATIONS

- SITE LAYOUT PROVIDES FULL PERIMETER ACCESS AND IMPROVED SIGHT LINES
- DESIRED ROOM SIZES AND ADJACENCIES CAN BE OPTIMIZED
- ACCESS TO COMMUNITY SPACES EASILY CONTROLLED
- TWO-STORY BUILDING REDUCES FOOTPRINT TO MAXIMIZE SITE POTENTIAL

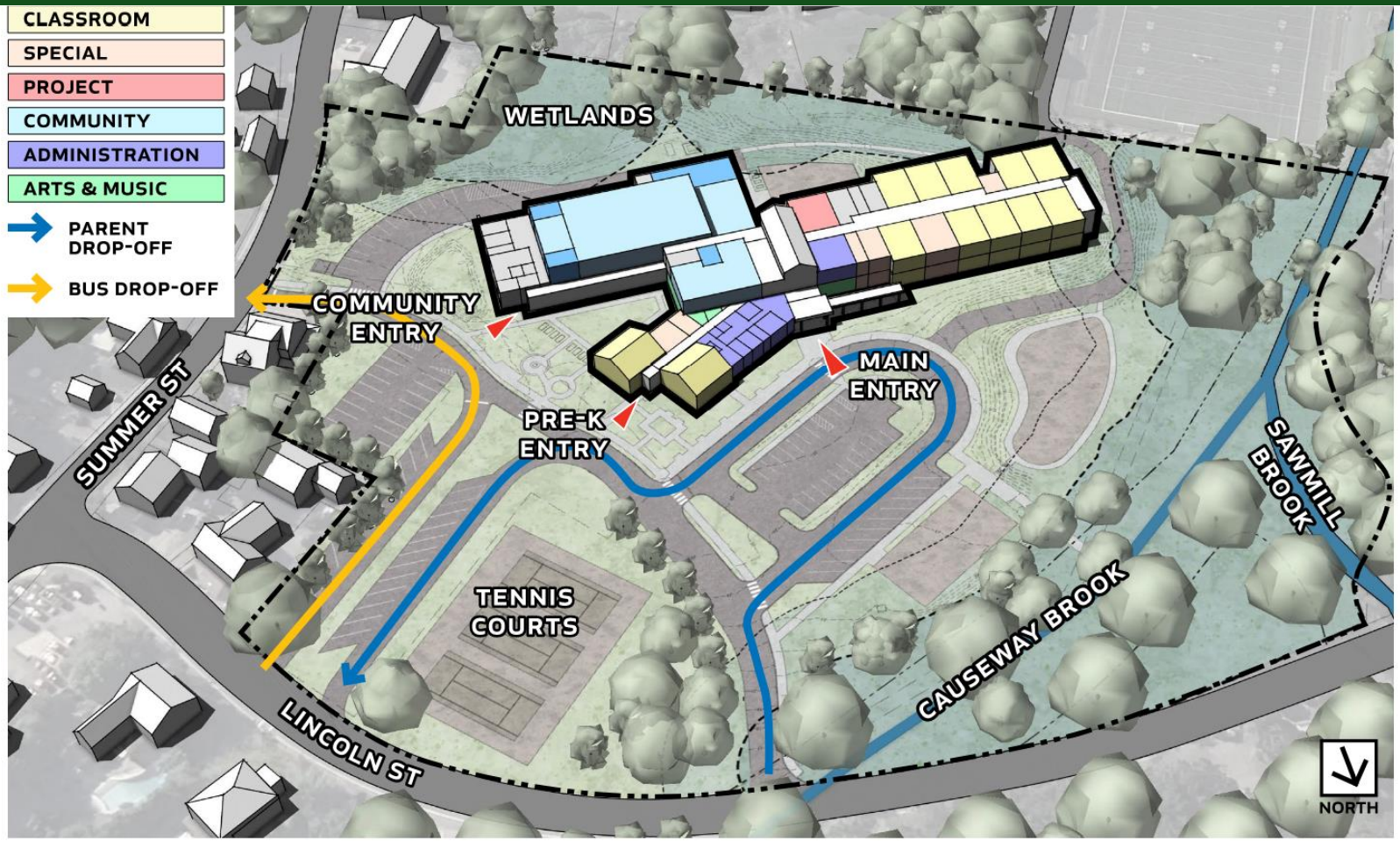
Design Alternatives

EXISTING MANCHESTER MEMORIAL

PRE-K – 5

335 STUDENTS + 45 PRE-K

77,102 GFA EXISTING



Design Alternatives

OPTION B1.1

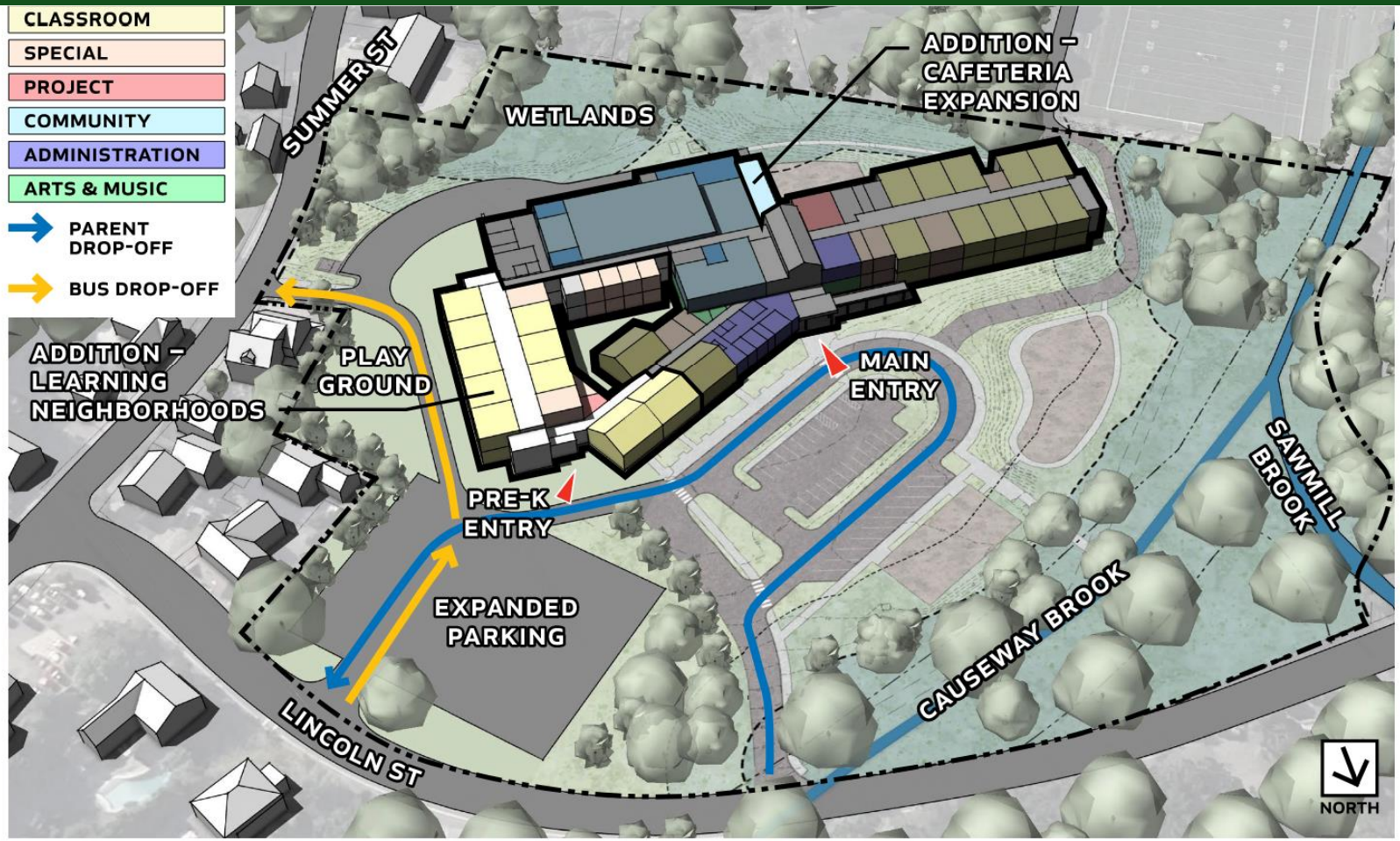
PRE-K –5
515 STUDENTS + 60 PRE-K
ADDITION/RENOVATION

77,102 GFA EXISTING/RENO
41,899 GFA NEW

TOTAL: 119,001 GFA

CONSIDERATIONS

- SITE AMENITIES WILL BE LIMITED SUCH AS PLAY SPACE AND PARKING CAPACITY
- REMOVAL OF TENNIS COURTS LIKELY
- NO FUTURE EXPANSION POTENTIAL
- BUILDING CODE AREA LIMITATIONS REQUIRES FIRE WALLS SEPARATING ADDITIONS
- COMMUNITY ENTRY AND NEAR-BY PARKING COMPROMISED BY ADDITION LOCATION
- NUMEROUS ISSUES ASSOCIATED WITH ELIMINATING A SCHOOL IN ESSEX (TRAVEL, BUSING, AFTERSCHOOL PROGRAMS, REGIONAL AGREEMENT, ETC.)



Design Alternatives

Legend	
0	Highly Undesirable
1	Undesirable
2	Neutral
3	Desirable
4	Highly Desirable



ESSEX ELEMENTARY SCHOOL PROJECT EVALUATION OF DESIGN ALTERNATIVES		SITE A CURRENT ESSEX ES						SITE B CURRENT MMES
		A0.1	A0.2	A1.1	A1.2	A2.1	A2.2	B1.1
		Code Upgrade/ Base Repair	Code Upgrade/ Base Repair	Addition/ Renovation	Addition/ Renovation	New Construction	New Construction	Addition/ Renovation
General	Enrollment (+ PRE-K)	165 + 30	250 + 30	165 + 30	250 + 30	165 + 30	250 + 30	515 + 60
	Grade Configuration	PRE-K - 3	PRE-K - 5	PRE-K - 3	PRE-K - 5	PRE-K - 3	PRE-K - 5	PRE-K - 5
	Renovated Area	53,036 GFA	53,036 GFA	53,036 GFA	53,036 GFA	0	0	77,102 GFA
	New Area	0	0	7,741 GFA	20,637 GFA	60,777 GFA	73,673 GFA	41,899 GFA
	Total Area	53,036 GFA	53,036 GFA	60,777 GFA	73,673 GFA	60,777 GFA	73,673 GFA	119,001 GFA
	Construction Phases	TBD	TBD	TBD	TBD	2	2	TBD
Education	Meets Needs of Educational Program at EES							
	Meets Needs of Educational Program at MMES							
	Equity across the District							
	Future Growth and Expansion							
	Flexible and Adaptable Spaces							
	Construction Impact on Existing School Activities							
Community	Compatible with Regional Agreement							
	Heart of Essex Community / Sense of Place							
	Walkability for Essex Student Population							
	Neighborhood Traffic Impact							
	Community Use Opportunities							
	Disruption to Manchester							
Site	Regulatory - Wetlands, Rivers & Streams, Flood Zones							
	Bus and Parent Drops - Safety & Efficiency							
	Parking Capacity							
	Play and Athletics Fields (inc. MMES Tennis Courts)							
	Meets Sustainability Goals - Bike Paths, Rain Garden							
Building	Existing Facility Deficiencies Addressed							
	Entries Visible / Unobstructed Sight Lines							
Cost & Schedule	Total Project Cost							
	Maximize MSBA Grant Reimbursement							
	Phasing Minimizes Construction Duration							
	Modular Classroom Swing Space not Required							
	Construction Access and Staging							
	Reduce Operational Costs - Utilities, Maintenance							
	Reduce Operational Costs - Staff, Transport							

SBC Meeting Agenda – November 25, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 8 20251028
   - ➢ SBC Meeting No. 9 20251106
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Minuteman Press Invoice | $3,127.81
4. Community Meeting #2 Feedback
5. Sustainability Working Group Update
6. Work Plan Review
7. Further Evaluate Alternatives
8. Schedule Update
9. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
10. Public Comment
11. Reflections & Actions Items
12. Adjourn

Schedule Update/PDP

11/25/25 SBC Meeting-Review Community Meeting #2 Feedback, Further Evaluation of Alternatives

12/9/25 Comm Meeting #3-Memorial ES with a tour and rerun of meetings #1 and #2

12/15/25 SBC Meeting-Final Evaluation of Alternatives with Preliminary Costs

12/19-12/30 Draft PDP to SBC

1/6/26 SBC Meeting-PDP Approval to MSBA, Initial Grade Configuration Discussion

Schedule Update/PSR

1/22/26 SBC Meeting-Alternatives with Grade Configuration Discussion

1/28/26 Comm Meeting #4-Share PDP results and Evaluation of Alternatives with Grade Configuration

2/9/26 SBC Meeting-Review Comm Meeting Feedback, Review Alternatives and Grade Configuration

2/24/26 SBC Meeting-Confirm Preferred Alternatives for Pricing

3/10/26 SBC Meeting-Preferred Alternates if Necessary

3/24/26 SBC Meeting-Final Review of Alternatives and Grade Configuration

3/30/26 Comm Meeting #5-Review Preferred Options

4/14/26 SBC Meeting-Review Comm Meeting #4 Feedback and Approval of Preferred Solution

4/28/26 SBC Meeting-Approved PSR Submission to MSBA

SBC Meeting Agenda – November 25, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 8 20251028
   - ➢ SBC Meeting No. 9 20251106
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Minuteman Press Invoice | $3,127.81
4. Community Meeting #2 Feedback
5. Sustainability Working Group Update
6. Work Plan Review
7. Further Evaluate Alternatives
8. Schedule Update
9. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
10. Public Comment
11. Reflections & Actions Items
12. Adjourn

SBC Meeting Agenda – November 25, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 8 20251028
   - ➢ SBC Meeting No. 9 20251106
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Minuteman Press Invoice | $3,127.81
4. Community Meeting #2 Feedback
5. Sustainability Working Group Update
6. Work Plan Review
7. Further Evaluate Alternatives
8. Schedule Update
9. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
10. Public Comment
11. Reflections & Actions Items
12. Adjourn

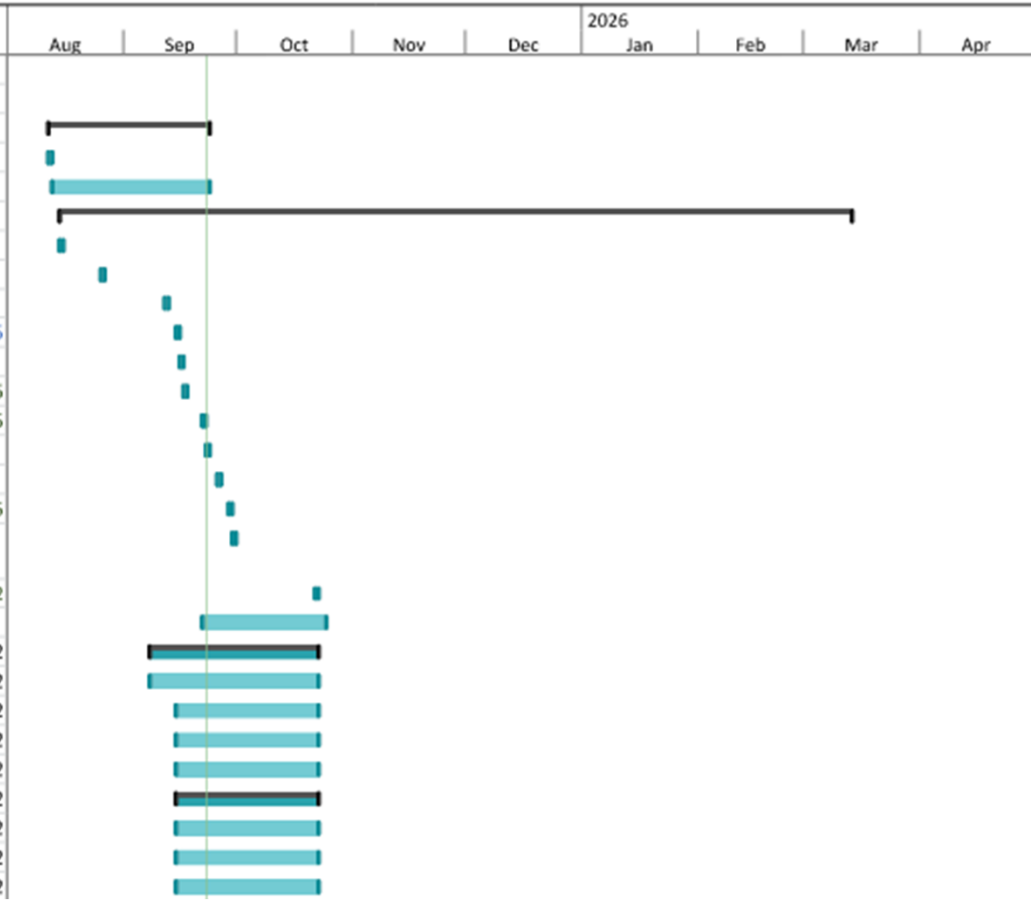
SBC Meeting Agenda – November 25, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 8 20251028
   - ➢ SBC Meeting No. 9 20251106
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Minuteman Press Invoice | $3,127.81
4. Community Meeting #2 Feedback
5. Sustainability Working Group Update
6. Work Plan Review
7. Further Evaluate Alternatives
8. Schedule Update
9. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
10. Public Comment
11. Reflections & Actions Items
12. Adjourn

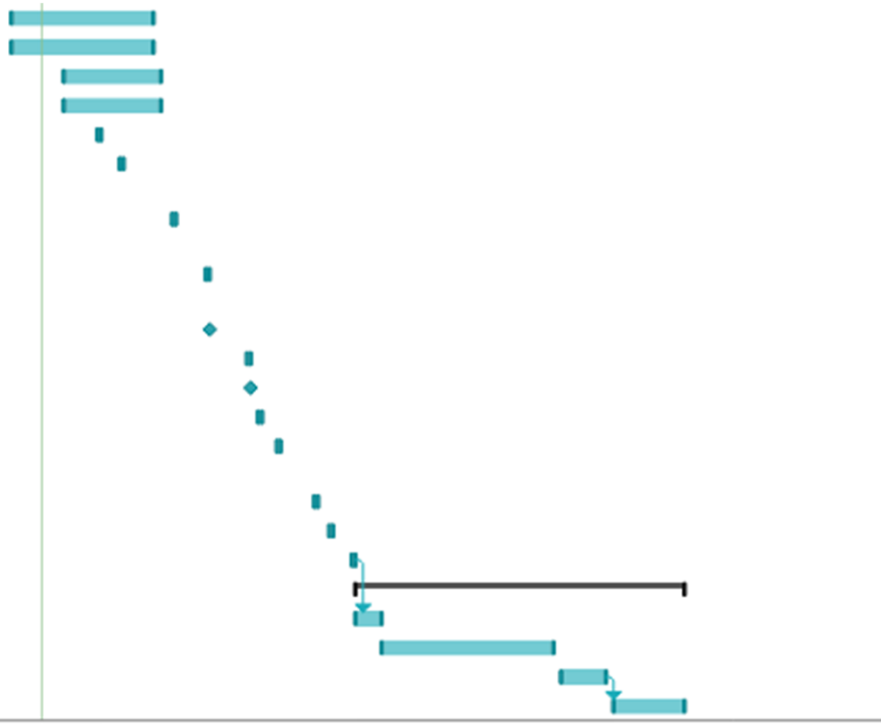
SBC Meeting Agenda – November 25, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 8 20251028
   - ➢ SBC Meeting No. 9 20251106
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Minuteman Press Invoice | $3,127.81
4. Community Meeting #2 Feedback
5. Sustainability Working Group Update
6. Work Plan Review
7. Further Evaluate Alternatives
8. Schedule Update
9. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
10. Public Comment
11. Reflections & Actions Items
12. Adjourn

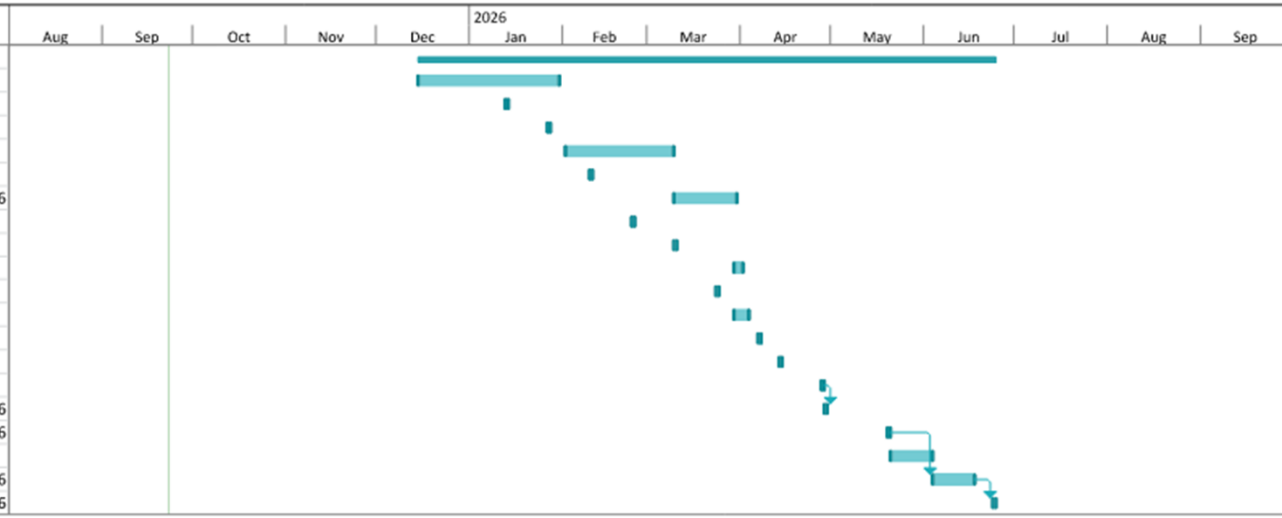
ID	Task Name	Duration	Start	Finish
1	Manchester Essex Regional School District			
2	**Essex Elementary School**			
3	**Designer Selection**	**31 days**	**Tue 8/12/25**	**Tue 9/23/25**
4	MSBA Designer Selection	1 day	Tue 8/12/25	Tue 8/12/25
5	Execute Contract	30 days	Wed 8/13/25	Tue 9/23/25
6	**Module 3: Feasibility Phase - PDP**	**151 days**	**Fri 8/15/25**	**Fri 3/13/26**
7	Kick Off Meeting: Dore + Whittier & District	1 day	Fri 8/15/25	Fri 8/15/25
8	SBC Meeting #4: Kick Off with JCJ	1 day	Tue 8/26/25	Tue 8/26/25
9	ESS Communications Working Group Meeting	1 day	Fri 9/12/25	Fri 9/12/25
10	SBC Meeting #5: Workplan Review, Evaluation Framework	1 day	Mon 9/15/25	Mon 9/15/25
11	Educational Visioning #1: Launch & Priorities	1 day	Tue 9/16/25	Tue 9/16/25
12	Educational Visioning #2: Shadow Day	1 day	Wed 9/17/25	Wed 9/17/25
13	Educational Visioning #3: Development, Belonging, Grad Configura	1 day	Mon 9/22/25	Mon 9/22/25
14	Kick Off Meeting with MSBA	1 day	Tue 9/23/25	Tue 9/23/25
15	Educational Visioning #4: School Tours	1 day	Fri 9/26/25	Fri 9/26/25
16	Educational Visioning #5: Workshop-Specific Program Needs & Adj	1 day	Mon 9/29/25	Mon 9/29/25
17	SBC Meeting #6: Educational Visioning Update, Site Development Requirements, Sustainability Goals	1 day	Tue 9/30/25	Tue 9/30/25
18	Educational Visioning #6: Teaching, Learning & Space	1 day	Wed 10/22/2	Wed 10/22/2
19	Educational Visioning #7: Workshop Special Education & Related Se	25 days	Mon 9/22/25	Fri 10/24/25
20	**Existing Conditions Building Investigations**	33 days	Mon 9/8/25	Wed 10/22/2
21	Architectural	33 days	Mon 9/8/25	Wed 10/22/2
22	Regulated Materials	28 days	Mon 9/15/25	Wed 10/22/2
23	Structural	28 days	Mon 9/15/25	Wed 10/22/2
24	MEP/FP Systems (Possible Hydrant Flow Tests)	28 days	Mon 9/15/25	Wed 10/22/2
25	**Existing Conditions Site Investigations**	28 days	Mon 9/15/25	Wed 10/22/2
26	Civil and Infrastructure	28 days	Mon 9/15/25	Wed 10/22/2
27	Phase 1 Environmental Assessments	28 days	Mon 9/15/25	Wed 10/22/2
28	Geotechnical Studies	28 days	Mon 9/15/25	Wed 10/22/2



29	Environmental Noise Surveys	28 days	Mon 9/15/25	Wed 10/22/2
30	Traffic	28 days	Mon 9/15/25	Wed 10/22/2
31	Food Service Program Meeting	20 days	Mon 9/29/25	Fri 10/24/25
32	Security Program Meeting	20 days	Mon 9/29/25	Fri 10/24/25
33	Community Meeting #1: Process, Schedule, Existing Conditions	1 day	Wed 10/8/25	Wed 10/8/25
34	SBC Meeting #7: Review Community Meeting #1 Feedback, Initial Space Summary	1 day	Tue 10/14/25	Tue 10/14/25
35	SBC Meeting #8: Preliminary Evaluation of Alternatives (Review), Acceptance of Space Summary	1 day	Tue 10/28/25	Tue 10/28/25
36	SBC Meeting #9: Preliminary Evaluation of Alternatives (Draft), Acceptance of Educational Program	1 day	Thu 11/6/25	Thu 11/6/25
37	Submit PDP Alternatives to Cost Estimator	0 days	Fri 11/7/25	Fri 11/7/25
38	Cost Estimate Reconciliation	1 day	Mon 11/17/2	Mon 11/17/2
39	SC Approval of Educational Program & Acceptance of Space Summa	0 days	Tue 11/18/25	Tue 11/18/25
40	Community Meeting #2: Sites & Alternatives Considered	1 day	Thu 11/20/25	Thu 11/20/25
41	SBC Meeting #10: Review Community Meeting #2 Feedback and Cost Estimate	1 day	Tue 11/25/25	Tue 11/25/25
42	Submit Draft PDP to SBC	1 day	Fri 12/5/25	Fri 12/5/25
43	Community Meeting #3: Review Draft PDP Results with Costs	1 day	Tue 12/9/25	Tue 12/9/25
44	SBC Meeting #11: Vote Approval of PDP	1 day	Mon 12/15/2	Mon 12/15/2
45	**MSBA PDP Submission and Review**	**64 days**	**Tue 12/16/25**	**Fri 3/13/26**
46	Submit PDP to MSBA	5 days	Tue 12/16/25	Mon 12/22/2
47	MSBA Review PDP and Comment - Timeframe TBD	34 days	Tue 12/23/25	Fri 2/6/26
48	Respond MSBA Comments and Resubmit	10 days	Mon 2/9/26	Fri 2/20/26
49	MSBA Accept PDP - Timeframe TBD	15 days	Mon 2/23/26	Fri 3/13/26



ID	Task Name	Duration	Start	Finish
50	**Module 3: Feasibility Phase - Preferred Schematic Report (PSR)**			
51	Further Development of Alternates	35 days	Mon 12/15/2	Fri 1/30/26
52	SBC Meeting #12	1 day	Tue 1/13/26	Tue 1/13/26
53	SBC Meeting #13	1 day	Tue 1/27/26	Tue 1/27/26
54	Development of Preferred Solution	26 days	Mon 2/2/26	Mon 3/9/26
55	SBC Meeting #14:	1 day	Tue 2/10/26	Tue 2/10/26
56	Cost Estimate	15 days	Tue 3/10/26	Mon 3/30/26
57	SBC Meeting #15	1 day	Tue 2/24/26	Tue 2/24/26
58	SBC Meeting #16	1 day	Tue 3/10/26	Tue 3/10/26
59	Reconciliation of Estimate	3 days	Mon 3/30/26	Wed 4/1/26
60	SBC Meeting #17	1 day	Tue 3/24/26	Tue 3/24/26
61	Community Meeting #4: Review Preferred Solution	5 days	Mon 3/30/26	Fri 4/3/26
62	Submit Draft PSR for SBC Review	1 day	Tue 4/7/26	Tue 4/7/26
63	SBC Meeting #18	1 day	Tue 4/14/26	Tue 4/14/26
64	SBC Meeting #19: Approval of PSR	1 day	Tue 4/28/26	Tue 4/28/26
65	PSR Submission to MSBA	1 day	Wed 4/29/26	Wed 4/29/26
66	MSBA Facilities Assessment Subcommittee Presentation Meeting	1 day	Wed 5/20/26	Wed 5/20/26
67	MSBA Review	10 days	Thu 5/21/26	Wed 6/3/26
68	Respond to MSBA PSR Comments	10 days	Thu 6/4/26	Wed 6/17/26
69	MSBA Board of Directors Approval of PSR	1 day	Wed 6/24/26	Wed 6/24/26



MEETING AGENDA

Meeting Date:	December 15, 2025
Meeting Time:	6:00PM – 8:00PM
Project Name:	Essex Elementary School
Project Number:	202306980020
Meeting Purpose:	School Building Committee Meeting
Location:	This meeting will be a hybrid meeting (both in-person and remote) at Essex Elementary School Cafeteria
Meeting Link:	https://us06web.zoom.us/j/85349809336

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
    - SBC Meeting No. 10 – November 25, 2025
3. Invoices & Commitments for Review and Approval (Vote Expected)
    - Dore + Whittier Management Partners | $51,587.00
    - JCJ Architecture | $58,635.00
4. Community Meeting #3 Feedback
5. Final Review of Alternatives with Preliminary Costs
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn



Essex Elementary School Project

SBC Meeting No. 11

December 15, 2025 @ 6:00 PM

DORE + WHITTIER

JCJARCHITECTURE

SBC Meeting Agenda – December 15, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 10 – November 25, 2025
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Dore + Whittier Invoice | $51,587.00
   - ➢ JCJ Invoice | $58,635.00
4. Community Meeting #3 Feedback
5. Final Review of Alternatives with Preliminary Costs
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – December 15, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 10 – November 25, 2025
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Dore + Whittier Invoice | $51,587.00
   - ➢ JCJ Invoice | $58,635.00
4. Community Meeting #3 Feedback
5. Final Review of Alternatives with Preliminary Costs
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – December 15, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 10 – November 25, 2025
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Dore + Whittier Invoice | $51,587.00
   - ➢ JCJ Invoice | $58,635.00
4. Community Meeting #3 Feedback
5. Final Review of Alternatives with Preliminary Costs
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – December 15, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 10 – November 25, 2025
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Dore + Whittier Invoice | $51,587.00
   - ➢ JCJ Invoice | $58,635.00
4. Community Meeting #3 Feedback
5. Final Review of Alternatives with Preliminary Costs
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – December 15, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 10 – November 25, 2025
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - Dore + Whittier Invoice | $51,587.00
   - JCJ Invoice | $58,635.00
4. Community Meeting #3 Feedback
5. Final Review of Alternatives with Preliminary Costs
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

Design Alternatives

DRAFT

Legend	
0	Highly Undesirable
1	Undesirable
2	Neutral
3	Desirable
4	Highly Desirable



ESSEX ELEMENTARY SCHOOL PROJECT EVALUATION OF DESIGN ALTERNATIVES		SITE A CURRENT ESSEX ES						SITE B CURRENT MMES
		A0.1	A0.2	A1.1	A1.2	A2.1	A2.2	B1.1
		Code Upgrade/ Base Repair	Code Upgrade/ Base Repair	Addition/ Renovation	Addition/ Renovation	New Construction	New Construction	Addition/ Renovation
General	Enrollment (+ PRE-K)	165 + 30	250 + 30	165 + 30	250 + 30	165 + 30	250 + 30	515 + 60
	Grade Configuration	PRE-K - 3	PRE-K - 5	PRE-K - 3	PRE-K - 5	PRE-K - 3	PRE-K - 5	PRE-K - 5
	Renovated Area	53,036 GFA	53,036 GFA	53,036 GFA	53,036 GFA	0	0	77,102 GFA
	New Area	0	0	7,741 GFA	20,637 GFA	60,777 GFA	73,673 GFA	41,899 GFA
	Total Area	53,036 GFA	53,036 GFA	60,777 GFA	73,673 GFA	60,777 GFA	73,673 GFA	119,001 GFA
	Construction Phases	TBD	TBD	TBD	TBD	2	2	TBD
Education	Meets Needs of Educational Program at EES	0	0	2	4	2	4	2
	Meets Needs of Educational Program at MMES	0	4	0	4	0	4	0
	Equity across the District	0	0	0	4	0	4	0
	Future Growth and Expansion	2	2	2	2	4	4	0
	Flexible and Adaptable Spaces	0	0	4	4	4	4	0
	Construction Impact on Existing School Activities	0	0	0	0	2	2	0
Community	Compatible with Regional Agreement	0	4	0	4	0	4	0
	Heart of Essex Community / Sense of Place	4	4	4	4	4	4	0
	Walkability for Essex Student Population	1	4	1	4	1	4	0
	Neighborhood Traffic Impact	1	4	1	4	1	4	0
	Community Use Opportunities	1	4	1	4	1	4	0
	Disruption to Manchester	1	4	1	4	1	4	0
Site	Regulatory - Wetlands, Rivers & Streams, Flood Zones	4	4	4	4	1	1	0
	Bus and Parent Drops - Safety & Efficiency	2	2	2	2	4	4	0
	Parking Capacity	2	2	2	2	4	4	0
	Play and Athletics Fields (inc. MMES Tennis Courts)	2	2	2	2	4	4	0
	Meets Sustainability Goals - Bike Paths, Rain Garden	4	4	4	4	4	4	0
Building	Existing Facility Deficiencies Addressed	2	2	4	4	4	4	4
	Entries Visible / Unobstructed Sight Lines	0	0	0	0	4	4	2
	Maximize MSBA Grant Reimbursement	4	4	4	4	4	4	0
	Phasing Minimizes Construction Duration	0	0	0	0	4	4	1
	Modular Classroom Swing Space not Required	4	0	4	4	4	4	4
	Construction Access and Staging	2	2	2	2	2	2	0
	Reduce Operational Costs - Utilities, Maintenance	1	2	1	2	1	2	2
	Reduce Operational Costs - Staff, Transport	1	2	1	2	1	2	2

Preliminary Design Program Pricing Exercise

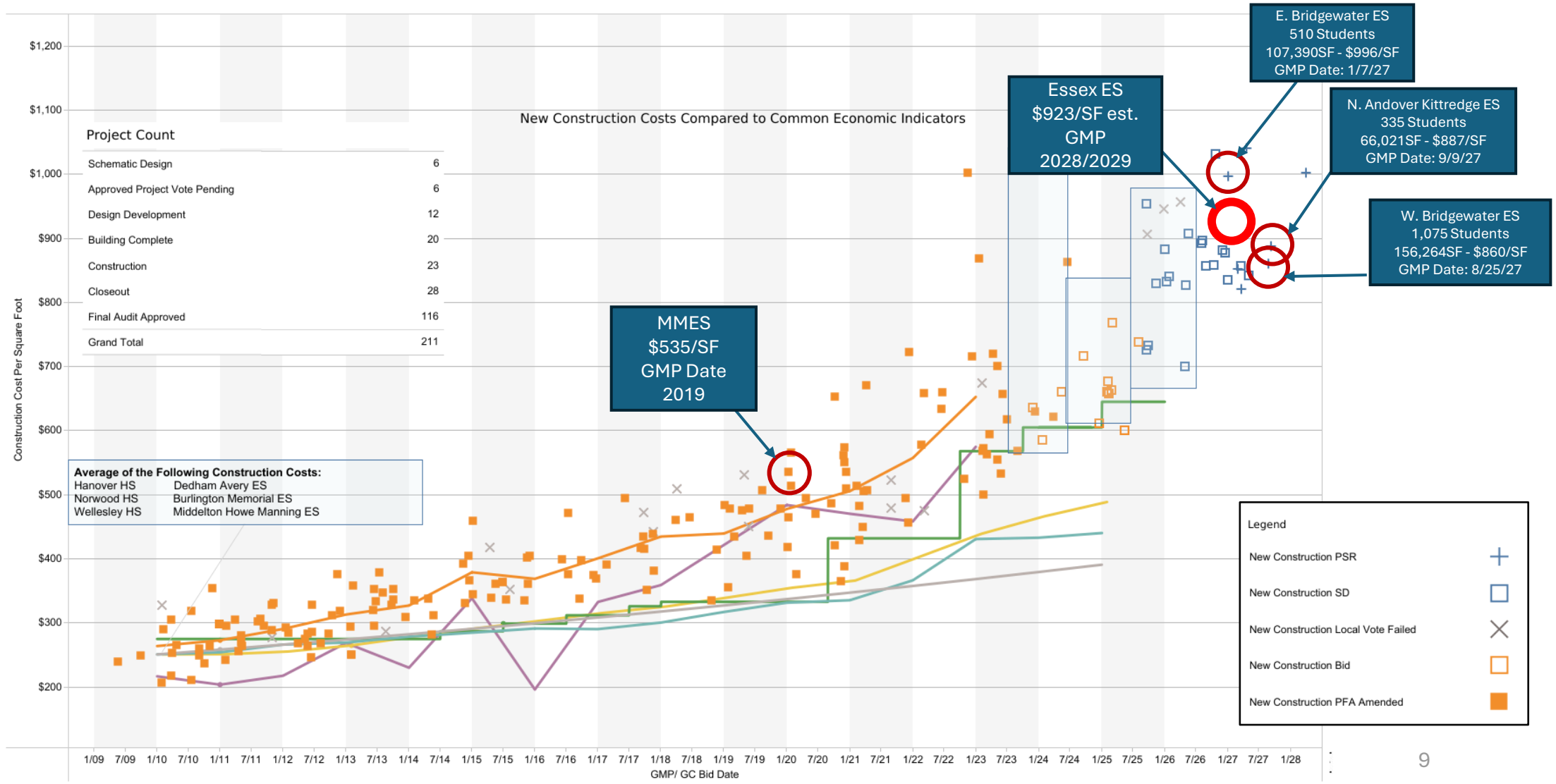
The costs for the various PDP Options indicated above are intended to be an analysis of the relative costs between options and **NOT** a prediction of the actual final cost of any individual option. Major variables such as geotechnical, site grading, structural system and final MEP systems have yet to be designed in detail so costs will vary significantly from the benchmark cost estimating included as part of this PDP cost analysis.

The costs outlined in this report should not be represented as the FINAL construction budget.

This PDP Design Submission cost estimate was produced from narratives and outline drawings dated November 06, 2025, prepared by JCJ Architecture and their design team.

Preliminary Design Program Pricing Exercise

Construction Cost per SF Averages per MSBA Data



Design Alternatives

Est. Total Project Cost PSF $870-$1470

DRAFT

Legend	
0	Highly Undesirable
1	Undesirable
2	Neutral
3	Desirable
4	Highly Desirable



ESSEX ELEMENTARY SCHOOL PROJECT EVALUATION OF DESIGN ALTERNATIVES		SITE A CURRENT ESSEX ES						SITE B CURRENT MMES
		A0.1	A0.2	A1.1	A1.2	A2.1	A2.2	B1.1
		Code Upgrade/ Base Repair	Code Upgrade/ Base Repair	Addition/ Renovation	Addition/ Renovation	New Construction	New Construction	Addition/ Renovation
General	Enrollment (+ PRE-K)	165 + 30	250 + 30	165 + 30	250 + 30	165 + 30	250 + 30	515 + 60
	Grade Configuration	PRE-K - 3	PRE-K - 5	PRE-K - 3	PRE-K - 5	PRE-K - 3	PRE-K - 5	PRE-K - 5
	Renovated Area	53,036 GFA	53,036 GFA	53,036 GFA	53,036 GFA	0	0	77,102 GFA
	New Area	0	0	7,741 GFA	20,637 GFA	60,777 GFA	73,673 GFA	41,899 GFA
	Total Area	53,036 GFA	53,036 GFA	60,777 GFA	73,673 GFA	60,777 GFA	73,673 GFA	119,001 GFA
	Construction Phases	TBD	TBD	TBD	TBD	2	2	TBD
Education	Meets Needs of Educational Program at EES	0	0	2	4	2	4	2
	Meets Needs of Educational Program at MMES	0	4	0	4	0	4	0
	Equity across the District	0	0	0	4	0	4	0
	Future Growth and Expansion	2	2	2	2	4	4	0
	Flexible and Adaptable Spaces	0	0	4	4	4	4	0
	Construction Impact on Existing School Activities	0	0	0	0	2	2	0
Community	Compatible with Regional Agreement	0	4	0	4	0	4	0
	Heart of Essex Community / Sense of Place	4	4	4	4	4	4	0
	Walkability for Essex Student Population	1	4	1	4	1	4	0
	Neighborhood Traffic Impact	1	4	1	4	1	4	0
	Community Use Opportunities	1	4	1	4	1	4	0
	Disruption to Manchester	1	4	1	4	1	4	0
Site	Regulatory - Wetlands, Rivers & Streams, Flood Zones	4	4	4	4	1	1	0
	Bus and Parent Drops - Safety & Efficiency	2	2	2	2	4	4	0
	Parking Capacity	2	2	2	2	4	4	0
	Play and Athletics Fields (inc. MMES Tennis Courts)	2	2	2	2	4	4	0
	Meets Sustainability Goals - Bike Paths, Rain Garden	4	4	4	4	4	4	0
Building	Existing Facility Deficiencies Addressed	2	2	4	4	4	4	4
	Entries Visible / Unobstructed Sight Lines	0	0	0	0	4	4	2
	Maximize MSBA Grant Reimbursement	4	4	4	4	4	4	0
	Phasing Minimizes Construction Duration	0	0	0	0	4	4	1
	Modular Classroom Swing Space not Required	4	0	4	4	4	4	4
	Construction Access and Staging	2	2	2	2	2	2	0
	Reduce Operational Costs - Utilities, Maintenance	1	2	1	2	1	2	2
	Reduce Operational Costs - Staff, Transport	1	2	1	2	1	2	2
	Total Project Cost	$45M-50M	$45M-50M	$75M-80M	$90M-95M	$80M-85M	$90M-95M	$70M-80M

SBC Meeting Agenda – December 15, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 10 – November 25, 2025
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Dore + Whittier Invoice | $51,587.00
   - ➢ JCJ Invoice | $58,635.00
4. Community Meeting #3 Feedback
5. Final Review of Alternatives with Preliminary Costs
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

Schedule Update/PDP

12/19-12/30 Draft PDP to SBC

1/6/26 SBC Meeting-PDP Approval to MSBA, Initial Grade Configuration Discussion

Schedule Update/PSR

1/26/26 SBC Meeting-Alternatives with Grade Configuration Discussion

1/28/26 Comm Meeting #4-Share PDP results and Evaluation of Alternatives with Grade Configuration

2/9/26 SBC Meeting-Review Comm Meeting Feedback, Review Alternatives and Grade Configuration

2/24/26 SBC Meeting-Confirm Preferred Alternatives for Pricing

3/10/26 SBC Meeting-Preferred Alternates if Necessary

3/24/26 SBC Meeting-Final Review of Alternatives and Grade Configuration

3/30/26 Comm Meeting #5-Review Preferred Options

4/14/26 SBC Meeting-Review Comm Meeting #4 Feedback and Approval of Preferred Solution

4/28/26 SBC Meeting-Approved PSR Submission to MSBA

SBC Meeting Agenda – December 15, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 10 – November 25, 2025
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - Dore + Whittier Invoice | $51,587.00
   - JCJ Invoice | $58,635.00
4. Community Meeting #3 Feedback
5. Final Review of Alternatives with Preliminary Costs
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – December 15, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 10 – November 25, 2025
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - Dore + Whittier Invoice | $51,587.00
   - JCJ Invoice | $58,635.00
4. Community Meeting #3 Feedback
5. Final Review of Alternatives with Preliminary Costs
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – December 15, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - ➢ SBC Meeting No. 10 – November 25, 2025
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - ➢ Dore + Whittier Invoice | $51,587.00
   - ➢ JCJ Invoice | $58,635.00
4. Community Meeting #3 Feedback
5. Final Review of Alternatives with Preliminary Costs
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

SBC Meeting Agenda – December 15, 2025 @ 6:00 PM

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
   - SBC Meeting No. 10 – November 25, 2025
3. Invoices & Commitments for Review and Approval (Vote Expected)
   - Dore + Whittier Invoice | $51,587.00
   - JCJ Invoice | $58,635.00
4. Community Meeting #3 Feedback
5. Final Review of Alternatives with Preliminary Costs
6. Schedule Update
7. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
8. Public Comment
9. Reflections & Actions Items
10. Adjourn

MEETING AGENDA

Meeting Date:	January 6, 2026
Meeting Time:	6:00PM – 8:00PM
Project Name:	Essex Elementary School
Project Number:	202306980020
Meeting Purpose:	School Building Committee Meeting
Location:	This meeting will be a hybrid meeting (both in-person and remote) at Essex Elementary School Cafeteria
Meeting Link:	https://us06web.zoom.us/j/84472035402

1. Call to Order & Intro
2. Previous Topics & Meeting Minutes (Vote Expected)
    - SBC Meeting No. 11 – December 15, 2025
3. Invoices & Commitments for Review and Approval (Vote Expected)
4. Preliminary Design Program Approval (Vote Expected)
5. Other Topics not Reasonably Anticipated 48 Hours Prior to the Meeting
6. Public Comment
7. Reflections & Actions Items
8. Adjourn

MEETING AGENDA

Meeting Date:	October 8, 2025
Meeting Time:	6:00PM – 8:00PM
Project Name:	Essex Elementary School Project
Meeting Purpose:	School Building Committee – Community Meeting No. 1
Location:	In person at Essex Elementary School cafeteria (12 Story Street, Essex MA) and online via Zoom.

Join Zoom: https://us06web.zoom.us/j/86021208740

---

1. Project Team Introduction
2. MSBA Process and Schedule
3. Existing Conditions
4. Site Analysis
5. Educational Programming
6. Next Steps
7. Q&A

Essex Elementary School Project
Community Meeting No. 01
October 8, 2025 @ 6:00 PM



Manchester Essex Regional School District

DORE + WHITTIER

JCJARCHITECTURE

Agenda

1. Project Team Introduction
2. MSBA Process and Schedule
3. Existing Conditions
4. Site Analysis
5. Educational Programming
6. Next Steps
7. Q&A

Organization/ Project Team



Massachusetts School Building Authority

Manchester Essex Regional School District

DORE + WHITTIER

JCJARCHITECTURE

Process


Middle High School
Memorial Elementary School
Essex Elementary School

Project Team

Dore + Whittier Team

Michael Burton
Partner In Charge

Christina Dell Angelo
Project Director

John Albright
Project Manager

Jacob Greco
Assistant Project Manager

JCJ Architecture Team

Jim LaPosta
Principal in Charge

Fawn Pellegrini
Project Manager

Jeff Elliott
Project Architect

Emily Czarnecki
Interior Designer

School Building Committee

Pam Beaudoin
Superintendent of Schools/SBC

Michelle Cresta
Director of Finance & Ops/SBC

Theresa Whitman
SC/SBC Co-Chair

John Binieris
SC/SBC Co-Chair

Annie Cameron
Essex Select Board/SBC

Tyler Virden
Project Executive/SBC

Gordon Brewster
OPM/SBC

Charlie Hay
Architect/SBC

Kim Provost
Essex Elementary School
Principal/SBC

Henry Oettinger
Manchester ConCom/SBC

Tim McDonald
Architect/SBC

Andy Oldeman
Manchester Finance
Committee/SBC

Lisa O'Donnell
Essex Planning Board/SBC
Advisor

Ariel Fernando Brain
Architect/SBC

Jen Hocherman
Architect/SBC

Michael Gerhardt
Civil Engineer/SBC

David Pereen
Plumbing/Fire Design/SBC
Advisor

Emily Dwyer
Essex ES Teacher Rep

Rachelle Russo
Essex ES Teacher Rep/SBC
Advisor

Kim Field
Essex ES Teacher Rep/SBC
Advisor

Steve Hunt
Facilities Director/SBC Advisor

MSBA Process



Massachusetts School Building Authority

Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities

Who is the Massachusetts School Building Authority (MSBA)?

A quasi-independent government authority created to reform the process of funding capital improvement projects in the Commonwealth's public schools.

The MSBA strives to work with local communities to create affordable, sustainable, and energy efficient schools across Massachusetts.

Collaborating with municipalities to equitably invest in finding the right-sized, most fiscally responsible and educationally appropriate solutions to create safe, sound, and sustainable learning environments.

MSBA Process



Massachusetts School Building Authority

Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities

Where do MSBA grant funds come from? How are they issued?

The MSBA has a dedicated revenue source of 1% from the state's 6.25% annual sales tax collections.



Grant funds are issued to the district using a "pay-as-you-go" reimbursement system for the duration of the project.

More than $16.6 billion issued to-date to cities, towns, and regional school districts for school construction projects.

MSBA Process

How does MSBA determine the level of financial support for projects?

Reimbursement rates are calculated based on a formula that is established in M.G.L ch.70B § 10

The formula starts all districts at a base rate of 31% (of eligible project costs).

The base rate may be adjusted based on three socioeconomic factors:

- **Community income factor**
- **Community property wealth factor**
- **Community poverty factor**

Essex ES Base Rate is 31%

6% potentially available from Green School (4%) incentive points and District maintenance policy (2%)

MSBA Process

What does “eligible project cost” mean?

The MSBA uses a total project budget template to apply and calculate their funding policies to determine the grant amount

The MSBA’s reimbursement rate is applied to “eligible project costs” to determine the MSBA’s participation on each budget line-item.

- **Construction and Site $605/sf + $73/sf**
- **Furniture, Fixtures & Equipment (FF&E) $1,995/sf**
- **Technology Equipment $1,570/sf**

There are funding caps on certain budget items, as well as “categorically ineligible” items that the MSBA will not participate in.

- **Pools, Field Houses, Elementary School Auditoriums, Central Offices, Senior Centers, site acquisition, and offsite improvements**

MSBA Process

These caps and ineligible costs will have an impact to the final (or "effective") reimbursement.

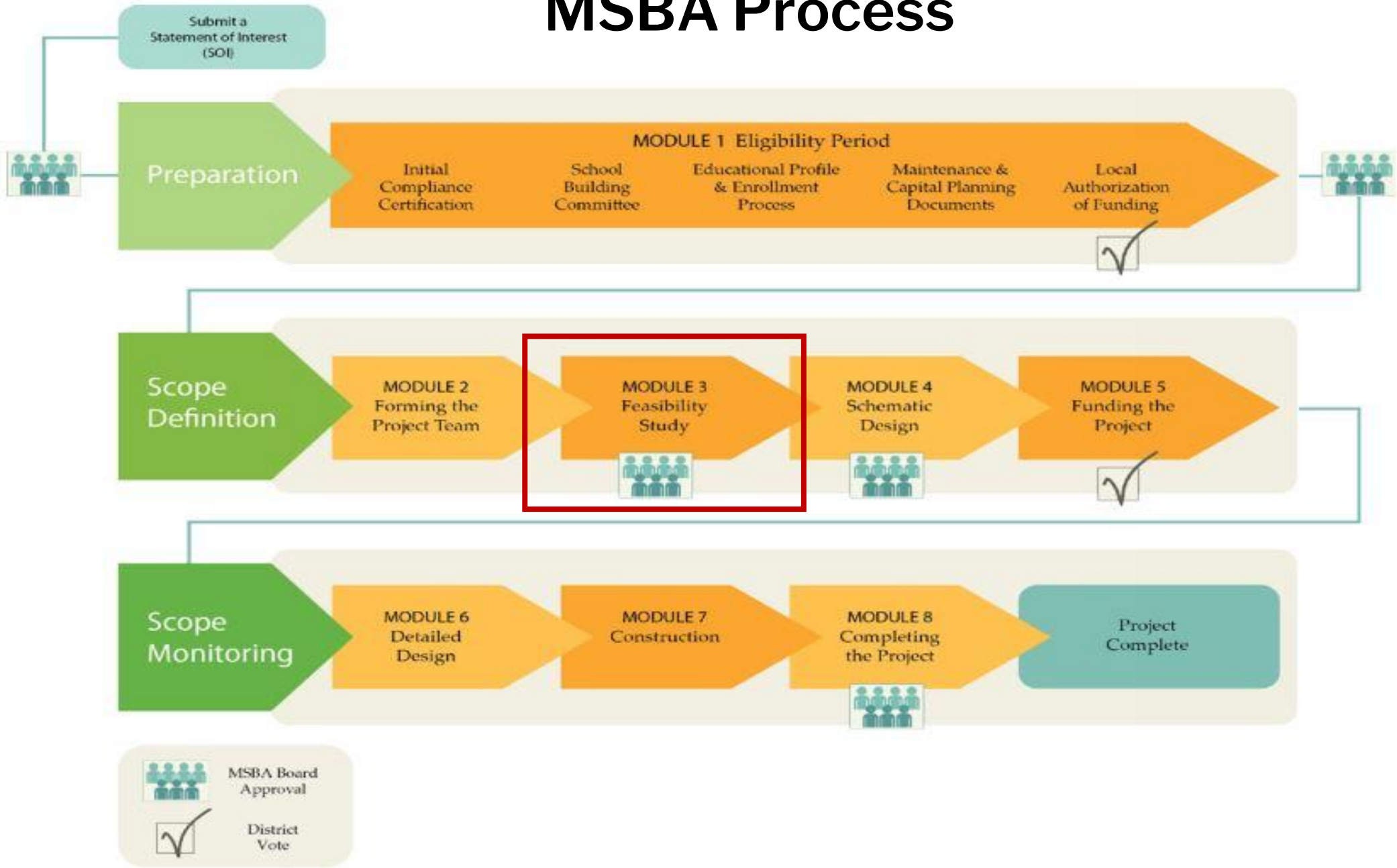
Memorial E.S. Example:

- **Base Rate of 31%**
- **CM@ Risk 1% (no longer applicable)**
- **Maintenance 1.93%**
- **Energy Efficient School 2% (has increased)**

MSBA reimbursement rate 35.93%

"Effective" reimbursement rate ~23% = $11.5 Million from the State

MSBA Process



Feasibility Phase Process

Preliminary Design Program (PDP)

- Identify the issues/articulate the educational plan
- List options to be studied in PSR

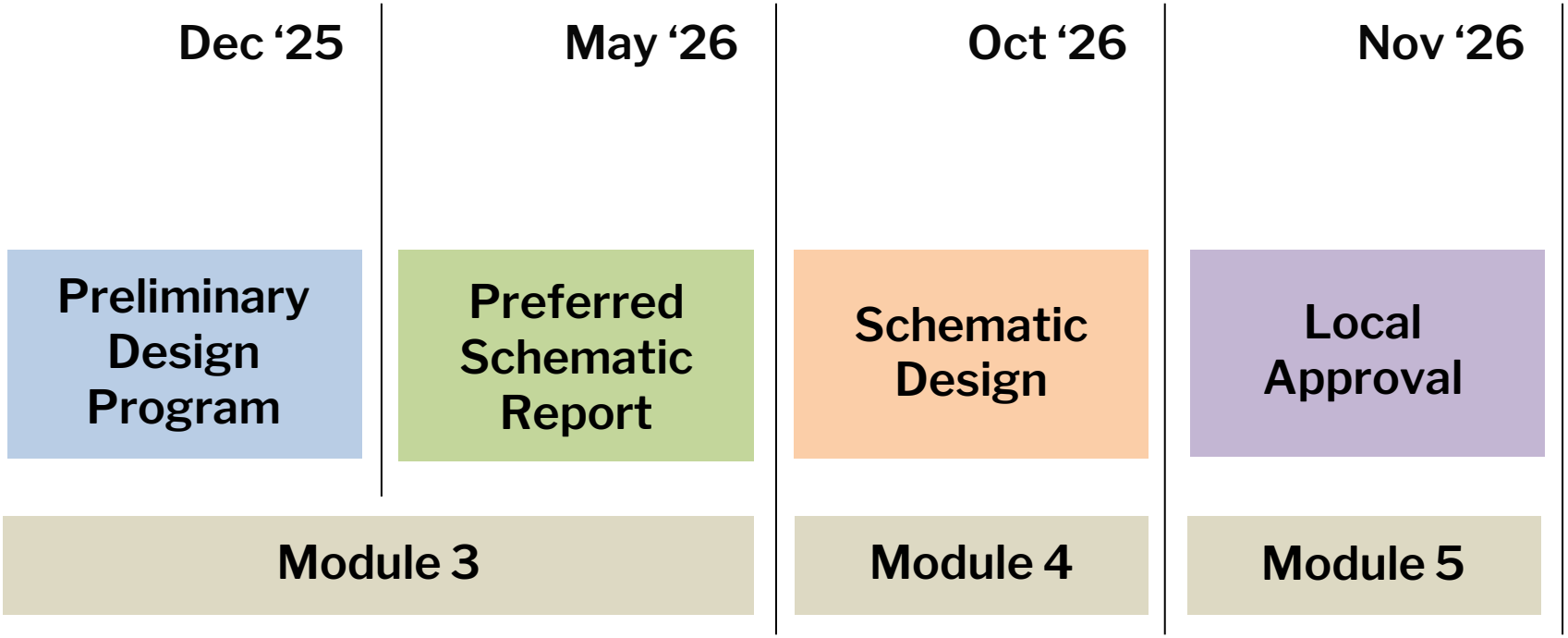
Preliminary Schematic Report (PSR)

- Evaluate the site and building options/select a preferred option

Schematic Design (SD)

- Develop schematic drawings and specifications to establish the project budget

Feasibility Phase Schedule



Community input is important throughout the process

Feasibility Phase Process

Local Approvals

- *Receive local funding approval in Essex and Manchester-by-the-Sea*
  - Approval November 2026
  - Depending upon preferred option

If Project is Approved

Proceed to detailed design and construction

Feasibility Phase Requirements

MSBA Requires Development of Several Options including:		
Renovation Only	Addition/Renovation	New Construction

Feasibility Phase Requirements

Feasibility Study Enrollment Configurations to be Studied for Essex Students		
Grades PreK-3 165 Students *Sited in Essex w/Grades 4 & 5 Integrated into Memorial*	Grades PreK-5 250 Students Sited in Essex	Pre-K to 5 515 Students Sited at Manchester Memorial with all Essex & Manchester students in one school
SC Program Vote/Redistricting		SC Program Vote/Redistricting
SC Vote to Amend Regional Agreement		SC Vote to Amend Regional Agreement
Essex & Manchester Town Meeting Vote to Approve Regional Agreement Amendment		Essex & Manchester Town Meeting Vote to Approve Regional Agreement Amendment

Essex & Manchester Town Meeting Full Project Vote & Debt Exclusion Vote

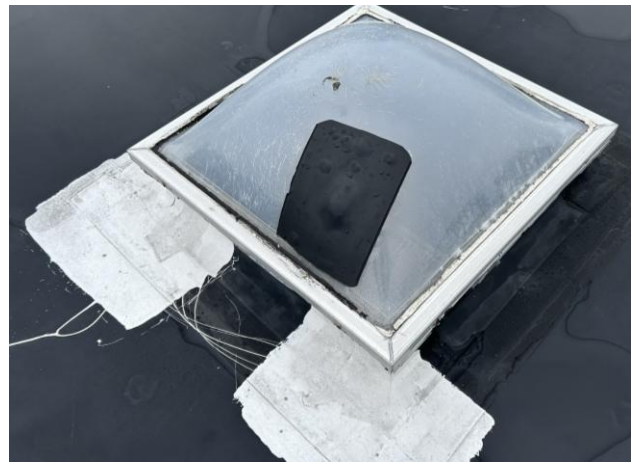
Building History

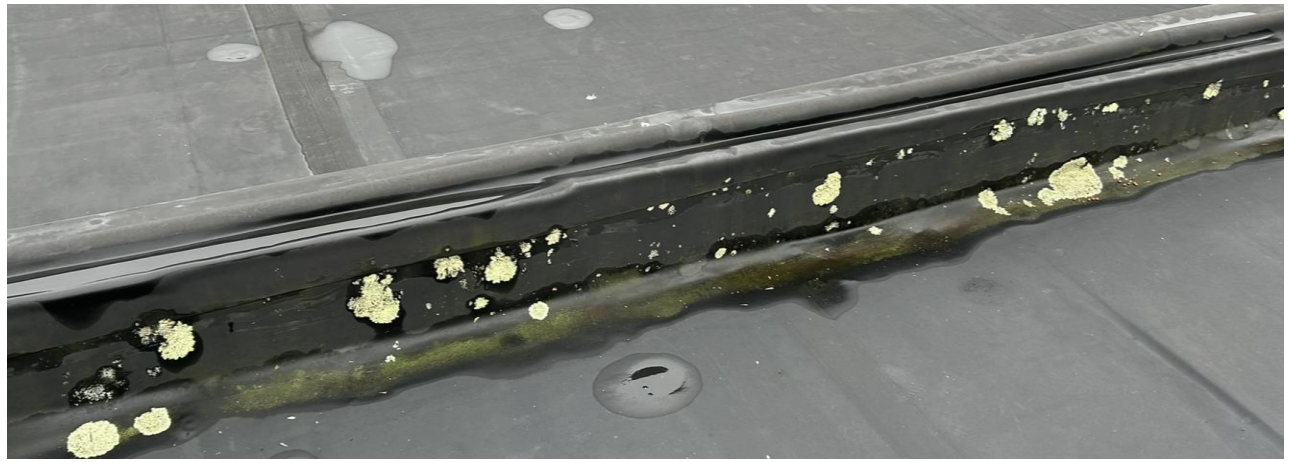
The Essex Elementary School building

1. Total building is approximately 52,900 SF
2. Originally built in 1957 (68 Years)
3. Addition provided in 1975 (50 Years) (media center and gymnasium)
4. The design team's existing investigations began and are ongoing.
5. Mechanical, electrical & plumbing systems has exceeded life expectancy
6. Roofing, windows and building materials are deteriorating

Existing Conditions









The roofing system is at life expectancy. There are several repairs, underlayment appears compromised, and water is ponding, so moisture is not shedding quickly.

Existing Conditions

Shedding water away from the school building through roofing and site drainage is important.
Moisture accelerates:

- Spalling at the existing roof eave
- Lichen on the masonry
- Compromises at the concrete foundation
- Plant growth occurring in unplanned or undesirable areas
- Deterioration of the original wood windows











Existing Conditions

Accessibility is being reviewed to enable students, staff and visitors of various abilities to enter the school together (not separate due to physical need, or otherwise). Some of the items included in this review of the site conditions and the school interior include:

- Exterior grade changes
- Interior level changes
- Pitch of sloped walkways and ramps
- Handrail design
- Push/pull clearances at doorways
- Circulation space & turn around space
- Mounting heights of accessories, plumbing, and equipment
- Furniture
- Signage





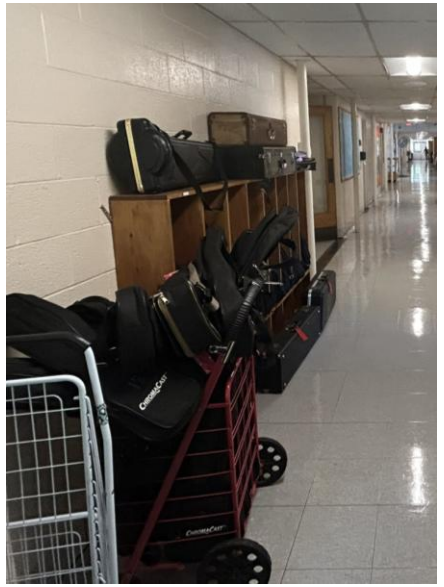


Existing Conditions

- Mechanical, electrical, plumbing systems are beyond or at life expectancy.
- Exhaust fans, unit ventilators and boiler are worn.
- Portable fans are seen throughout the school to supplement air circulation
- Interior finishes are buckling.
- Wood windows are deteriorating.
- The water heating system is at the end of its useful life. The mixing value is leaking.

- Considerations include:
- Efficiency of operation (operational costs for the District)
- Efficiency to heat, cool, dehumidify and provide fresh air circulation
- Availability of parts quickly for future repairs







Existing Conditions







Existing Conditions





Entry and exit sequence for students, staff, and visitors is being reviewed with the District to support the operational needs.

Identified Sites

Statement of interest includes:

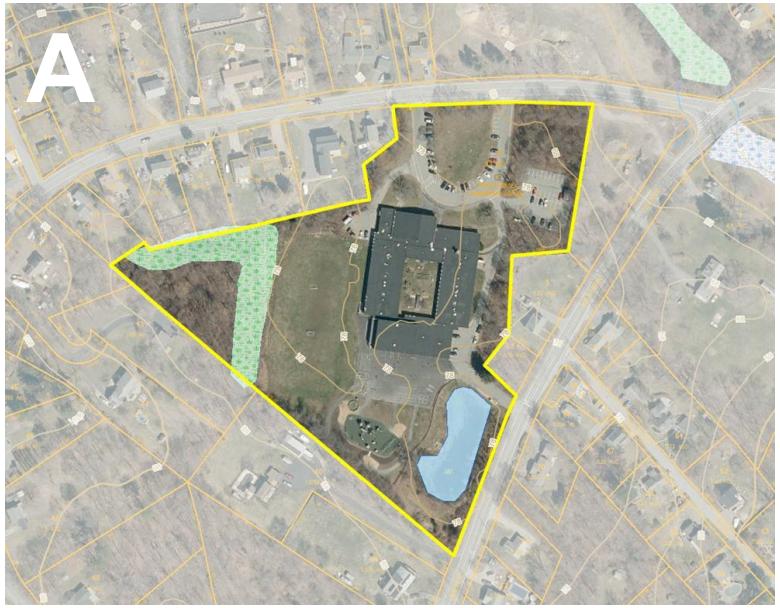
- Current Essex Elementary School
- Current Manchester Memorial Elementary School

Search of other potential sites in Essex:

Town of Essex owned parcels	112
Minimum 9.75 acres	16
Street access & utilities	7
Not used by other town function	1 → 30 Apple St

Town Hall, Spring Street Cemetery, Essex ES, Centennial Grove, DPW Transfer Station, Public Water Supply

Identified Sites



Current Essex Elementary School

12 Story Street, Essex MA



Current Manchester Memorial Elementary School

43 Lincoln Street, Manchester MA



Apple Street Site

30 Apple Street, Essex MA

Current Essex Elementary School



Opportunities

- Established identity in the community
- Developed site utilities
- Multiple options for site access

Constraints

- Construction activities on occupied school site
  Wetlands & pond
- Some topography on north side of site

Unknowns

- Soil conditions proximate to wetlands

Current Manchester Memorial ES



Opportunities

- Developed site utilities

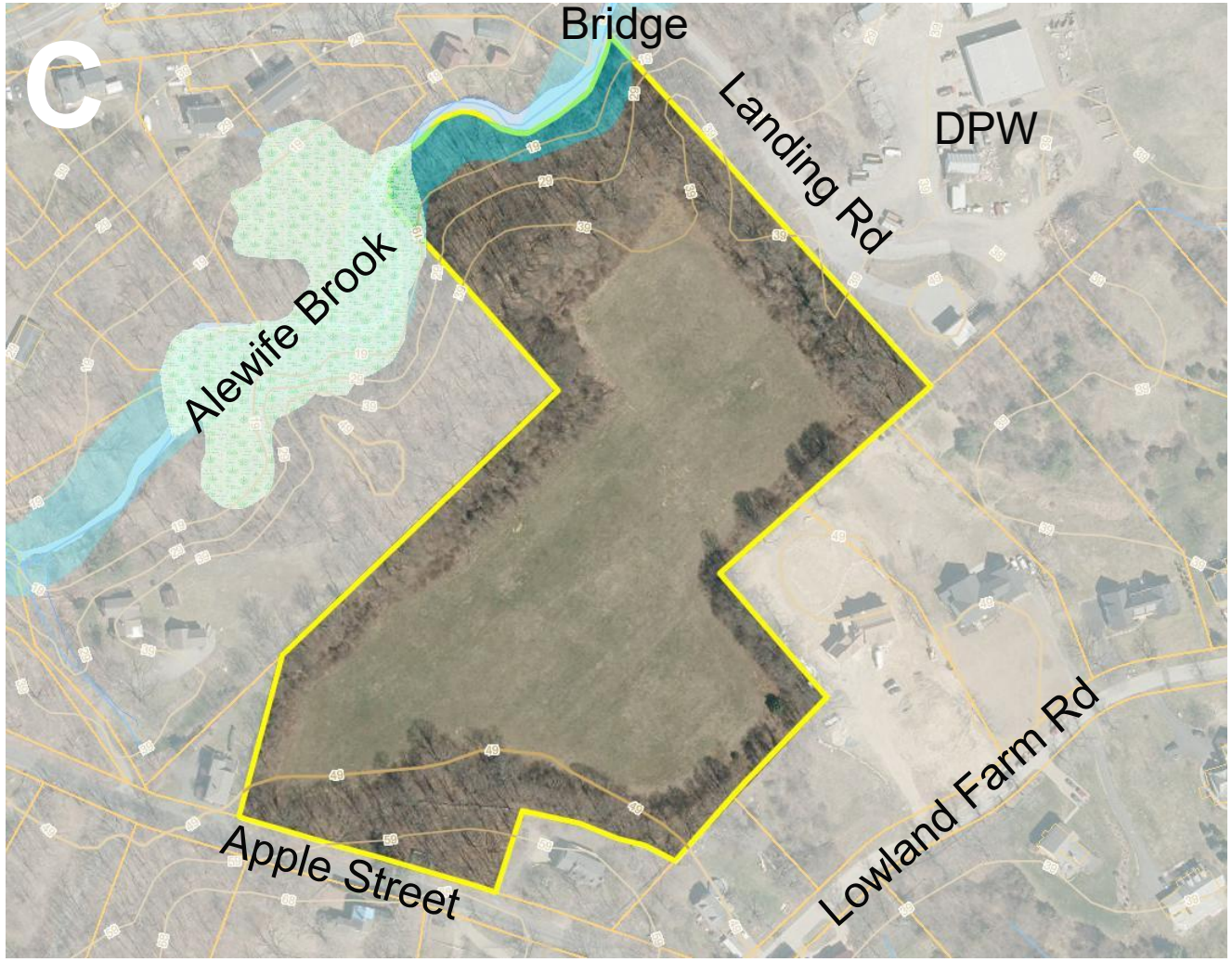
Constraints

- Construction activities on occupied school site
- Dense site with limited expansion options
- Wetlands and flood zone
- Transportation from Essex to Manchester
- Regional Agreement

Unknowns

- MSBA funding considerations

Apple Street Site



Opportunities

- No disruption to existing schools
- Construction phasing

Constraints

- Undeveloped site
- Restricted site access
- Impacts to adjacent residences

Unknowns

- Environmental risks

Site Evaluation Criteria

Legend	
	Not Preferable
	Neutral
	Advantageous







ESSEX ELEMENTARY SCHOOL PROJECT SITE ALTERNATIVES		SITE A CURRENT ESSEX ES	SITE B CURRENT MMES	SITE C APPLE STREET
		12 STORY ST	43 LINCOLN ST	30 APPLE ST
General	Location	ESSEX	MANCHESTER	ESSEX
	Size	9.75 ACRES	11.313 ACRES	11.50 ACRES
Site Development	Town Owned	●	●	●
	Adequate Buildable Area - Target minimum of 8 Usable Acres			
	Utilities Access			
	Subsurface Conditions – Geotechnical (Bearing Capacity, Organics, Ledge)			
	Subsurface Conditions – Environmental Contaminants			
	Regulatory - Wetlands, Rivers and Streams, Flood Zones			
	Future Development Options and Flexibility			
	Reimbursement potential from MSBA (Offsite, Budget cap)			
	Construction Complexity – Access, Laydown, Phasing			
Site Access	Infrastructure - Bridges, Road Surface			
	Walkability - Distances, Sidewalks			
	Safety - Road Width, Sight Lines			
	Busing			
Community	Compatible with District Agreement			
	Access to other Community Resources			
	Minimize Impact on Neighbors			
Education	Meets needs of Educational Program			
	Construction Impact on Existing School Activities			
Schedule	No significant schedule risks - "Shovel Ready"			

DRAFT

Educational Programming

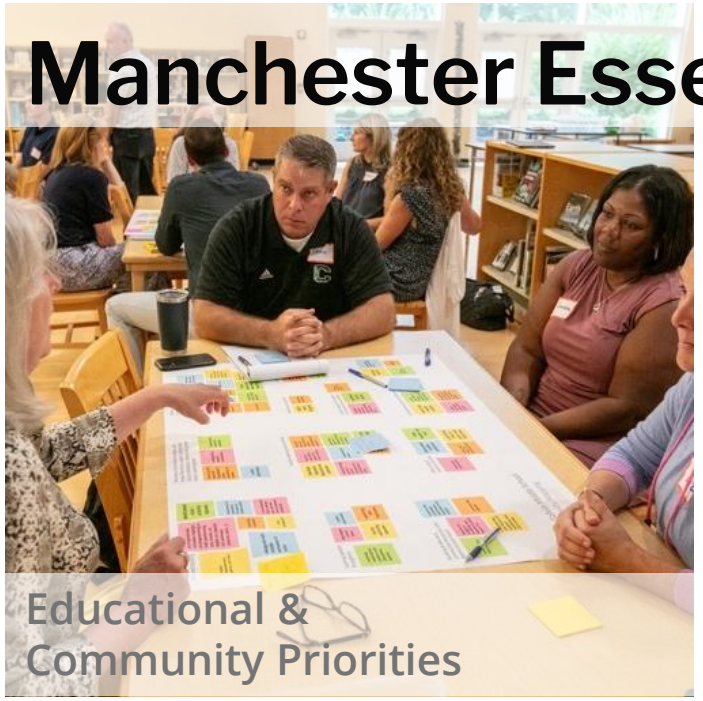
During the Feasibility phase, the District and its team collaborate to document their Educational Program.

- **The Educational Program enables an evaluation and creation of an initial space summary.**
- **Then the team evaluates the site and grade configuration alternatives to recommend the most cost effective and educationally appropriate preferred solution.**

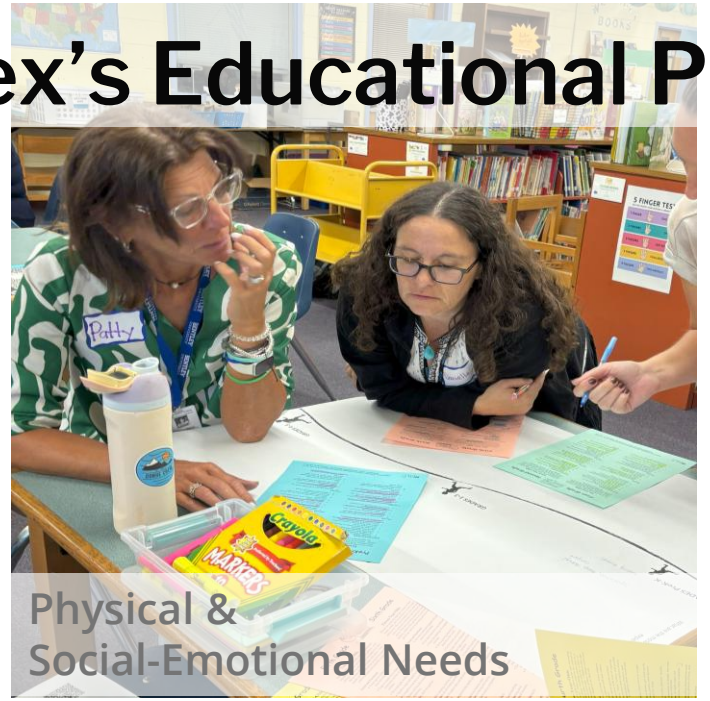
The Educational Program is developed through programming workshops to:

- **Build a shared understanding**
- **Envision through an educational and scenario-based lens**
- **Align renovated or new spaces with the educational program**

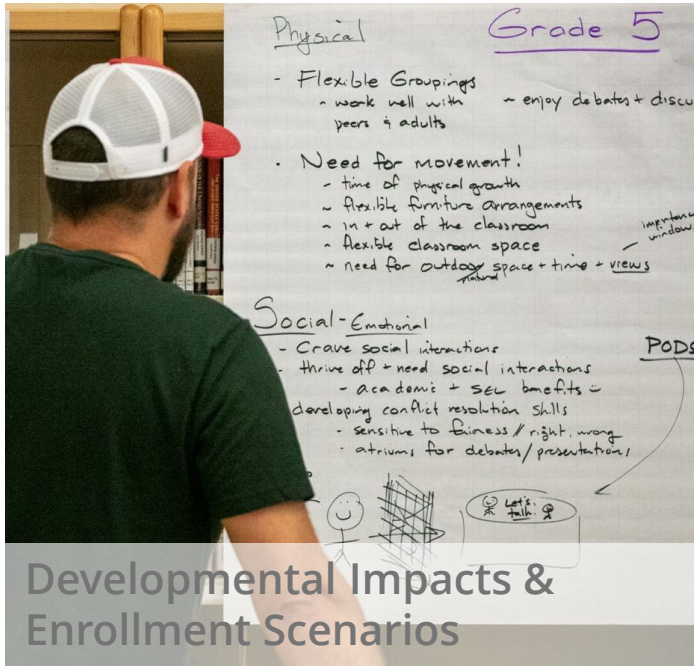
Manchester Essex's Educational Program



Educational &
Community Priorities



Physical &
Social-Emotional Needs



Developmental Impacts &
Enrollment Scenarios

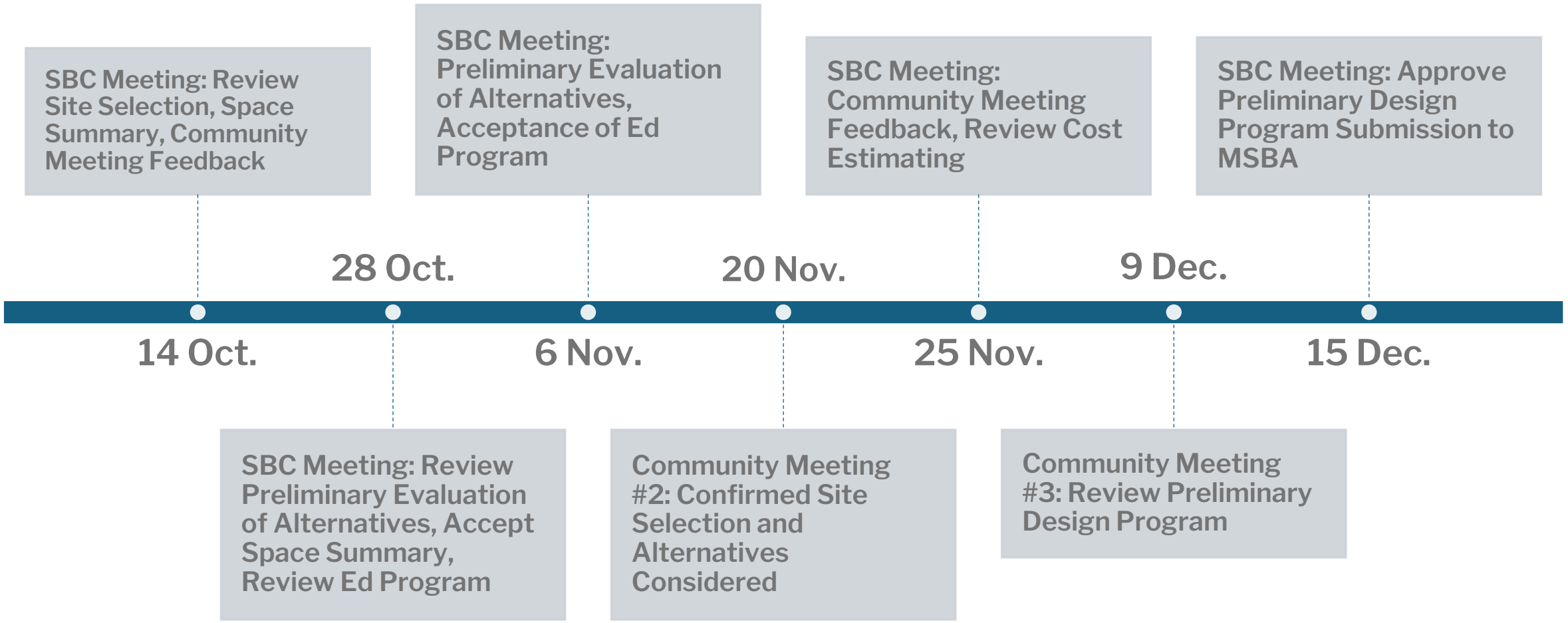


Program
Adjacencies



High-Quality
Instructional Practices

Upcoming Meetings/Next Steps



Project Website



Thank you!



MEETING AGENDA

Meeting Date:	November 20, 2025
Meeting Time:	6:00PM – 8:00PM
Project Name:	Essex Elementary School Project
Meeting Purpose:	School Building Committee – Community Meeting No. 2
Location:	In person at Essex Elementary School cafeteria (12 Story Street, Essex MA) and online via Zoom.

Join Zoom: https://us06web.zoom.us/j/82584703859

---

1. Project Overview
2. Review of Potential Sites
3. Preliminary Review of Alternatives
4. Next Steps
5. Q&A

Essex Elementary School Project
Community Meeting No. 02
November 20, 2025 @ 6:00 PM



Agenda

1. Project Overview
2. Review of Sites
3. Preliminary Review of Alternatives
4. Next Steps
5. Q&A

Organization/ Project Team



Massachusetts School Building Authority

Manchester Essex Regional School District

DORE + WHITTIER

JCJARCHITECTURE

Project Team

Dore + Whittier Team

Michael Burton
Partner In Charge

Christina Dell Angelo
Project Director

John Albright
Project Manager

Jacob Greco
Assistant Project Manager

Rachel Rincon
Assistant Project Manager

JCJ Architecture Team

Jim LaPosta
Principal in Charge

Dustin Lombardi
Project Architect

Fawn Pellegrini
Project Manager

Jeff Elliott
Project Architect

Emily Czarnecki
Interior Designer

School Building Committee

Pam Beaudoin
Superintendent of Schools/SBC

Michelle Cresta
Director of Finance & Ops/SBC

Theresa Whitman
SC/SBC Co-Chair

John Binieris
SC/SBC Co-Chair

Annie Cameron
Essex Select Board/SBC

Tyler Virden
Project Executive/SBC

Gordon Brewster
OPM/SBC

Charlie Hay
Architect/SBC

Kim Provost
Essex Elementary School Principal/SBC

Henry Oettinger
Manchester ConCom/SBC

Tim McDonald
Architect/SBC

Andy Oldeman
Manchester Finance Committee/SBC

Lisa O'Donnell
Essex Planning Board/SBC Advisor

Ariel Fernando Brain
Architect/SBC

Jen Hocherman
Architect/SBC

Michael Gerhardt
Civil Engineer/SBC

David Pereen
Plumbing/Fire Design/SBC Advisor

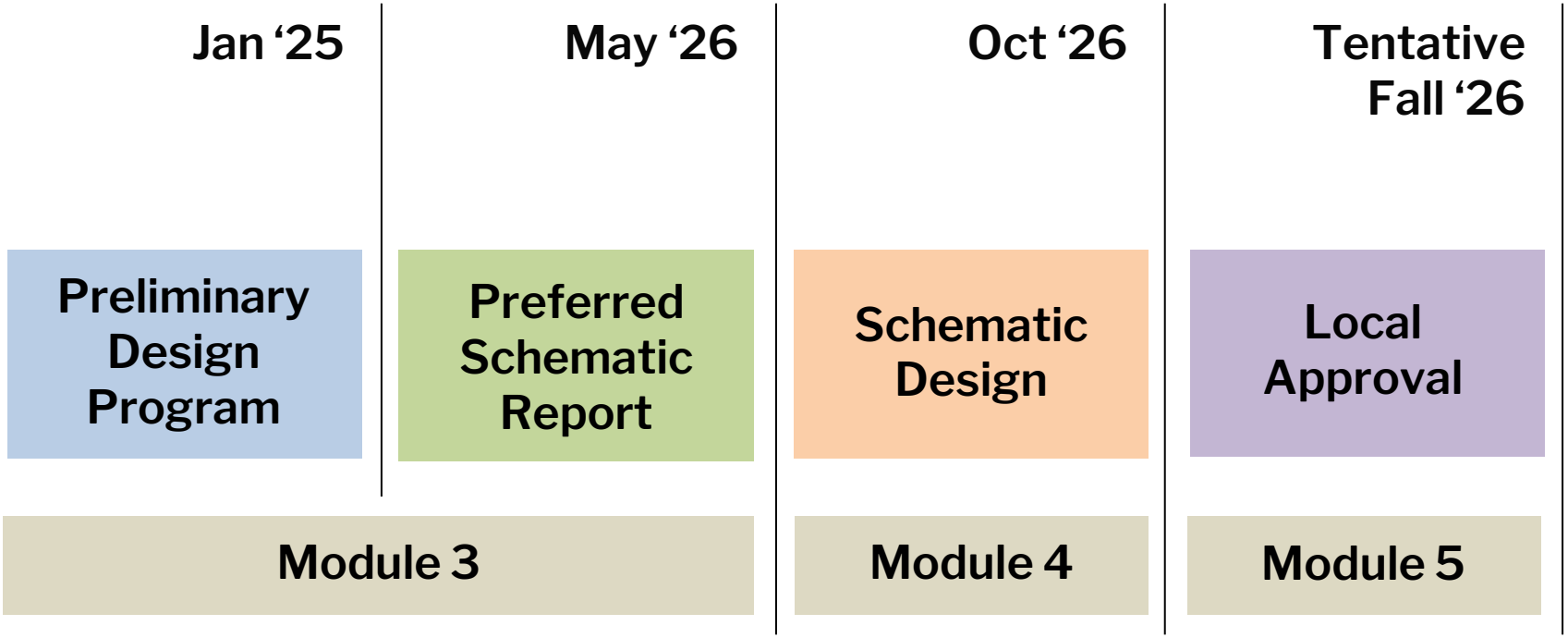
Emily Dwyer
Essex ES Teacher Rep

Rachelle Russo
Essex ES Teacher Rep/SBC Advisor

Kim Field
Essex ES Teacher Rep/SBC Advisor

Steve Hunt
Facilities Director/SBC Advisor

Feasibility Phase Schedule



Timeline is subject to change during the process

Feasibility Phase Requirements

MSBA Requires Development of Several Options including:		
Renovation Only	Addition/Renovation	New Construction

Feasibility Phase Requirements

Feasibility Study Enrollment Configurations to be Studied for Essex Students		
Grades PreK-3 165 Students *Sited in Essex w/Grades 4 & 5 Integrated into Memorial*	Grades PreK-5 250 Students Sited in Essex	Pre-K to 5 515 Students Sited at Manchester Memorial with all Essex & Manchester students in one school
SC Program Vote/Redistricting		SC Program Vote/Redistricting
SC Vote to Amend Regional Agreement		SC Vote to Amend Regional Agreement
Essex & Manchester Town Meeting Vote to Approve Regional Agreement Amendment		Essex & Manchester Town Meeting Vote to Approve Regional Agreement Amendment

Essex & Manchester Town Meeting Full Project Vote & Debt Exclusion Vote

Identified Sites

Statement of interest includes:

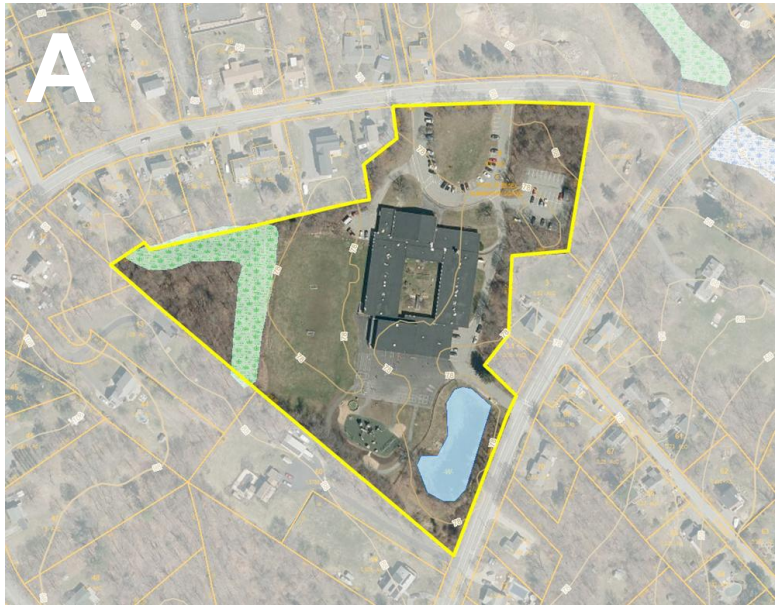
- Current Essex Elementary School
- Current Manchester Memorial Elementary School

Search of other potential sites in Essex:

Town of Essex owned parcels	112
Minimum 9.75 acres	16
Street access & utilities	7
Not used by other town function	1 → 30 Apple St

Town Hall, Spring Street Cemetery, Essex ES, Centennial Grove, DPW Transfer Station, Public Water Supply

Identified Sites



Current Essex Elementary School

12 Story Street, Essex MA



Current Manchester Memorial Elementary School

43 Lincoln Street, Manchester MA



Apple Street Site

Removed

30 Apple Street, Essex MA

Current Essex Elementary School



Opportunities

- Established identity in the community
- Developed site utilities
- Multiple options for site access
- Sidewalks on adjacent streets

Constraints

- Construction activities on occupied school site
- Wetlands & pond
- Exposed ledge on north side of site

Current Manchester Memorial ES



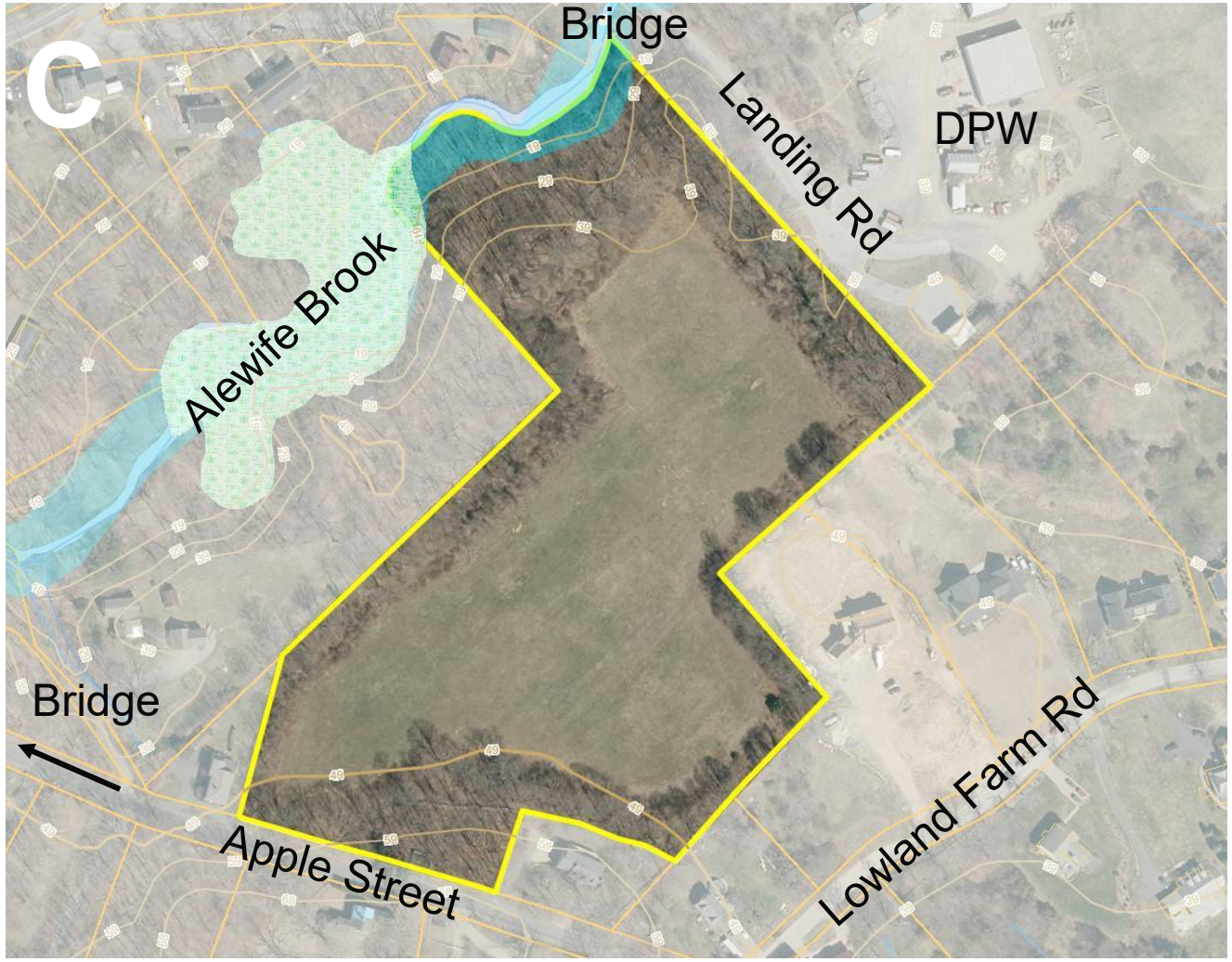
Opportunities

- Developed site utilities

Constraints

- Construction activities on occupied school site
- Dense site already fully built out
- Loss of tennis courts
- Wetlands and flood zone
- Transportation from Essex to Manchester
- Regional Agreement
- MSBA funding considerations

Apple Street Site



Opportunities

- No disruption to existing schools
- Simplified construction phasing

Constraints

- Restricted site access
- No sidewalks
- Municipal utilities are undersized
- Offsite developments are not MSBA reimbursable
- Impacts to adjacent residences / land acquisition for road widening
- Regional Agreement Amendment

Site Evaluation

Legend	
	Not Preferable
	Neutral
	Advantageous







ESSEX ELEMENTARY SCHOOL PROJECT SITE ALTERNATIVES		SITE A CURRENT ESSEX ES	SITE B CURRENT MMES	SITE C APPLE STREET
		12 STORY ST	43 LINCOLN ST	30 APPLE ST
General	Location	ESSEX	MANCHESTER	ESSEX
	Size	9.75 ACRES	11.313 ACRES	11.50 ACRES
Site Development	Town Owned			
	Adequate Buildable Area - (Current Site 9.75 Acres)			
	Utilities Access			
	Subsurface Conditions – Geotechnical (Bearing Capacity, Organics, Ledge)			
	Environmental Contaminants			
	Regulatory - Wetlands, Rivers and Streams, Flood Zones			
	Future Development Options and Flexibility			
	Reimbursement potential from MSBA (Offsite, Budget cap)			
	Construction Complexity – Access, Laydown, Phasing			
Site Access	Infrastructure - Bridges, Road Surface			
	Walkability - Distances, Sidewalks			
	Safety - Road Width, Sight Lines			
	Busing			
Community	Compatible with Regional Agreement			
	Access to other Community Resources			
	Minimize Impact on Neighbors			
Education	Meets needs of Educational Program			
	Construction Impact on Existing School Activities			
Schedule	No significant schedule risks - "Shovel Ready"			

Design Alternatives









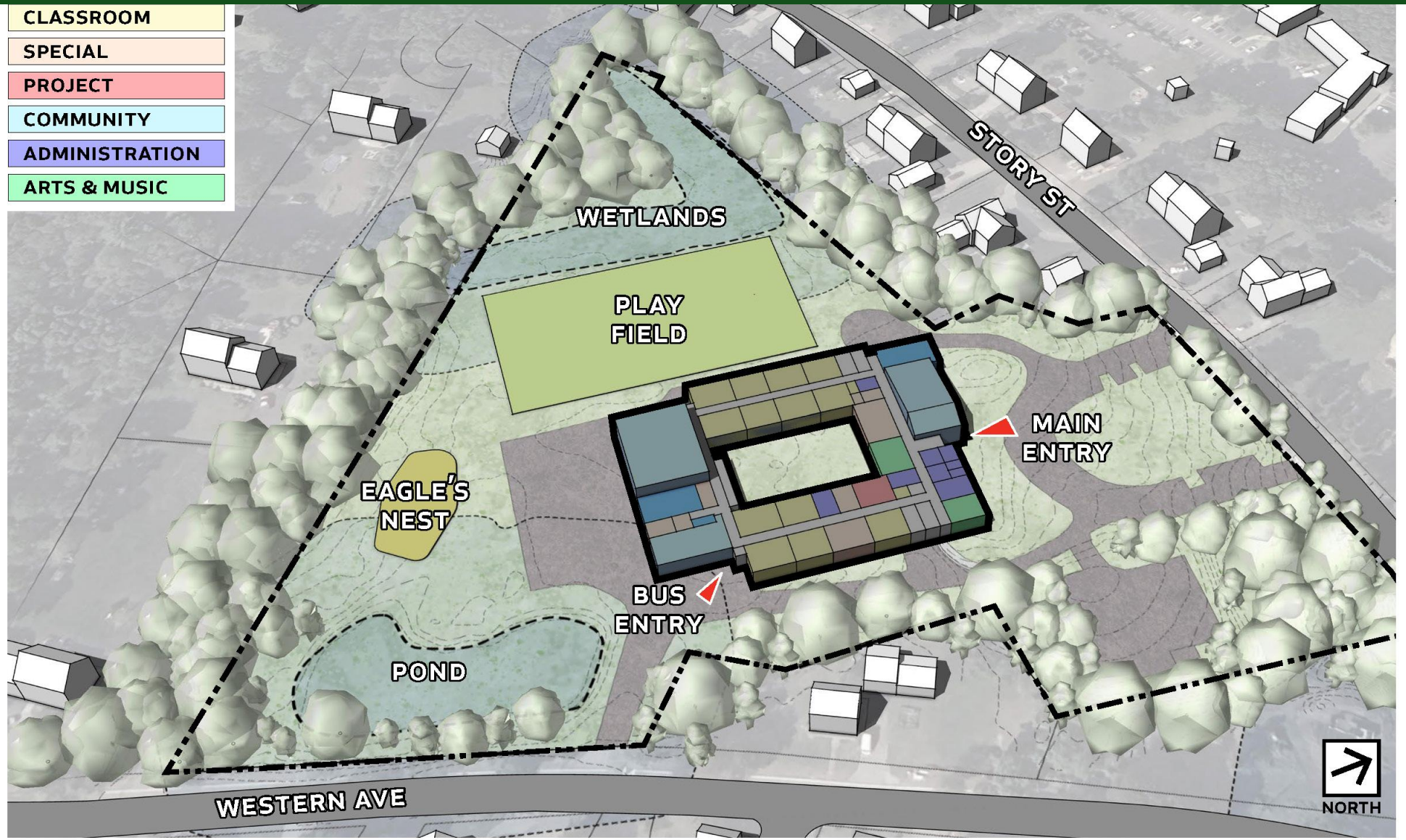
ESSEX ELEMENTARY SCHOOL PROJECT EVALUATION OF DESIGN ALTERNATIVES		SITE A CURRENT ESSEX ES						SITE B CURRENT MMES
		A0.1	A0.2	A1.1	A1.2	A2.1	A2.2	B1.1
		Code Upgrade/ Base Repair	Code Upgrade/ Base Repair	Addition/ Renovation	Addition/ Renovation	New Construction	New Construction	Addition/ Renovation
General	Enrollment	165	250	165	250	165	250	515
	Grade Configuration	K-3	K-5	K-3	K-5	K-3	K-5	K-5
	Renovated Area	53,036 GFA	53,036 GFA	53,036 GFA	53,036 GFA	0	0	77,102 GFA
	New Area	0	0	7,741 GFA	20,637 GFA	60,777 GFA	73,673 GFA	41,899 GFA
	Total Area	53,036 GFA	53,036 GFA	60,777 GFA	73,673 GFA	60,777 GFA	73,673 GFA	119,001 GFA
	Construction Phases	TBD	TBD	TBD	TBD	2	2	TBD

Design Alternatives

OPTION A0.1
165 STUDENTS
K-3
CODE UPGRADE/BASE REPAIR
53,036 GFA RENOVATION

OPTION A0.2
250 STUDENTS
K-5
CODE UPGRADE/BASE REPAIR
53,036 GFA RENOVATION

CONSIDERATIONS
- EXISTING BUILDING IS SMALLER THAN TARGET
- CORE CLASSROOMS ARE UNDERSIZED
- GYM IS UNDERSIZED
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- SWING SPACE
  A0.1: MOVING GRADES 4-5 TO MMES CREATES SWING SPACE (4 CLASSROOMS)
  A0.2: MODULAR CLASSROOMS WILL BE REQUIRED TO PROVIDE SWING SPACE
- K-3 REQUIRES MODIFICATION TO THE REGIONAL AGREEMENT



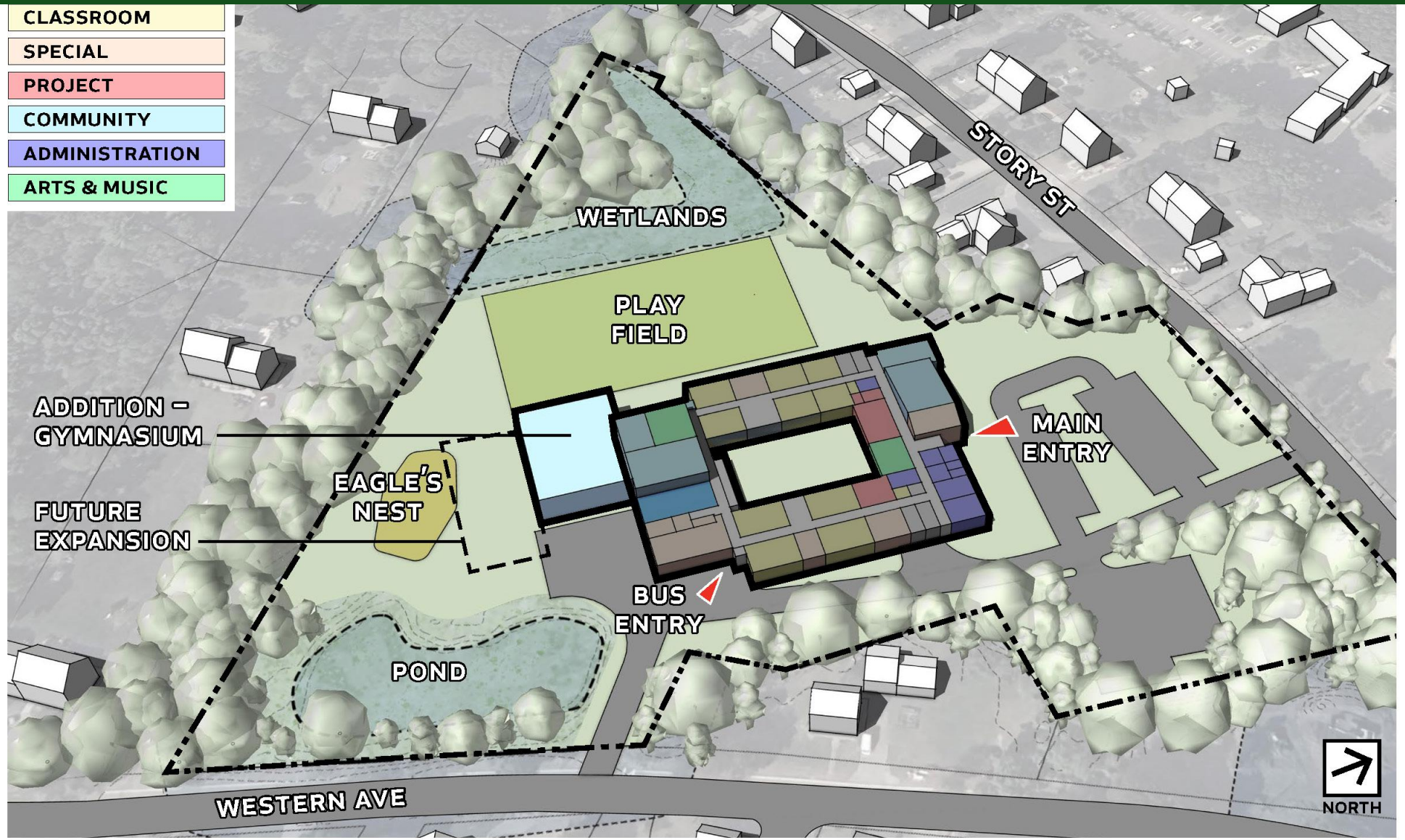
Design Alternatives

OPTION A1.1

165 STUDENTS
K-3
ADDITION/RENOVATION

53,036 GFA RENOVATION
7,741 GFA ADDITION

TOTAL: 60,777 GFA



CONSIDERATIONS

- FULL-SIZE GYM COULD BE ACCOMMODATED IN AN ADDITION
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- MOVING GRADES 4-5 TO MMES CREATES SWING SPACE (4 CLASSROOMS)
- K-3 REQUIRES MODIFICATION TO THE REGIONAL AGREEMENT

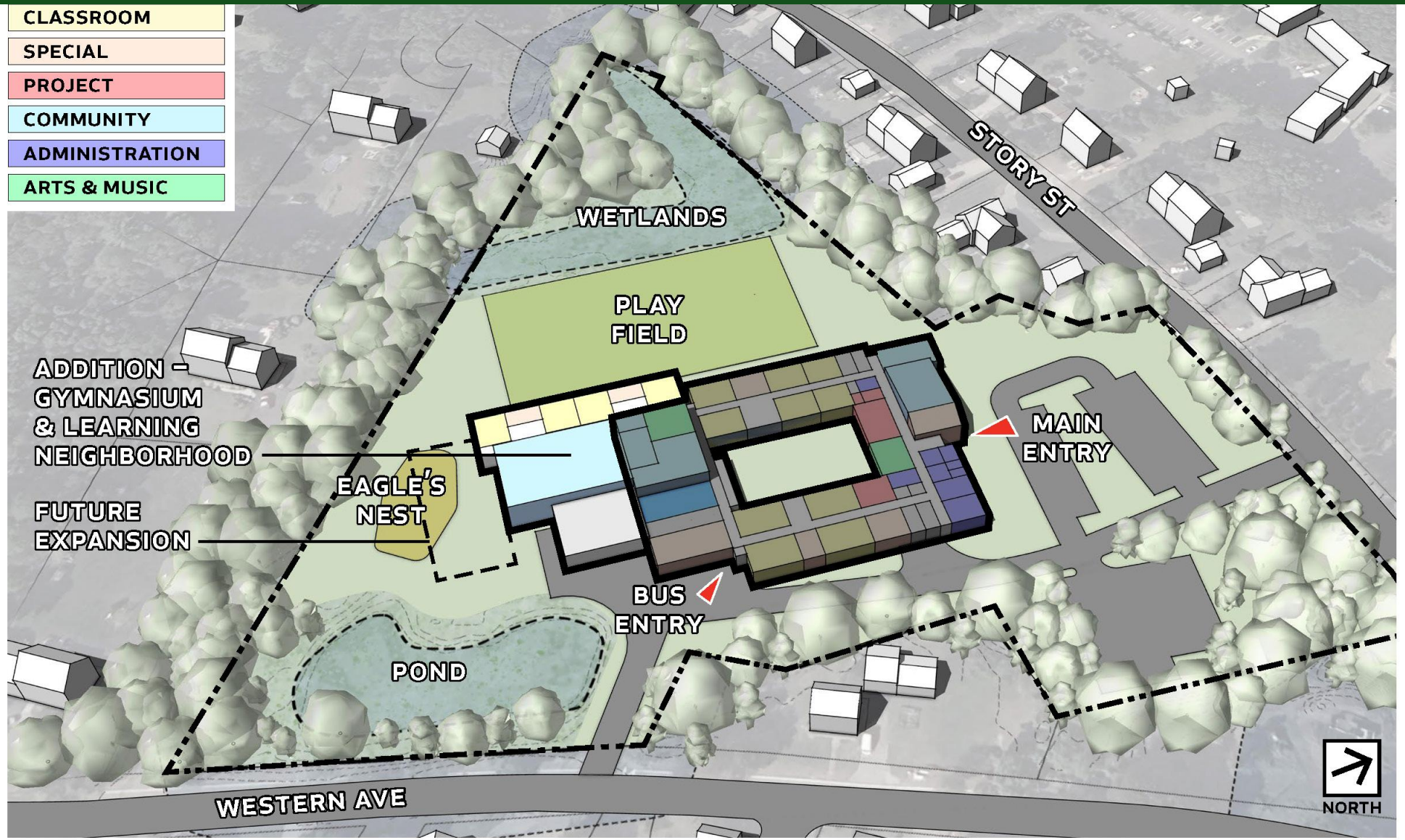
Design Alternatives

OPTION A1.2

250 STUDENTS
K-5
ADDITION/RENOVATION

53,036 GFA RENOVATION
20,637 GFA ADDITION

TOTAL: 73,673 GFA



CONSIDERATIONS

- FULL-SIZE GYM COULD BE ACCOMMODATED IN AN ADDITION
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- SWING SPACE (4 CLASSROOMS) COULD BE ACCOMMODATED IN AN ADDITION

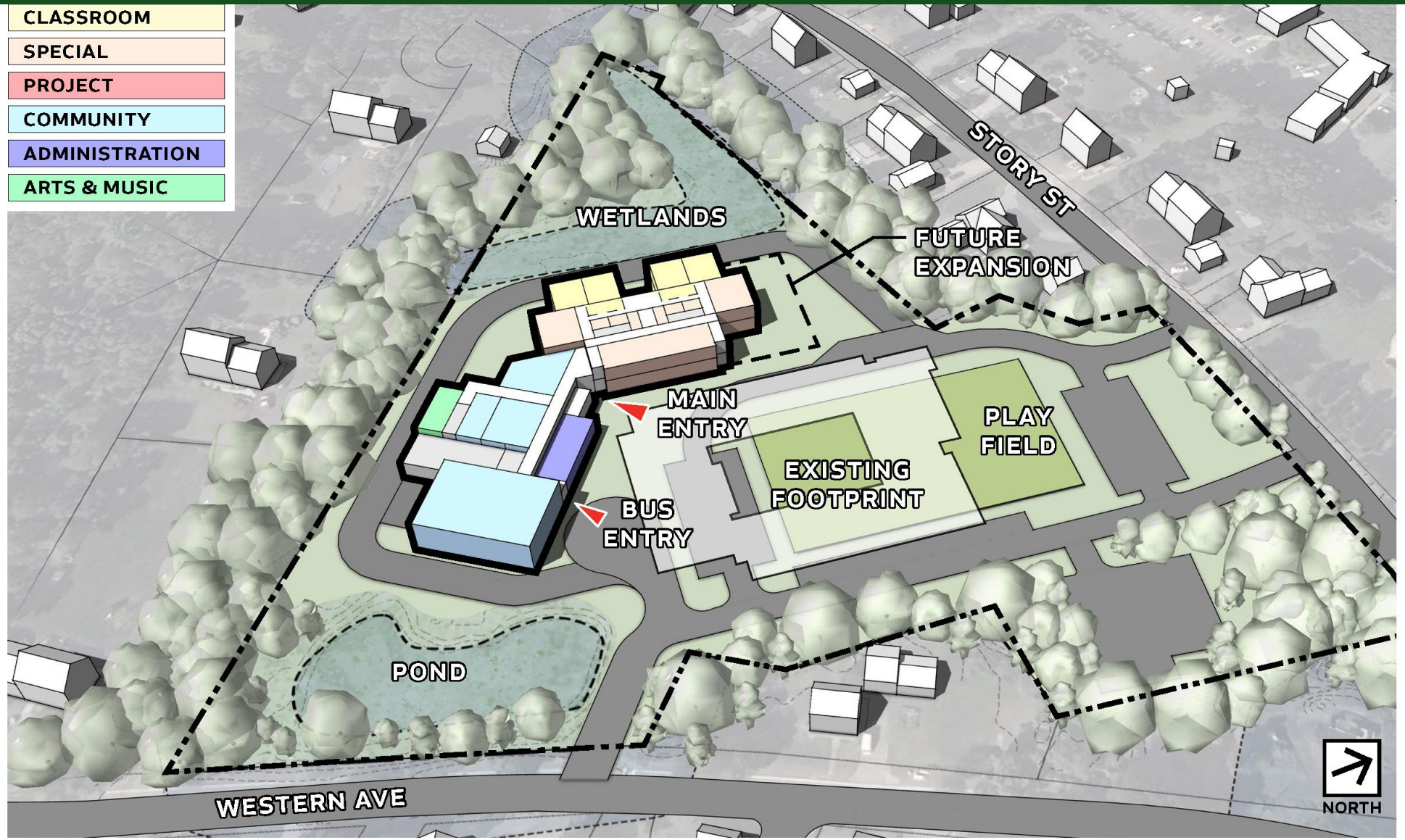
Design Alternatives

OPTION A2.1

165 STUDENTS
K-3
NEW

60,777 GFA NEW

TOTAL: 60,777 GFA



CONSIDERATIONS

- SITE LAYOUT PROVIDES FULL PERIMETER ACCESS AND IMPROVED SIGHT LINES
- DESIRED ROOM SIZES AND ADJACENCIES CAN BE PROVIDED
- ACCESS TO COMMUNITY SPACES EASILY CONTROLLED
- LEARNING NEIGHBORHOOD INTEGRATE SPECIAL EDUCATION AND INTERVENTIONISTS
- K-3 REQUIRES MODIFICATION TO THE REGIONAL AGREEMENT

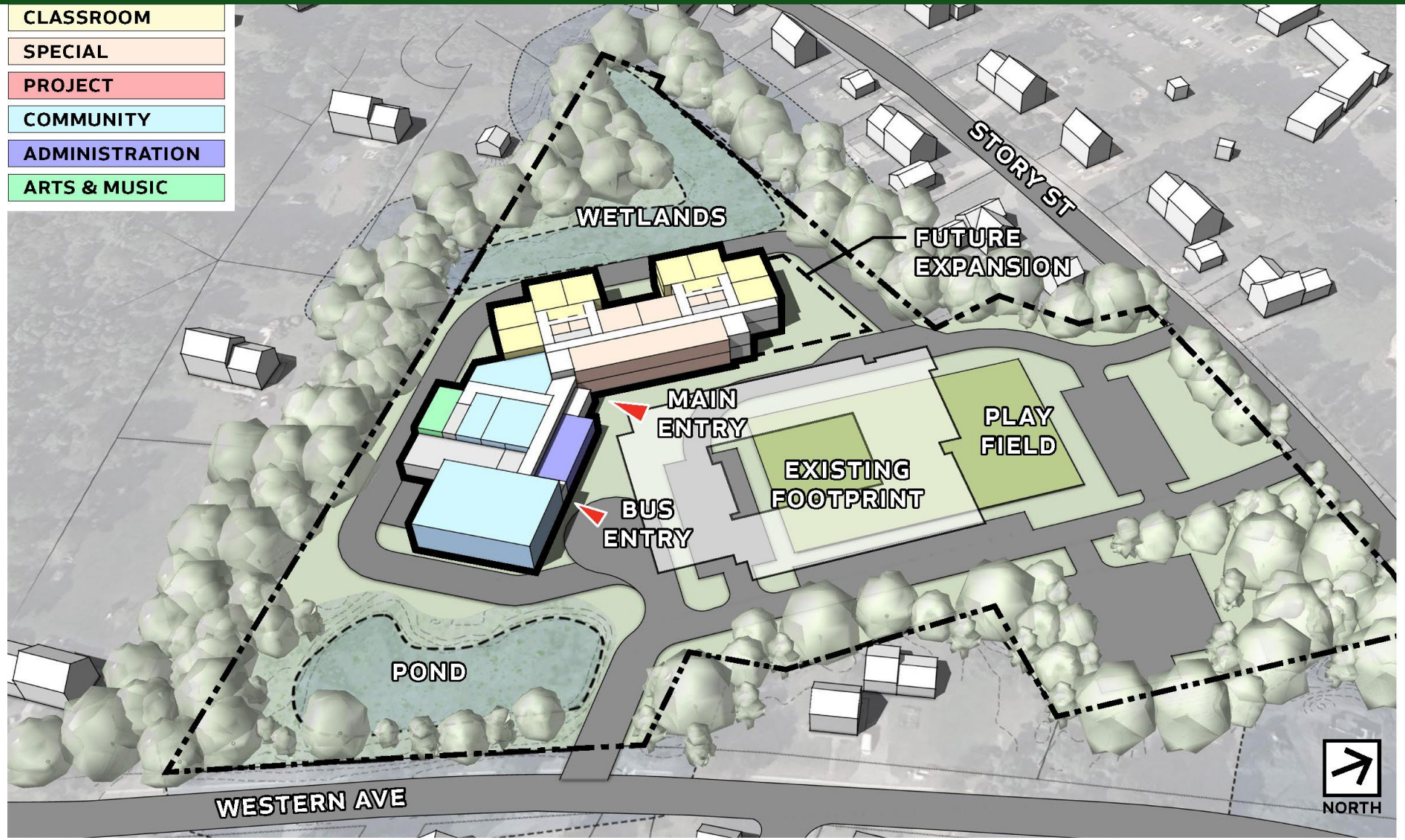
Design Alternatives

OPTION A2.2

250 STUDENTS
K-5
NEW

73,673 GFA NEW

TOTAL: 73,673 GFA



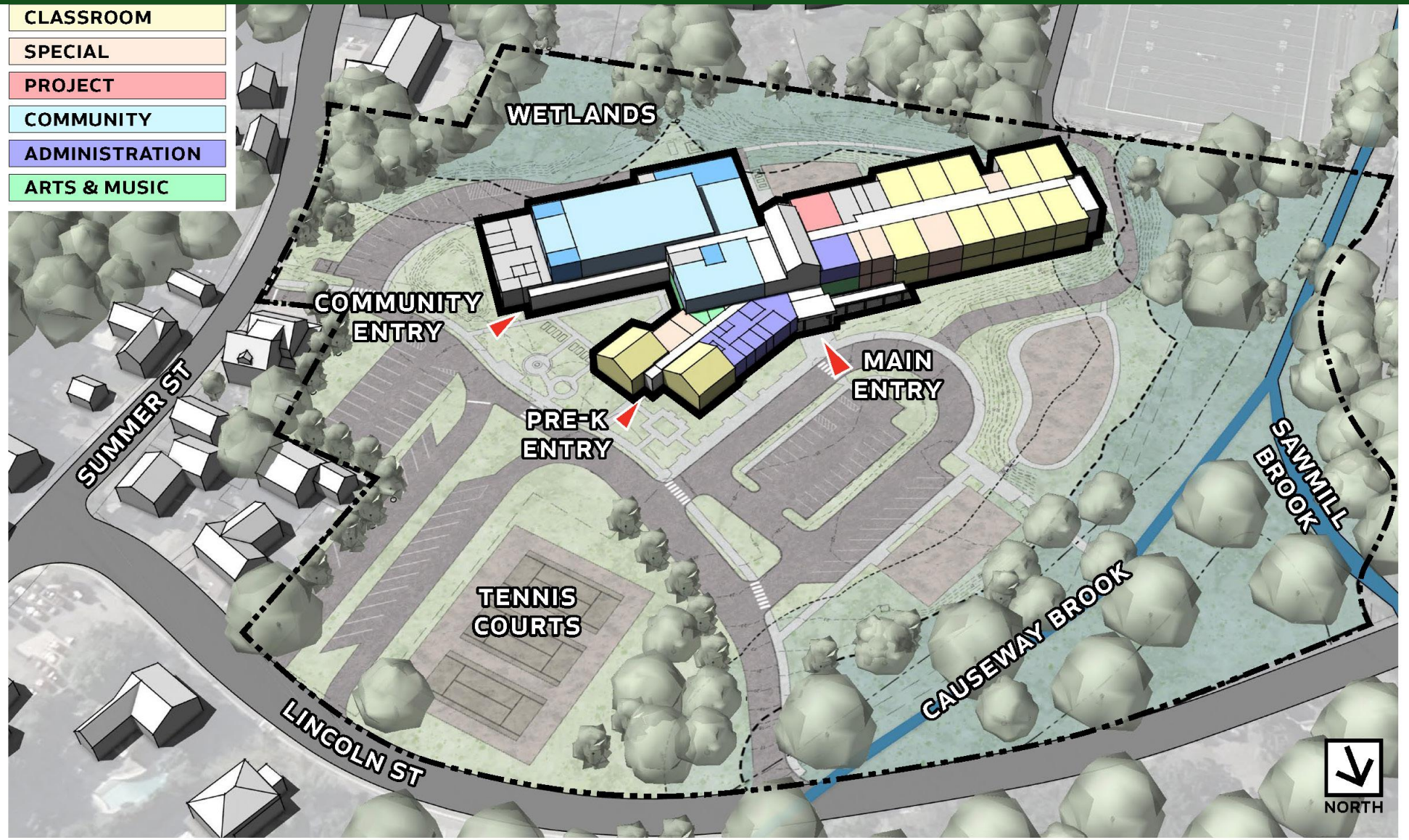
CONSIDERATIONS

- SITE LAYOUT PROVIDES FULL PERIMETER ACCESS AND IMPROVED SIGHT LINES
- DESIRED ROOM SIZES AND ADJACENCIES CAN BE PROVIDED
- ACCESS TO COMMUNITY SPACES EASILY CONTROLLED
- LEARNING NEIGHBORHOOD INTEGRATE SPECIAL EDUCATION AND INTERVENTIONISTS

Design Alternatives

EXISTING MMES
335 STUDENTS
K-5

77,102 GFA EXISTING



Design Alternatives

OPTION B1.1

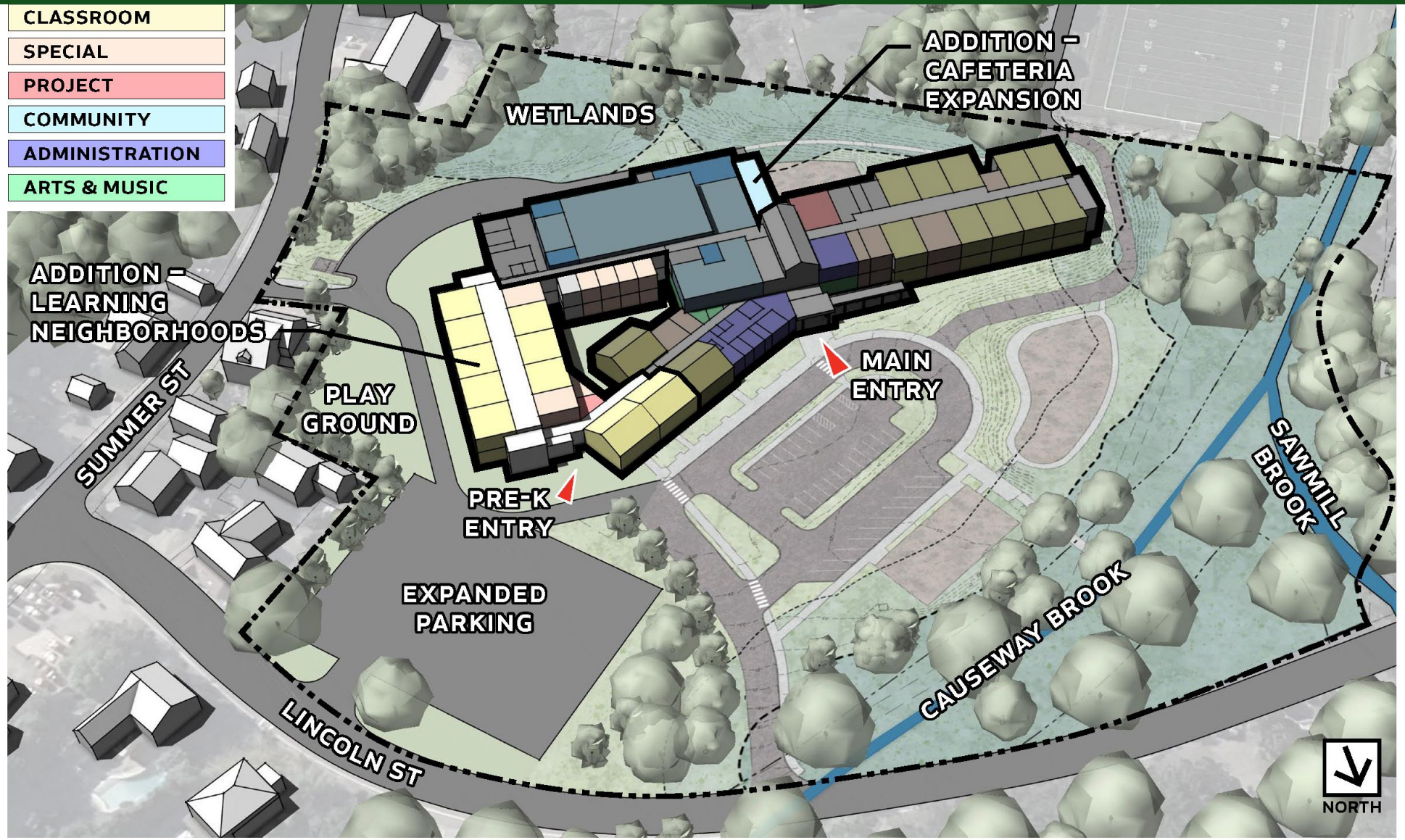
515 STUDENTS
K-5
ADDITION/RENOVATION

77,102 GFA EXISTING/RENO
41,899 GFA NEW

TOTAL: 119,001 GFA

CONSIDERATIONS

- SITE AMENITIES WILL BE LIMITED SUCH AS PLAY SPACE AND PARKING CAPACITY
- REMOVAL OF TENNIS COURTS LIKELY
- NO FUTURE EXPANSION POTENTIAL
- BUILDING CODE AREA LIMITATIONS REQUIRES FIRE WALLS SEPARATING ADDITIONS
- COMMUNITY ENTRY AND NEAR-BY PARKING COMPROMISED BY ADDITION LOCATION
- NUMEROUS ISSUES ASSOCIATED WITH ELIMINATING A SCHOOL IN ESSEX (TRAVEL, BUSING, AFTERSCHOOL PROGRAMS, REGIONAL AGREEMENT, ETC.)



Next Steps/Upcoming Meetings

12/9/2025 Community Meeting No. 3

- Located at Manchester Memorial Elementary School building tour @4:30, meeting starts at 6pm

1/6/2026 SBC Approval for the Preliminary Design Program to the MSBA

1/28/2026 Community Meeting No. 4

- Located at Essex Elementary School building tour @4:30, meeting starts at 6pm

Q&A

Mersdessexelementaryproject.com

MEETING AGENDA

Meeting Date:	December 9, 2025
Meeting Time:	6:00PM – 8:00PM
Project Name:	Essex Elementary School Project
Meeting Purpose:	School Building Committee – Community Meeting No. 3
Location:	In person at Manchester Memorial Elementary School cafeteria (43 Lincoln Street, Manchester-by-the-Sea, MA) and online via Zoom.

Join Zoom: https://us06web.zoom.us/j/81635599071

---

1. Project Team Introduction
2. MSBA Process and Schedule
3. Existing Conditions
4. Review of Potential Sites
5. Preliminary Review of Alternatives
6. Educational Programming
7. Next Steps
8. Q&A

Essex Elementary School Project
Community Meeting No. 03
December 9, 2025 @ 6:00 PM



Manchester Essex Regional School District

DORE + WHITTIER

JCJARCHITECTURE

Agenda

1. Project Team Introduction
2. MSBA Process and Schedule
3. Existing Conditions
4. Review Potential Sites
5. Preliminary Review of Alternatives
6. Educational Programming
7. Next Steps
8. Q&A

Organization/ Project Team



Massachusetts School Building Authority

Manchester Essex Regional School District

DORE + WHITTIER

JCJARCHITECTURE

Process


Middle High School
Memorial Elementary School
Essex Elementary School

Project Team

Dore + Whittier Team

Michael Burton
Partner In Charge

Christina Dell Angelo
Project Director

John Albright
Project Manager

Jacob Greco
Assistant Project Manager

Rachel Rincon
Assistant Project Manager

JCJ Architecture Team

Jim LaPosta
Principal in Charge

Dustin Lombardi
Project Architect

Fawn Pellegrini
Project Manager

Jeff Elliott
Project Architect

Emily Czarnecki
Interior Designer

School Building Committee

Pam Beaudoin
Superintendent of Schools/SBC

Michelle Cresta
Director of Finance & Ops/SBC

Theresa Whitman
SC/SBC Co-Chair

John Binieris
SC/SBC Co-Chair

Annie Cameron
Essex Select Board/SBC

Tyler Virden
Project Executive/SBC

Gordon Brewster
OPM/SBC

Charlie Hay
Architect/SBC

Kim Provost
Essex Elementary School Principal/SBC

Henry Oettinger
Manchester ConCom/SBC

Tim McDonald
Architect/SBC

Andy Oldeman
Manchester Finance Committee/SBC

Lisa O'Donnell
Essex Planning Board/SBC Advisor

Ariel Fernando Brain
Architect/SBC

Jen Hocherman
Architect/SBC

Michael Gerhardt
Civil Engineer/SBC

David Pereen
Plumbing/Fire Design/SBC Advisor

Emily Dwyer
Essex ES Teacher Rep

Rachelle Russo
Essex ES Teacher Rep/SBC Advisor

Kim Field
Essex ES Teacher Rep/SBC Advisor

Steve Hunt
Facilities Director/SBC Advisor

MSBA Process



Massachusetts School Building Authority

Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities

Who is the Massachusetts School Building Authority (MSBA)?

A quasi-independent government authority created to reform the process of funding capital improvement projects in the Commonwealth's public schools.

The MSBA strives to work with local communities to create affordable, sustainable, and energy efficient schools across Massachusetts.

Collaborating with municipalities to equitably invest in finding the right-sized, most fiscally responsible and educationally appropriate solutions to create safe, sound, and sustainable learning environments.

MSBA Process



Massachusetts School Building Authority

Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities

Where do MSBA grant funds come from? How are they issued?

The MSBA has a dedicated revenue source of 1% from the state's 6.25% annual sales tax collections.



Grant funds are issued to the district using a "pay-as-you-go" reimbursement system for the duration of the project.

More than $16.6 billion issued to-date to cities, towns, and regional school districts for school construction projects.

MSBA Process

How does MSBA determine the level of financial support for projects?

Reimbursement rates are calculated based on a formula that is established in M.G.L ch.70B § 10

The formula starts all districts at a base rate of 31% (of eligible project costs).

The base rate may be adjusted based on three socioeconomic factors:

- **Community income factor**
- **Community property wealth factor**
- **Community poverty factor**

Essex ES Base Rate is 31%

6% potentially available from Green School (4%) incentive points and District maintenance policy (2%)

MSBA Process

What does “eligible project cost” mean?

The MSBA uses a total project budget template to apply and calculate their funding policies to determine the grant amount

The MSBA’s reimbursement rate is applied to “eligible project costs” to determine the MSBA’s participation on each budget line-item.

- **Construction and Site $605/sf + $73/sf**
- **Furniture, Fixtures & Equipment (FF&E) $1,995/sf**
- **Technology Equipment $1,570/sf**

There are funding caps on certain budget items, as well as “categorically ineligible” items that the MSBA will not participate in.

- **Pools, Field Houses, Elementary School Auditoriums, Central Offices, Senior Centers, site acquisition, and offsite improvements**

MSBA Process

These caps and ineligible costs will have an impact to the final (or "effective") reimbursement.

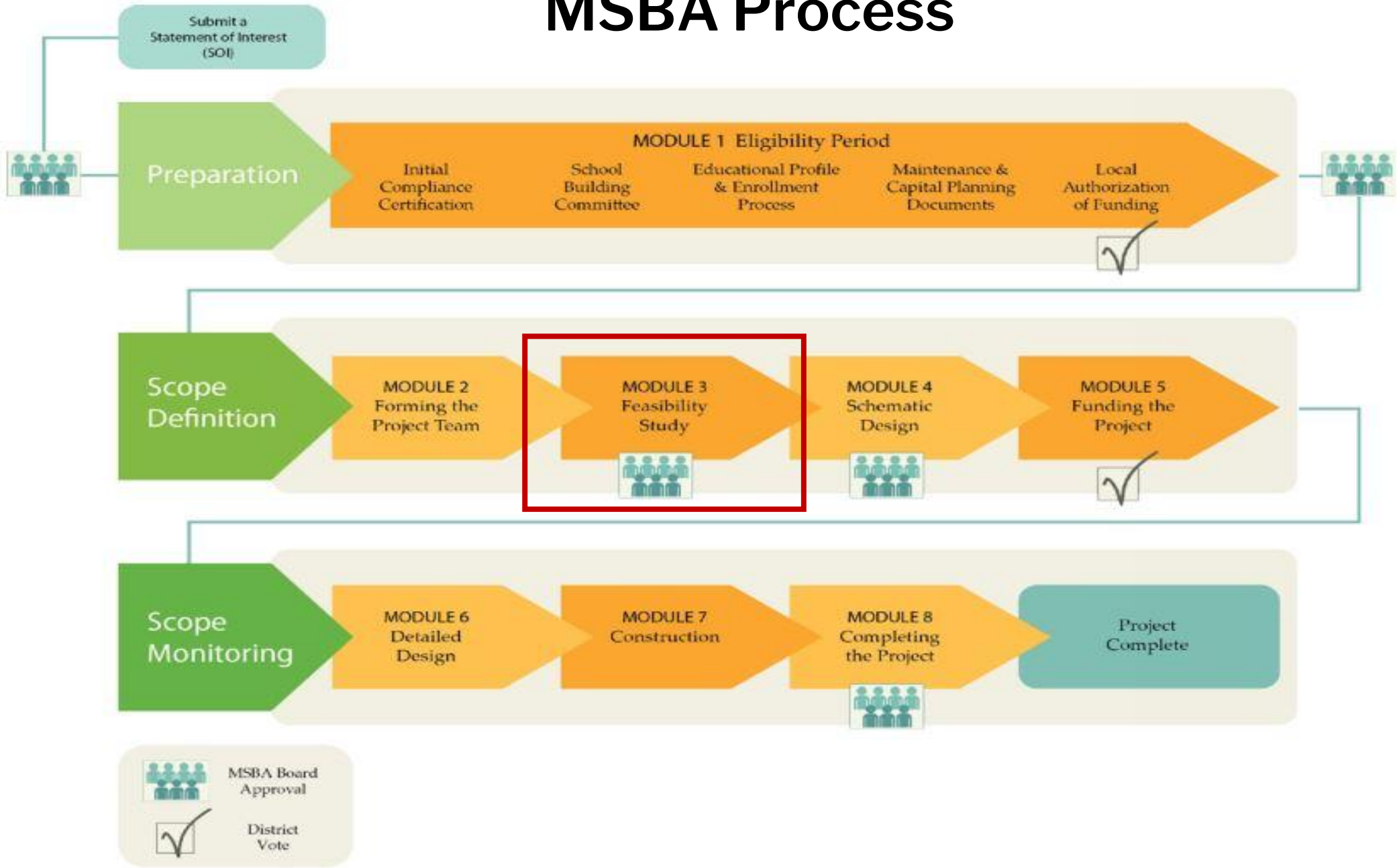
Memorial E.S. Example:

- **Base Rate of 31%**
- **CM@ Risk 1% (no longer applicable)**
- **Maintenance 1.93%**
- **Energy Efficient School 2% (has increased)**

MSBA reimbursement rate 35.93%

"Effective" reimbursement rate ~23% = $11.5 Million from the State

MSBA Process



Feasibility Phase Process

Preliminary Design Program (PDP)

- Identify the issues/articulate the educational plan
- List options to be studied in PSR

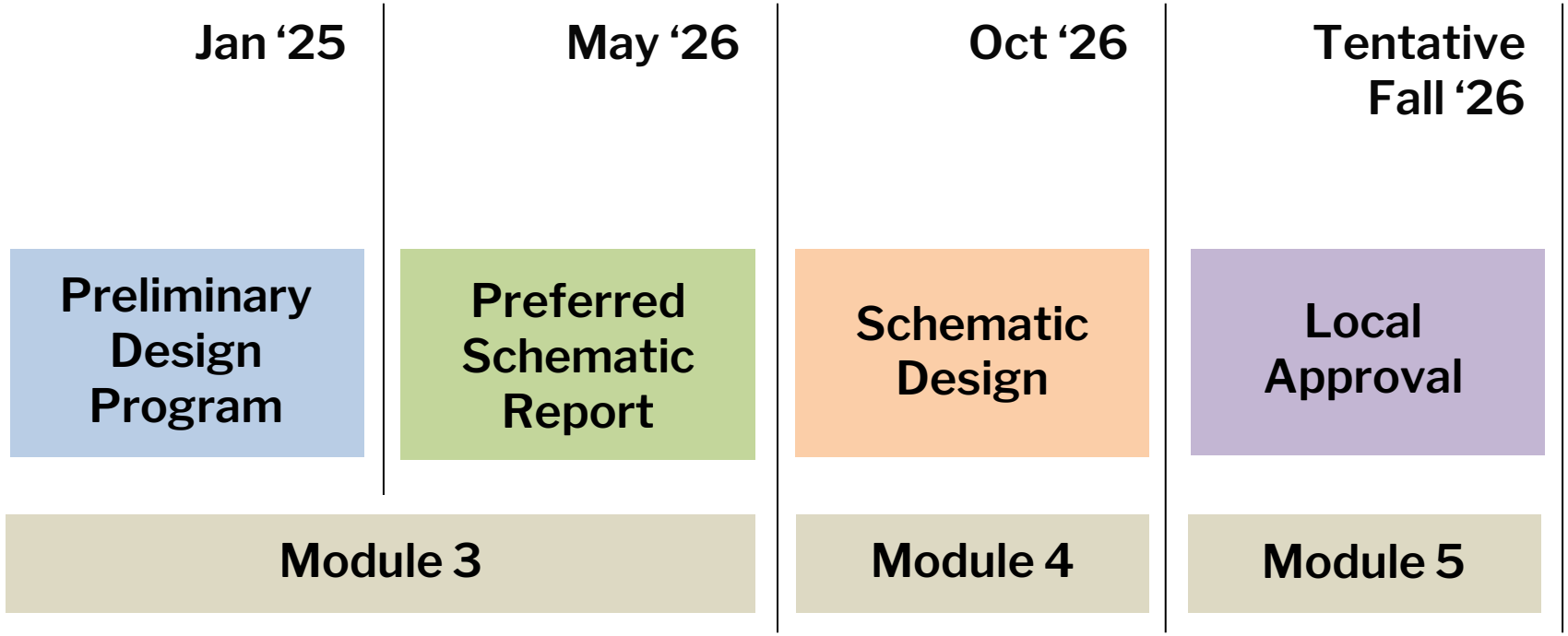
Preliminary Schematic Report (PSR)

- Evaluate the site and building options/select a preferred option

Schematic Design (SD)

- Develop schematic drawings and specifications to establish the project budget

Feasibility Phase Schedule



Timeline is subject to change during the process

Feasibility Phase Requirements

MSBA Requires Development of Several Options including:		
Renovation Only	Addition/Renovation	New Construction

Feasibility Phase Requirements

Feasibility Study Enrollment Configurations to be Studied for Essex Students		
Grades PreK-3 165 Students *Sited in Essex w/Grades 4 & 5 Integrated into Memorial*	Grades PreK-5 250 Students Sited in Essex	Pre-K to 5 515 Students Sited at Manchester Memorial with all Essex & Manchester students in one school
SC Program Vote/Redistricting		SC Program Vote/Redistricting
SC Vote to Amend Regional Agreement		SC Vote to Amend Regional Agreement
Essex & Manchester Town Meeting Vote to Approve Regional Agreement Amendment		Essex & Manchester Town Meeting Vote to Approve Regional Agreement Amendment
Essex & Manchester Town Meeting Full Project Vote & Debt Exclusion Vote		

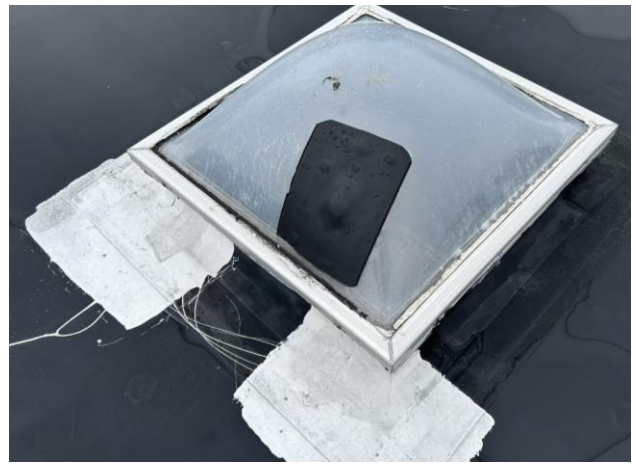
Building History

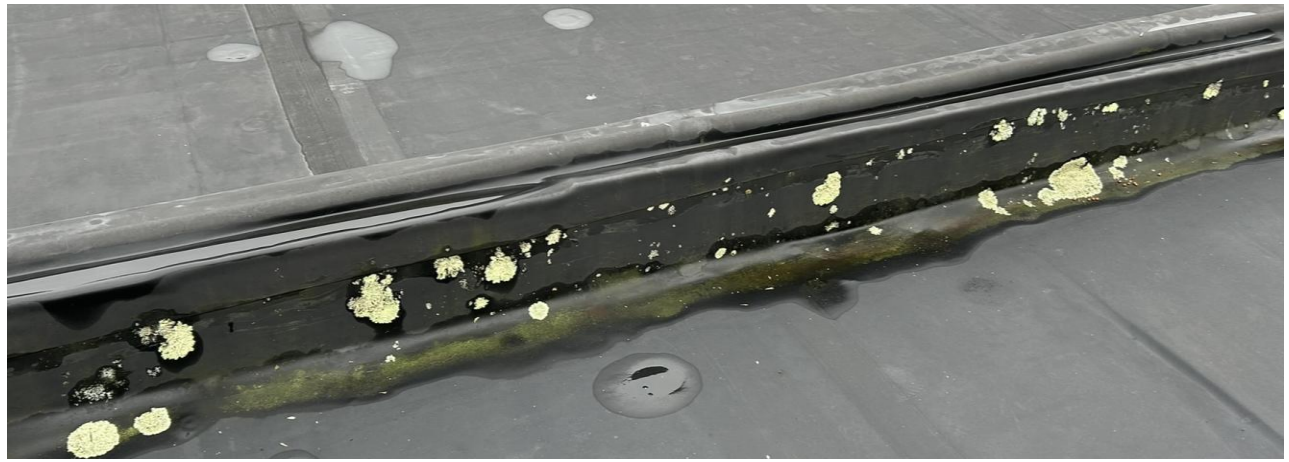
The Essex Elementary School building

1. Total building is approximately 52,900 SF
2. Originally built in 1957 (68 Years)
3. Addition provided in 1975 (50 Years) (media center and gymnasium)
4. The design team's existing investigations began and are ongoing.
5. Mechanical, electrical & plumbing systems has exceeded life expectancy
6. Roofing, windows and building materials are deteriorating

Existing Conditions









The roofing system is at life expectancy. There are several repairs, underlayment appears compromised, and water is ponding, so moisture is not shedding quickly.

Existing Conditions

Shedding water away from the school building through roofing and site drainage is important.
Moisture accelerates:

- Spalling at the existing roof eave
- Lichen on the masonry
- Compromises at the concrete foundation
- Plant growth occurring in unplanned or undesirable areas
- Deterioration of the original wood windows











Existing Conditions

Accessibility is being reviewed to enable students, staff and visitors of various abilities to enter the school together (not separate due to physical need, or otherwise). Some of the items included in this review of the site conditions and the school interior include:

- Exterior grade changes
- Interior level changes
- Pitch of sloped walkways and ramps
- Handrail design
- Push/pull clearances at doorways
- Circulation space & turn around space
- Mounting heights of accessories, plumbing, and equipment
- Furniture
- Signage







Existing Conditions

- Mechanical, electrical, plumbing systems are beyond or at life expectancy.
- Exhaust fans, unit ventilators and boiler are worn.
- Portable fans are seen throughout the school to supplement air circulation
- Interior finishes are buckling.
- Wood windows are deteriorating.
- The water heating system is at the end of its useful life. The mixing value is leaking.

- Considerations include:
- Efficiency of operation (operational costs for the District)
- Efficiency to heat, cool, dehumidify and provide fresh air circulation
- Availability of parts quickly for future repairs







Existing Conditions







Existing Conditions





Entry and exit sequence for students, staff, and visitors is being reviewed with the District to support the operational needs.

Identified Sites

Statement of interest includes:

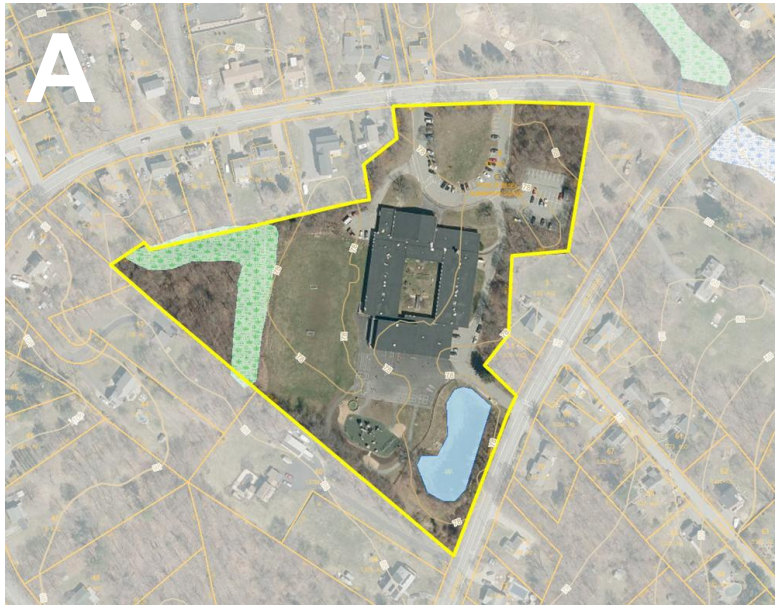
- Current Essex Elementary School
- Current Manchester Memorial Elementary School

Search of other potential sites in Essex:

➢	Town of Essex owned parcels	112
➢	Minimum 9.75 acres	16
➢	Street access & utilities	7
➢	Not used by other town function	1 → 30 Apple St

Town Hall, Spring Street Cemetery, Essex ES, Centennial Grove, DPW Transfer Station, Public Water Supply

Identified Sites



Current Essex Elementary School

12 Story Street, Essex MA



Current Manchester Memorial Elementary School

43 Lincoln Street, Manchester MA



Apple Street Site

Removed

30 Apple Street, Essex MA

Current Essex Elementary School



Opportunities

- Established identity in the community
- Developed site utilities
- Multiple options for site access
- Sidewalks on adjacent streets

Constraints

- Construction activities on occupied school site
- Wetlands & pond
- Exposed ledge on north side of site

Current Manchester Memorial ES



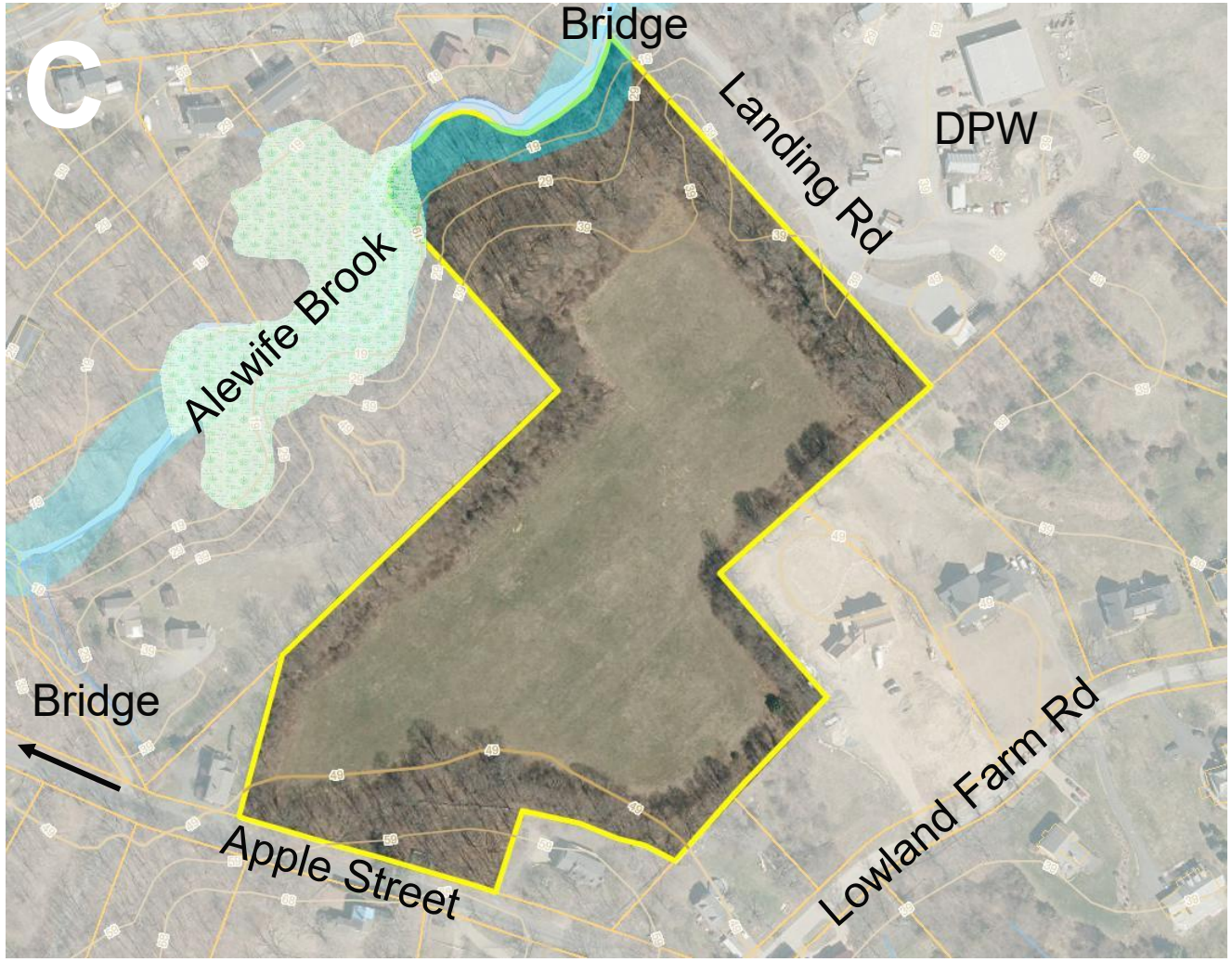
Opportunities

- Developed site utilities

Constraints

- Construction activities on occupied school site
- Dense site already fully built out
- Loss of tennis courts
- Wetlands and flood zone
- Transportation from Essex to Manchester
- Regional Agreement
- MSBA funding considerations

Apple Street Site



Opportunities

- No disruption to existing schools
- Simplified construction phasing

Constraints

- Restricted site access
- No sidewalks
- Municipal utilities are undersized
- Offsite developments are not MSBA reimbursable
- Impacts to adjacent residences / land acquisition for road widening
- Regional Agreement Amendment

Site Evaluation

Legend	
	Not Preferable
	Neutral
	Advantageous







ESSEX ELEMENTARY SCHOOL PROJECT SITE ALTERNATIVES		SITE A CURRENT ESSEX ES	SITE B CURRENT MMES	SITE C APPLE STREET
		12 STORY ST	43 LINCOLN ST	30 APPLE ST
General	Location	ESSEX	MANCHESTER	ESSEX
	Size	9.75 ACRES	11.313 ACRES	11.50 ACRES
Site Development	Town Owned			
	Adequate Buildable Area - (Current Site 9.75 Acres)			
	Utilities Access			
	Subsurface Conditions – Geotechnical (Bearing Capacity, Organics, Ledge)			
	Environmental Contaminants			
	Regulatory - Wetlands, Rivers and Streams, Flood Zones			
	Future Development Options and Flexibility			
	Reimbursement potential from MSBA (Offsite, Budget cap)			
	Construction Complexity – Access, Laydown, Phasing			
Site Access	Infrastructure - Bridges, Road Surface			
	Walkability - Distances, Sidewalks			
	Safety - Road Width, Sight Lines			
	Busing			
Community	Compatible with Regional Agreement			
	Access to other Community Resources			
	Minimize Impact on Neighbors			
Education	Meets needs of Educational Program			
	Construction Impact on Existing School Activities			
Schedule	No significant schedule risks - "Shovel Ready"			

Design Alternatives

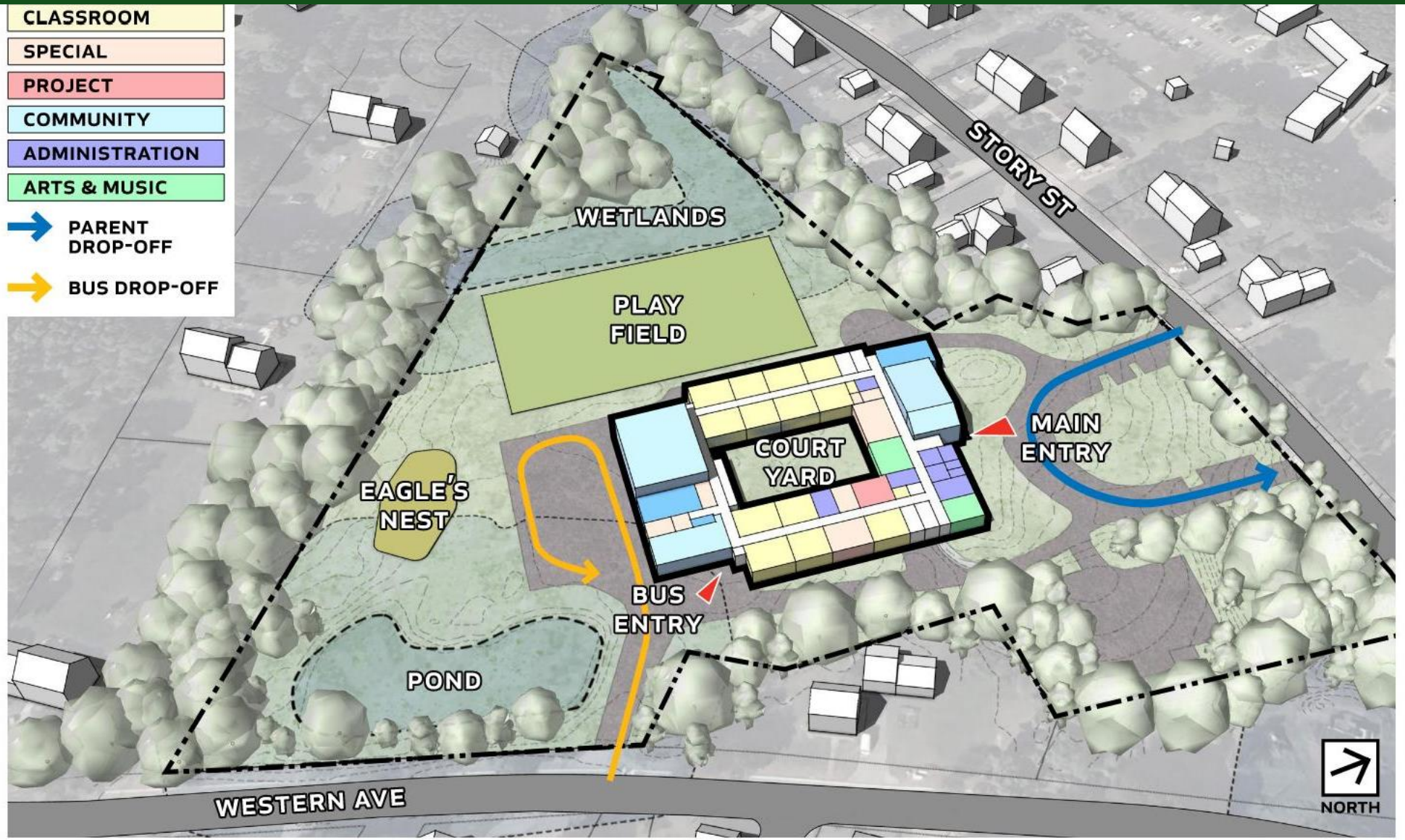


ESSEX ELEMENTARY SCHOOL PROJECT EVALUATION OF DESIGN ALTERNATIVES		SITE A CURRENT ESSEX ES						SITE B CURRENT MMES
		A0.1	A0.2	A1.1	A1.2	A2.1	A2.2	B1.1
		Code Upgrade/ Base Repair	Code Upgrade/ Base Repair	Addition/ Renovation	Addition/ Renovation	New Construction	New Construction	Addition/ Renovation
General	Enrollment (+ PRE-K)	165 + 30	250 + 30	165 + 30	250 + 30	165 + 30	250 + 30	515 + 60
	Grade Configuration	PRE-K - 3	PRE-K - 5	PRE-K - 3	PRE-K - 5	PRE-K - 3	PRE-K - 5	PRE-K - 5
	Renovated Area	53,036 GFA	53,036 GFA	53,036 GFA	53,036 GFA	0	0	77,102 GFA
	New Area	0	0	7,741 GFA	20,637 GFA	60,777 GFA	73,673 GFA	41,899 GFA
	Total Area	53,036 GFA	53,036 GFA	60,777 GFA	73,673 GFA	60,777 GFA	73,673 GFA	119,001 GFA
	Construction Phases	TBD	TBD	TBD	TBD	2	2	TBD

Design Alternatives

EXISTING ESSEX ELEMENTARY
K – 5
200 STUDENTS

53,036 GFA EXISTING



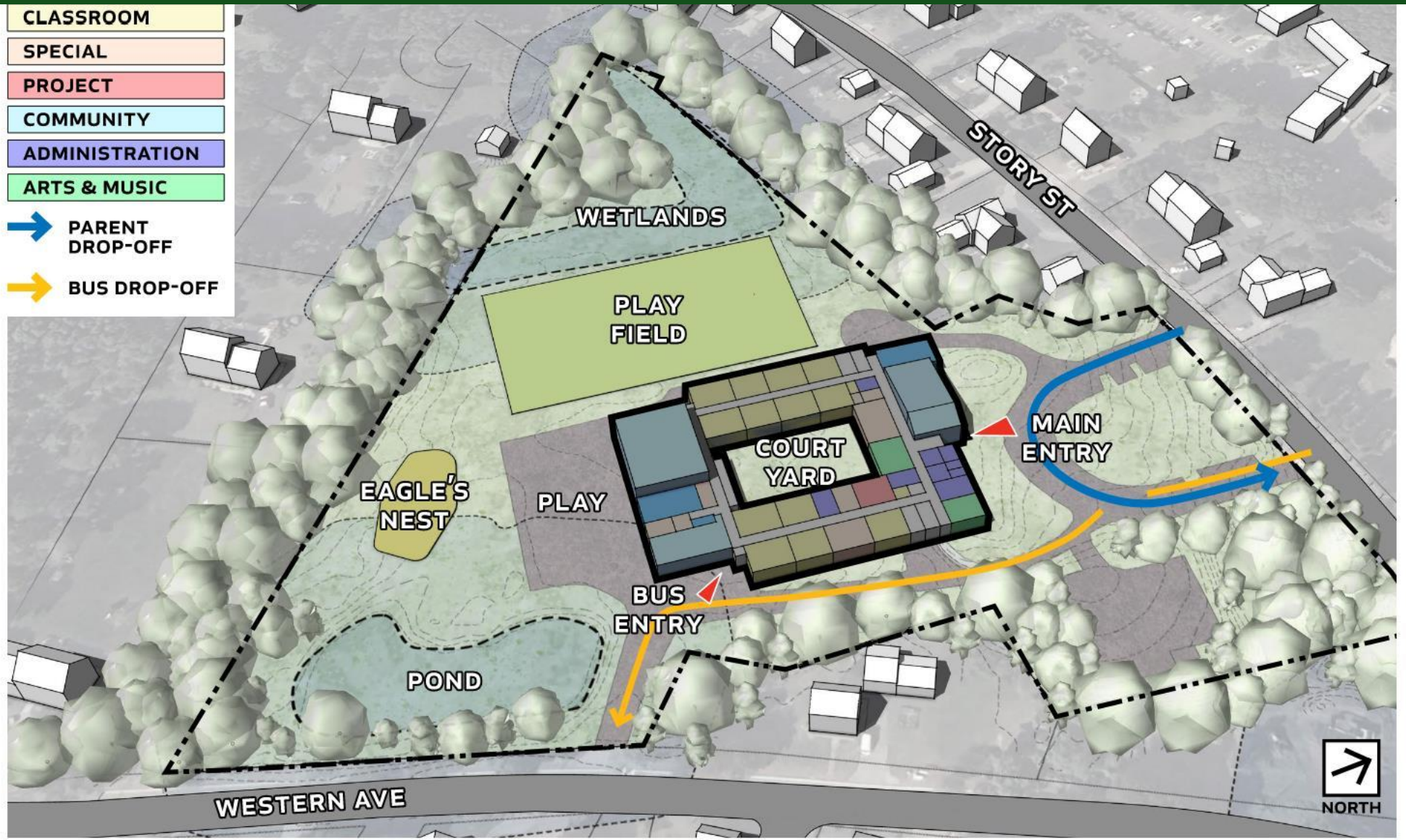
Design Alternatives

OPTION A0.1

PRE-K – 3
165 STUDENTS + 30 PRE-K
CODE UPGRADE/BASE REPAIR

53,036 GFA RENOVATION

CLASSROOM
SPECIAL
PROJECT
COMMUNITY
ADMINISTRATION
ARTS & MUSIC
PARENT DROP-OFF
BUS DROP-OFF



CONSIDERATIONS

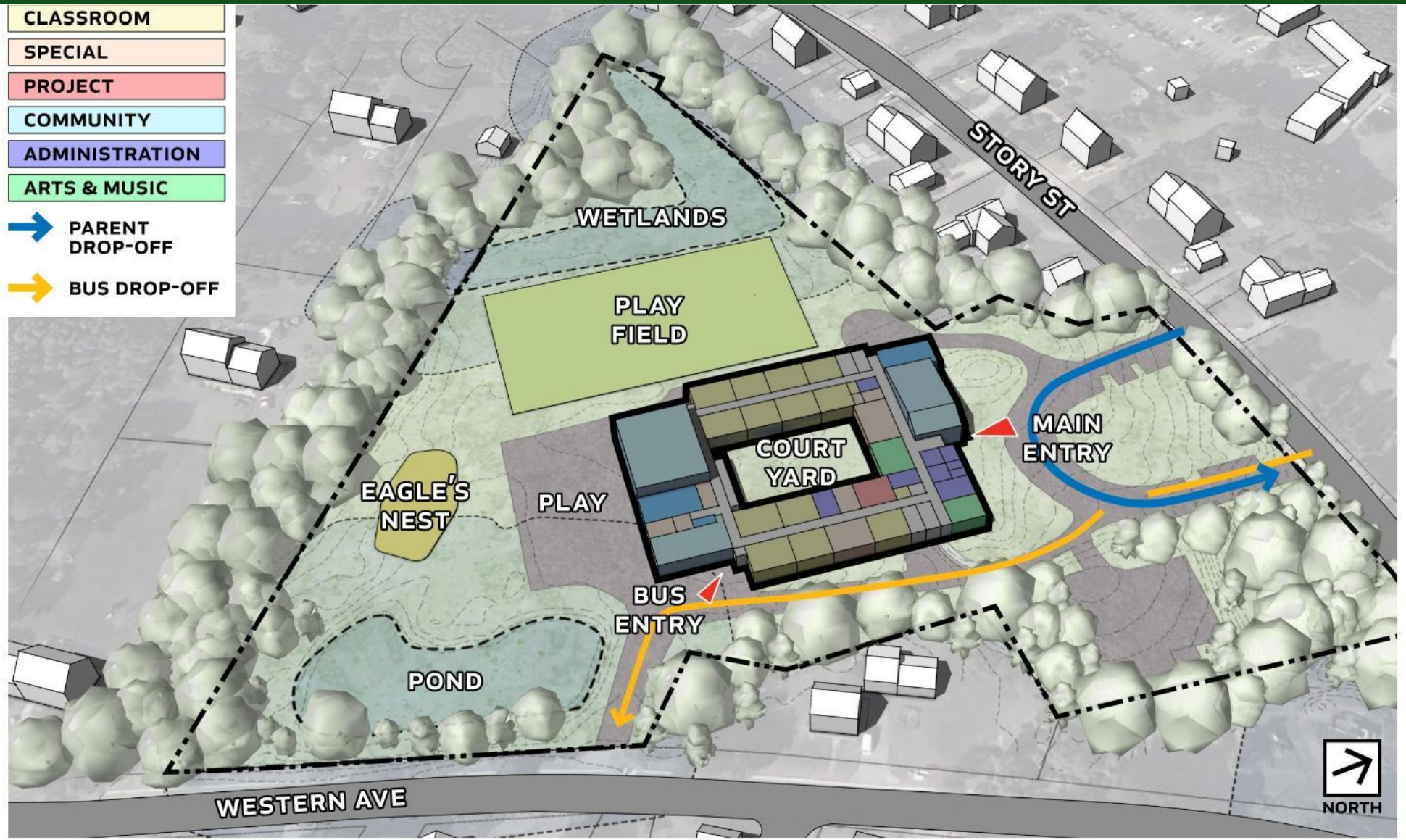
- EXISTING BUILDING IS SMALLER THAN TARGET
- CORE CLASSROOMS ARE UNDERSIZED
- GYM IS UNDERSIZED
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- MOVING GRADES 4-5 TO MMES CREATES SWING SPACE (4 CLASSROOMS)
- K-3 REQUIRES MODIFICATION TO THE REGIONAL AGREEMENT

Design Alternatives

OPTION A0.2

PRE-K – 5
250 STUDENTS + 30 PRE-K
CODE UPGRADE/BASE REPAIR

53,036 GFA RENOVATION



CONSIDERATIONS

- EXISTING BUILDING IS SMALLER THAN TARGET
- CORE CLASSROOMS ARE UNDERSIZED
- GYM IS UNDERSIZED
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- MODULAR CLASSROOMS WILL BE REQUIRED TO PROVIDE SWING SPACE

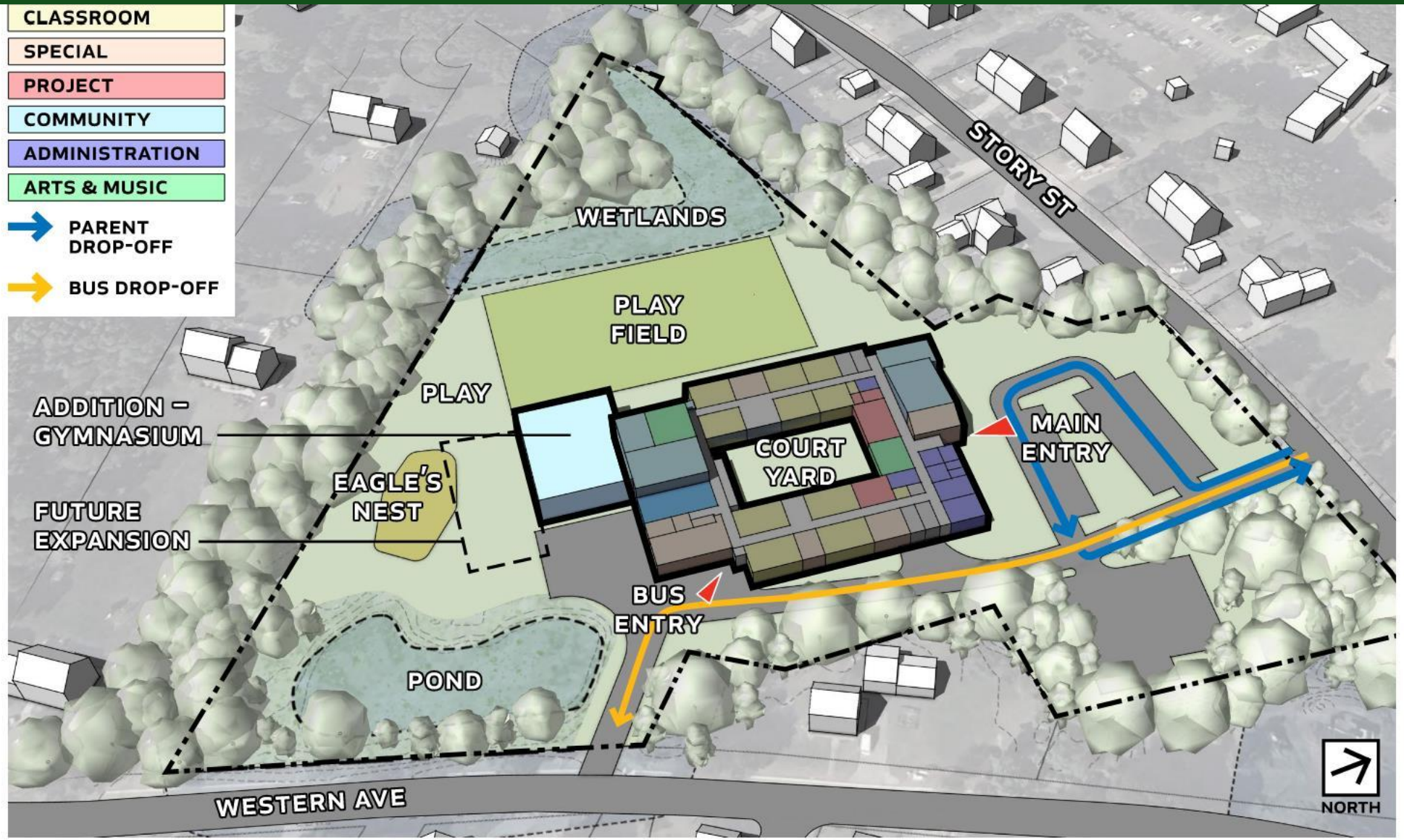
Design Alternatives

OPTION A1.1

PRE-K – 3
165 STUDENTS + 30 PRE-K
ADDITION/RENOVATION

53,036 GFA RENOVATION
7,741 GFA ADDITION

TOTAL: 60,777 GFA



CONSIDERATIONS

- FULL-SIZE GYM COULD BE ACCOMMODATED IN AN ADDITION
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- MOVING GRADES 4-5 TO MMES CREATES SWING SPACE (4 CLASSROOMS)
- K-3 REQUIRES MODIFICATION TO THE REGIONAL AGREEMENT

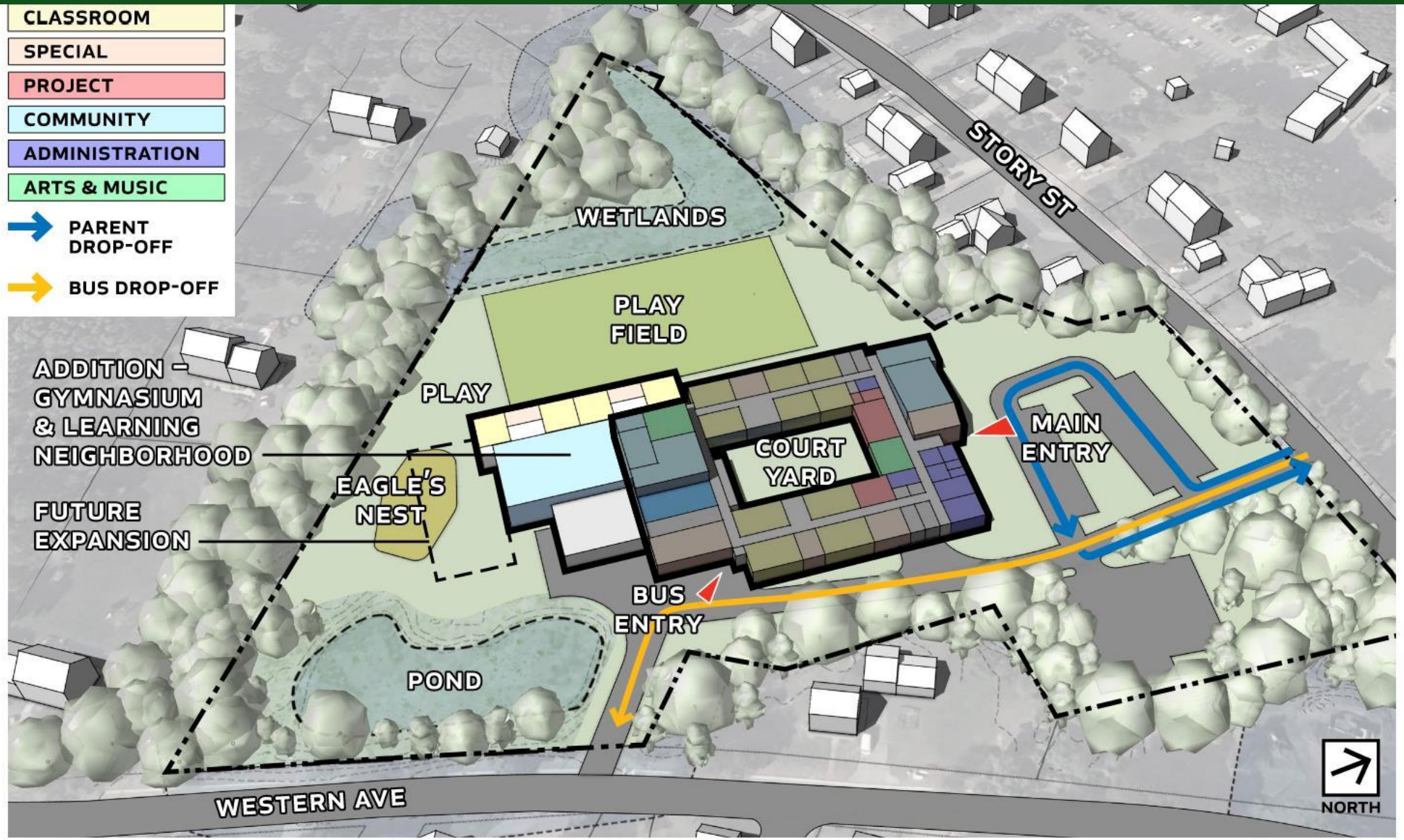
Design Alternatives

OPTION A1.2

PRE-K – 5
250 STUDENTS + 30 PRE-K
ADDITION/RENOVATION

53,036 GFA RENOVATION
20,637 GFA ADDITION

TOTAL: 73,673 GFA



CONSIDERATIONS

- FULL-SIZE GYM COULD BE ACCOMMODATED IN AN ADDITION
- CONSTRUCTION WILL REQUIRE NUMEROUS SMALL PHASES IN AN OCCUPIED BUILDING
- SWING SPACE (4 CLASSROOMS) COULD BE ACCOMMODATED IN AN ADDITION

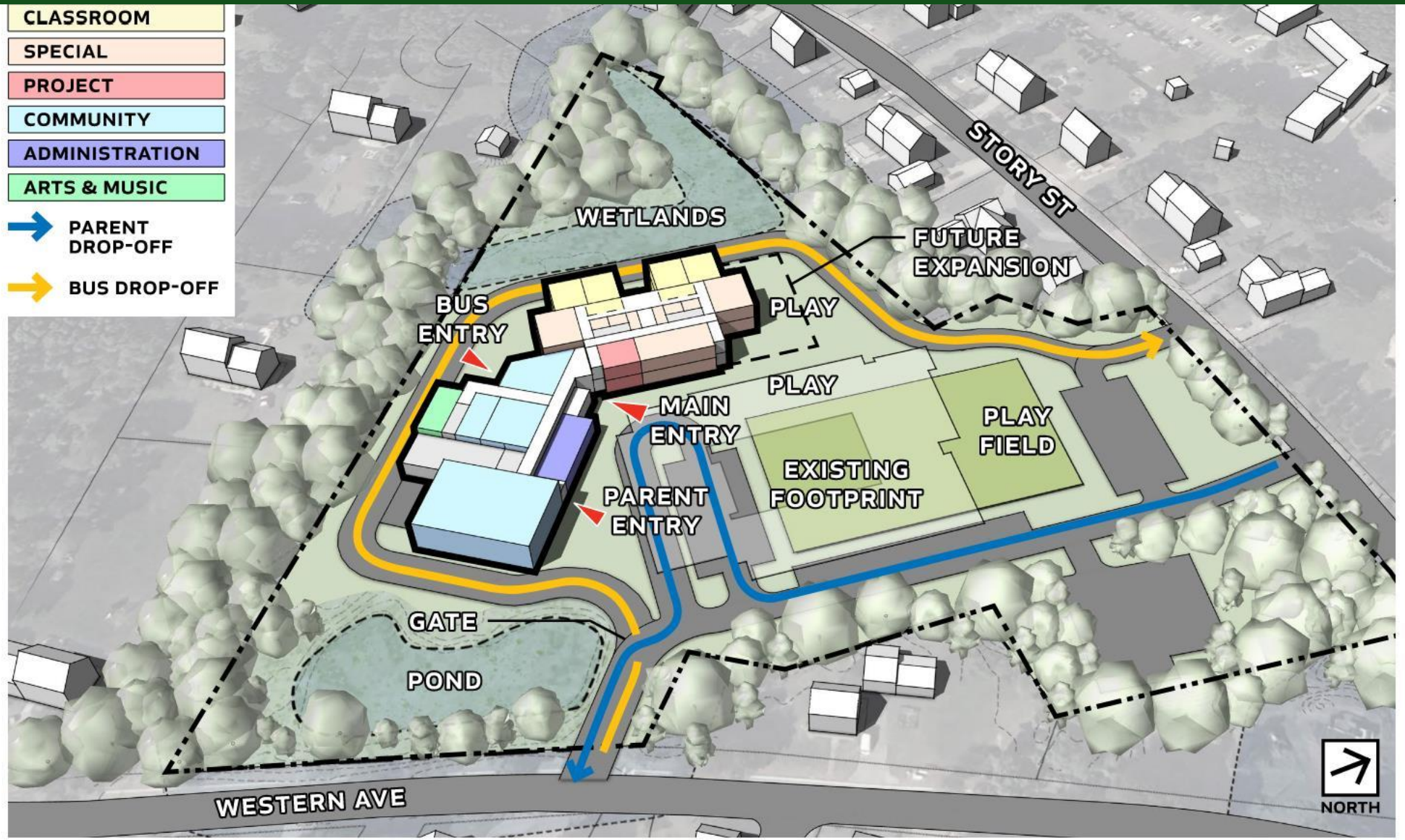
Design Alternatives

OPTION A2.1

PRE-K – 3
165 STUDENTS + 30 PRE-K
NEW

60,777 GFA NEW

TOTAL: 60,777 GFA



CONSIDERATIONS

- SITE LAYOUT PROVIDES FULL PERIMETER ACCESS AND IMPROVED SIGHT LINES
- DESIRED ROOM SIZES AND ADJACENCIES CAN BE OPTIMIZED
- ACCESS TO COMMUNITY SPACES EASILY CONTROLLED
- TWO-STORY BUILDING REDUCES FOOTPRINT TO MAXIMIZE SITE POTENTIAL
- K-3 REQUIRES MODIFICATION TO THE REGIONAL AGREEMENT

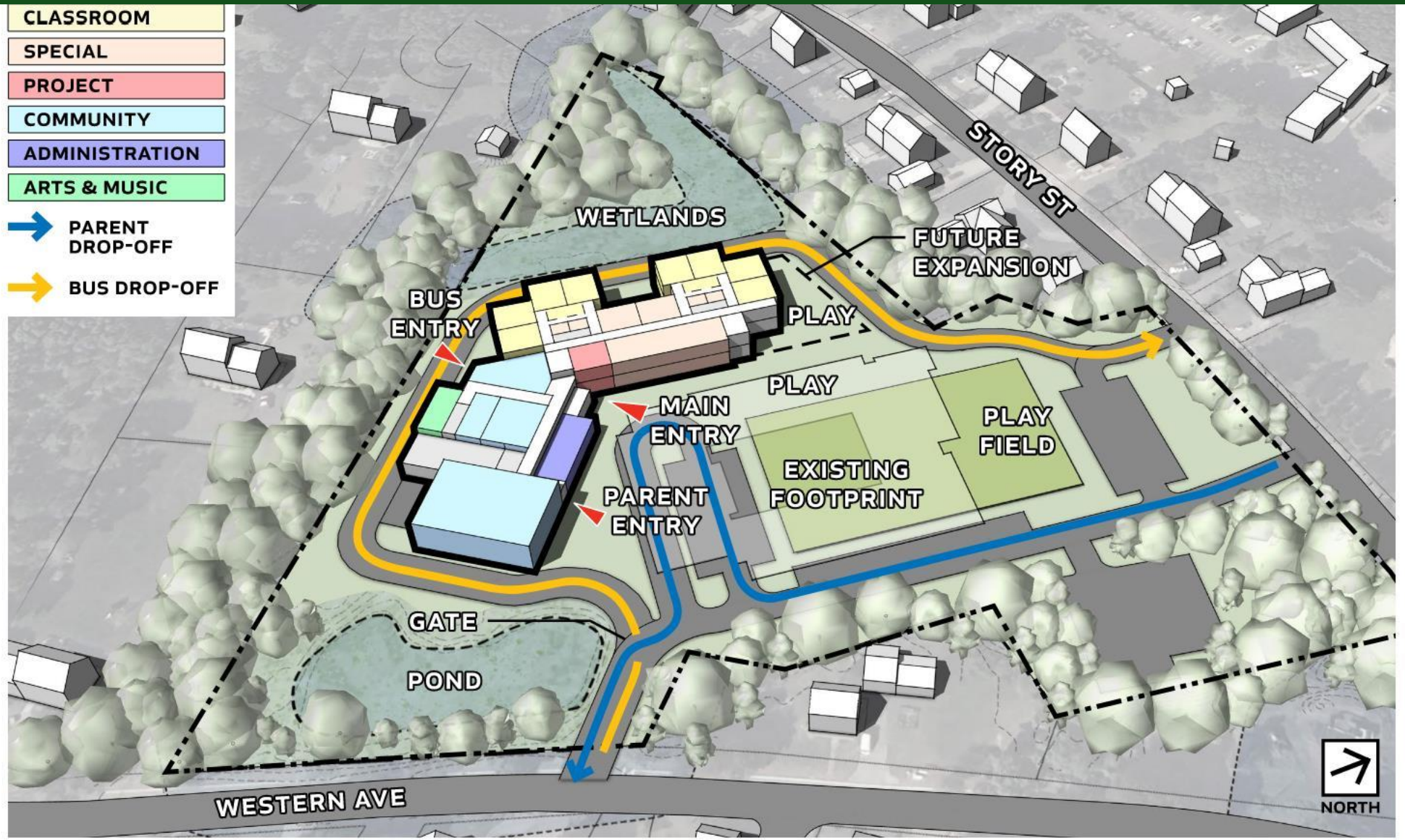
Design Alternatives

OPTION A2.2

PRE-K – 5
250 STUDENTS + 30 PRE-K NEW

73,673 GFA NEW

TOTAL: 73,673 GFA



CONSIDERATIONS

- SITE LAYOUT PROVIDES FULL PERIMETER ACCESS AND IMPROVED SIGHT LINES
- DESIRED ROOM SIZES AND ADJACENCIES CAN BE OPTIMIZED
- ACCESS TO COMMUNITY SPACES EASILY CONTROLLED
- TWO-STORY BUILDING REDUCES FOOTPRINT TO MAXIMIZE SITE POTENTIAL

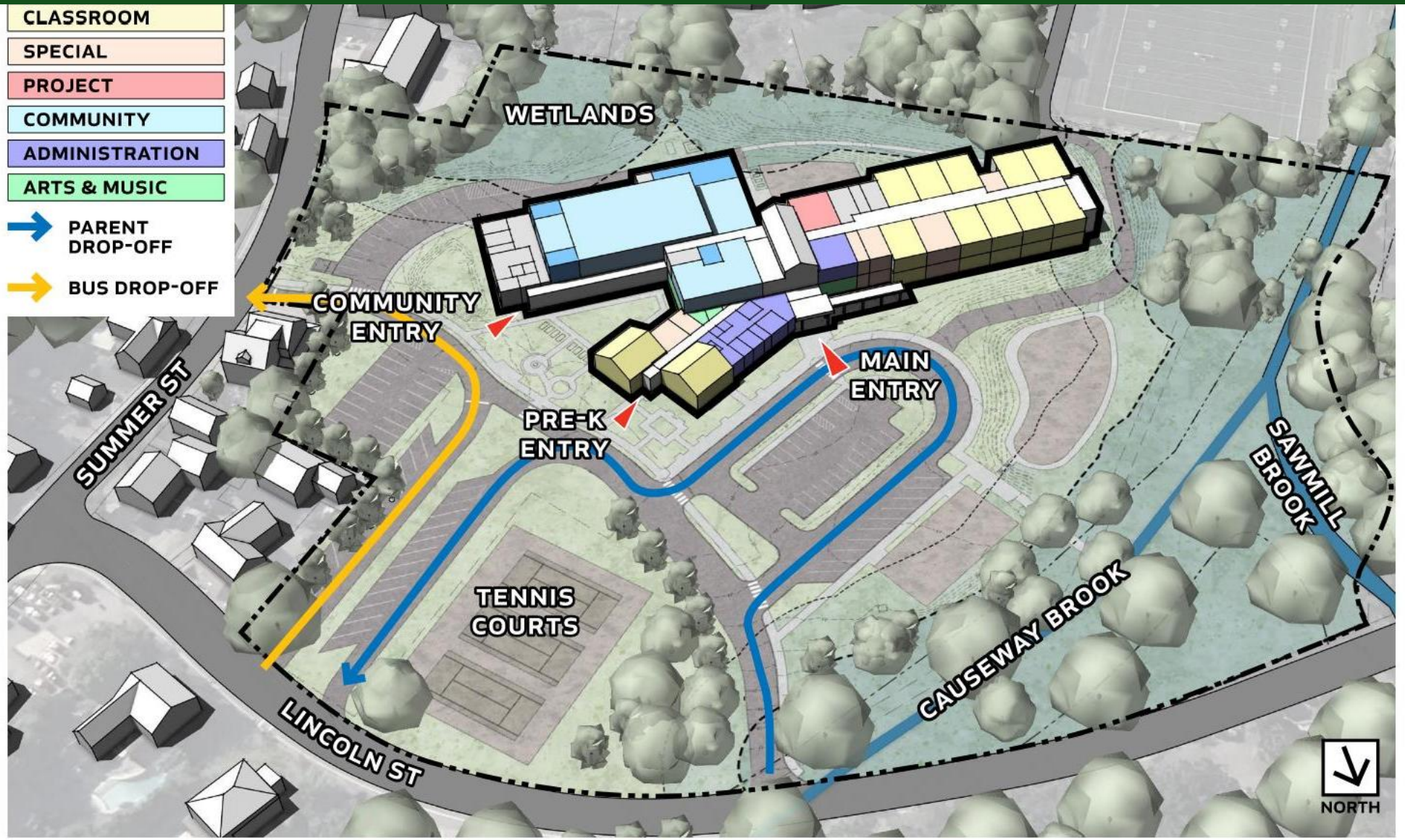
Design Alternatives

EXISTING MANCHESTER MEMORIAL

PRE-K – 5

335 STUDENTS + 45 PRE-K

77,102 GFA EXISTING



Design Alternatives

OPTION B1.1

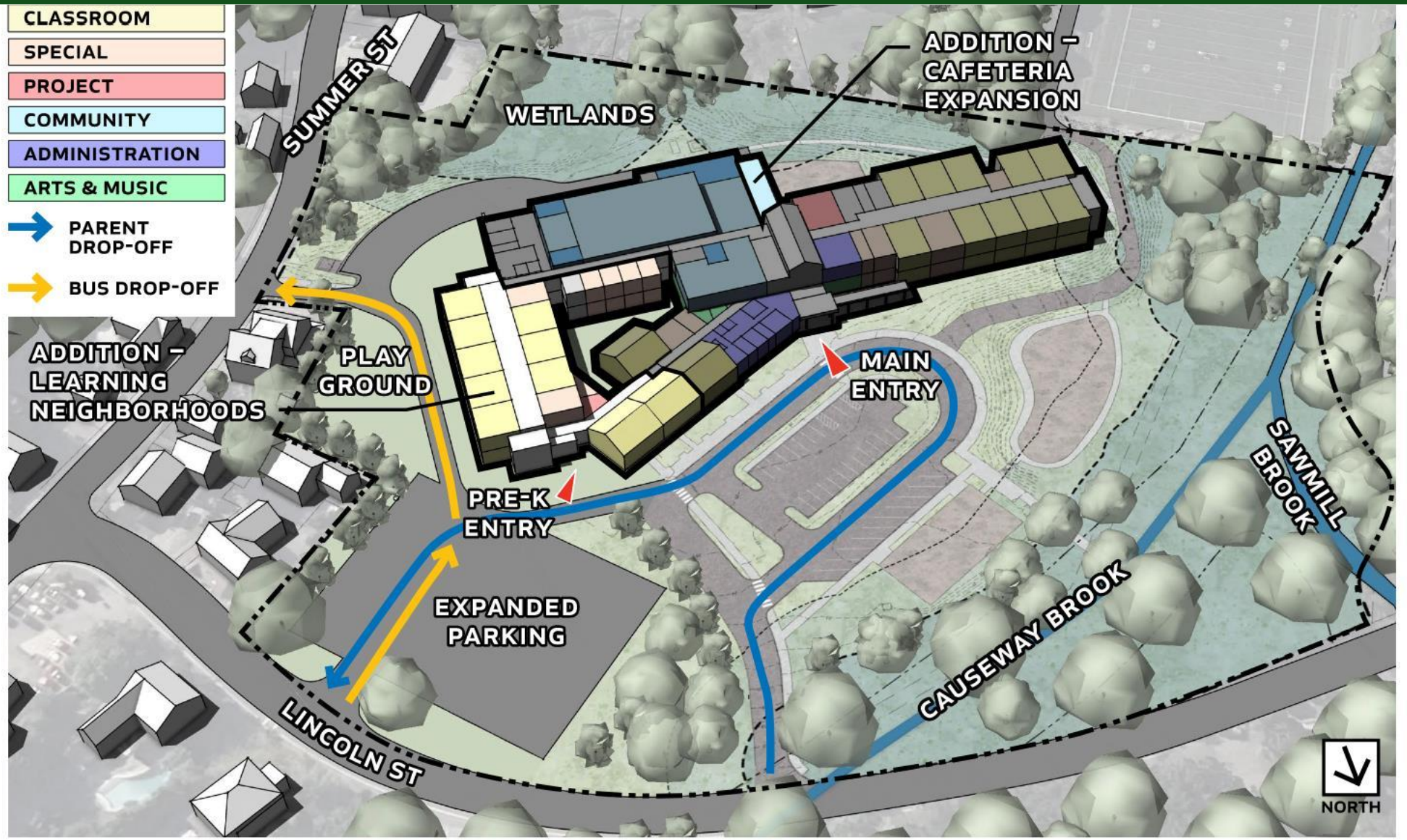
PRE-K –5
515 STUDENTS + 60 PRE-K
ADDITION/RENOVATION

77,102 GFA EXISTING/RENO
41,899 GFA NEW

TOTAL: 119,001 GFA

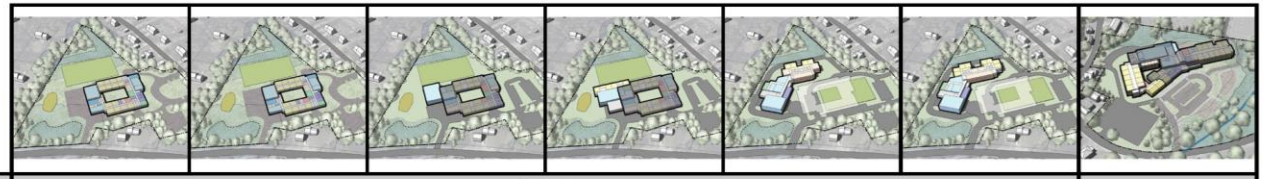
CONSIDERATIONS

- SITE AMENITIES WILL BE LIMITED SUCH AS PLAY SPACE AND PARKING CAPACITY
- REMOVAL OF TENNIS COURTS LIKELY
- NO FUTURE EXPANSION POTENTIAL
- BUILDING CODE AREA LIMITATIONS REQUIRES FIRE WALLS SEPARATING ADDITIONS
- COMMUNITY ENTRY AND NEAR-BY PARKING COMPROMISED BY ADDITION LOCATION
- NUMEROUS ISSUES ASSOCIATED WITH ELIMINATING A SCHOOL IN ESSEX (TRAVEL, BUSING, AFTERSCHOOL PROGRAMS, REGIONAL AGREEMENT, ETC.)



Design Alternatives

Legend	
0	Highly Undesirable
1	Undesirable
2	Neutral
3	Desirable
4	Highly Desirable



ESSEX ELEMENTARY SCHOOL PROJECT EVALUATION OF DESIGN ALTERNATIVES		SITE A CURRENT ESSEX ES						SITE B CURRENT MMES
		A0.1	A0.2	A1.1	A1.2	A2.1	A2.2	B1.1
		Code Upgrade/ Base Repair	Code Upgrade/ Base Repair	Addition/ Renovation	Addition/ Renovation	New Construction	New Construction	Addition/ Renovation
General	Enrollment (+ PRE-K)	165 + 30	250 + 30	165 + 30	250 + 30	165 + 30	250 + 30	515 + 60
	Grade Configuration	PRE-K - 3	PRE-K - 5	PRE-K - 3	PRE-K - 5	PRE-K - 3	PRE-K - 5	PRE-K - 5
	Renovated Area	53,036 GFA	53,036 GFA	53,036 GFA	53,036 GFA	0	0	77,102 GFA
	New Area	0	0	7,741 GFA	20,637 GFA	60,777 GFA	73,673 GFA	41,899 GFA
	Total Area	53,036 GFA	53,036 GFA	60,777 GFA	73,673 GFA	60,777 GFA	73,673 GFA	119,001 GFA
	Construction Phases	TBD	TBD	TBD	TBD	2	2	TBD
Education	Meets Needs of Educational Program at EES							
	Meets Needs of Educational Program at MMES							
	Equity across the District							
	Future Growth and Expansion							
	Flexible and Adaptable Spaces							
	Construction Impact on Existing School Activities							
Community	Compatible with Regional Agreement							
	Heart of Essex Community / Sense of Place							
	Walkability for Essex Student Population							
	Neighborhood Traffic Impact							
	Community Use Opportunities							
	Disruption to Manchester							
Site	Regulatory - Wetlands, Rivers & Streams, Flood Zones							
	Bus and Parent Drops - Safety & Efficiency							
	Parking Capacity							
	Play and Athletics Fields (inc. MMES Tennis Courts)							
	Meets Sustainability Goals - Bike Paths, Rain Garden							
Building	Existing Facility Deficiencies Addressed							
	Entries Visible / Unobstructed Sight Lines							
Cost & Schedule	Total Project Cost							
	Maximize MSBA Grant Reimbursement							
	Phasing Minimizes Construction Duration							
	Modular Classroom Swing Space not Required							
	Construction Access and Staging							
	Reduce Operational Costs - Utilities, Maintenance							
	Reduce Operational Costs - Staff, Transport							

Educational Programming

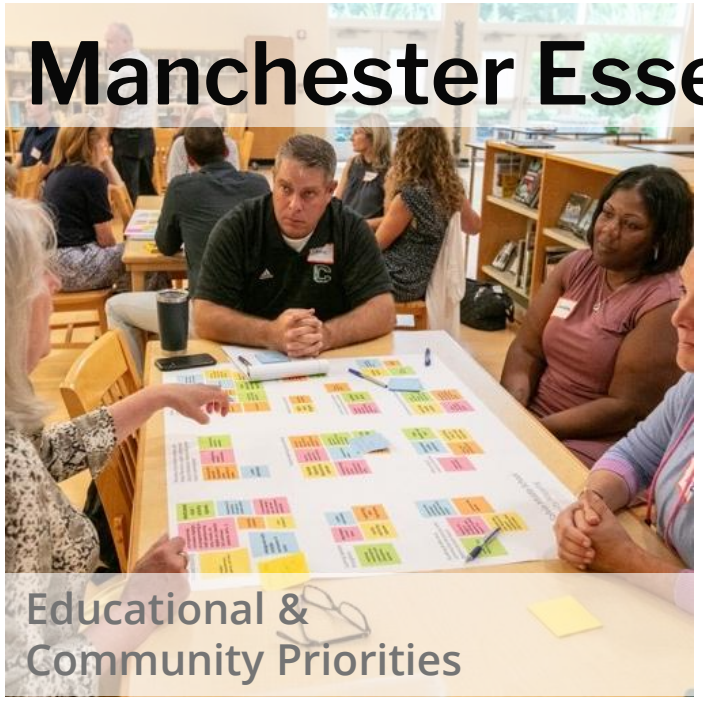
During the Feasibility phase, the District and its team collaborate to document their Educational Program.

- **The Educational Program enables an evaluation and creation of an initial space summary.**
- **Then the team evaluates the site and grade configuration alternatives to recommend the most cost effective and educationally appropriate preferred solution.**

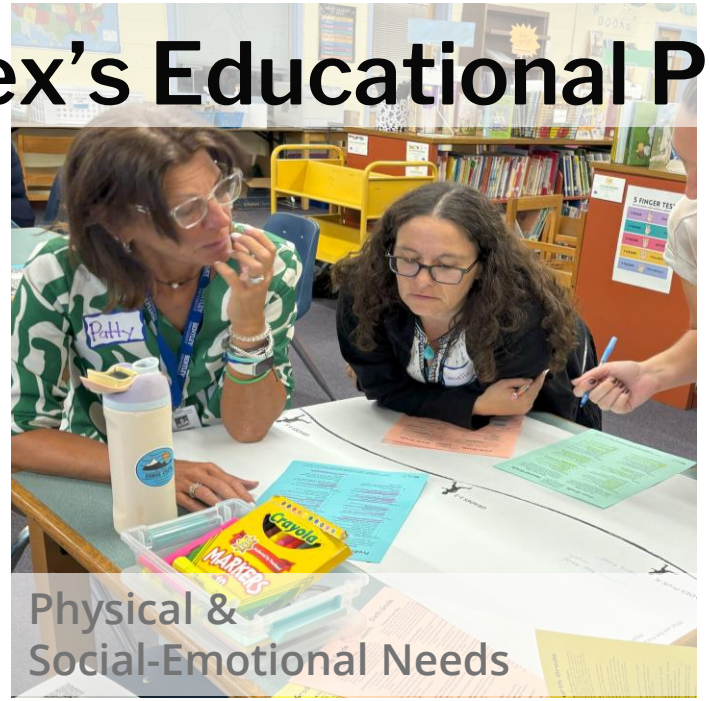
The Educational Program is developed through programming workshops to:

- **Build a shared understanding**
- **Envision through an educational and scenario-based lens**
- **Align renovated or new spaces with the educational program**

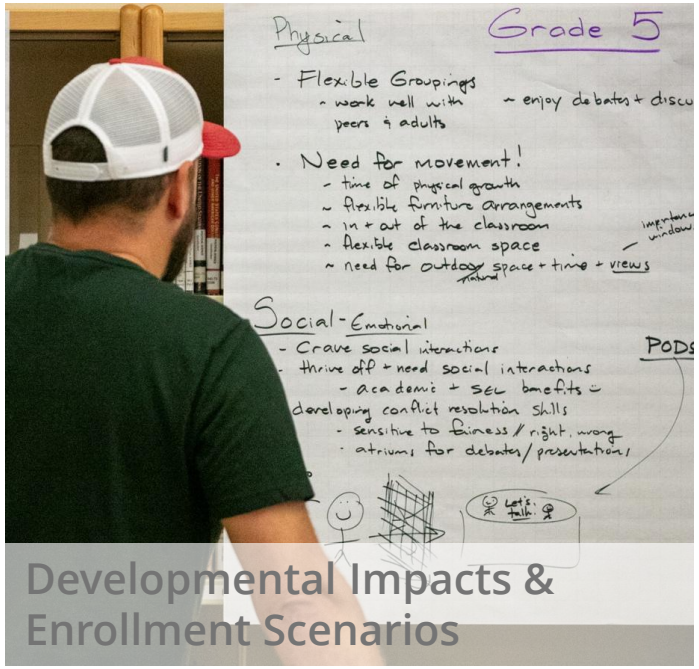
Manchester Essex's Educational Program



Educational &
Community Priorities



Physical &
Social-Emotional Needs



Developmental Impacts &
Enrollment Scenarios



Program
Adjacencies



High-Quality
Instructional Practices

Next Steps/Upcoming Meetings

- 1/6/2026 SBC Approval for the Preliminary Design Program to the MSBA
- 1/28/2026 Community Meeting No. 4
  - Located at Essex Elementary School building tour @4:30, meeting starts at 6pm

Q&A

Project Website



Thank you!



MEETING AGENDA

Meeting Date:	September 12, 2025
Meeting Time:	9:00AM – 10:00AM
Project Name:	Essex Elementary School Project
Meeting Purpose:	School Building Committee - Communications Working Group
Location:	Zoom

Join Zoom: https://us06web.zoom.us/j/88015570880

---

1. **October Community Meeting**
2. **Communication Working Group Meeting Cadance**
3. **New Business**

MEETING NOTES

Meeting Date: September 12, 2025
Project Name: Essex Elementary School Project
Subject: EES Communications Working Group Meeting

Communication Working Group Members

Christina Dell Angelo	DWMP - Project Manager
Mike Burton	DWMP- Partner
Jacob Greco	DWMP - Assistant Project Manager
John Albright	DWMP – Project Manager
Jim LaPosta	JCJ – Design Principal
Fawn Pellegrini	JCJ – Associate Principal
Jeff Elliott	JCJ – Associate Design Principal
Lisa O'Donnell	Essex Planning Board
Kim Provost	Essex Elementary School Principal
Pam Beaudoin	MERSD Superintendent
Annie Cameron	Manchester Con Com
Michelle Cresta	MERSD Director of Finance & Operations
Theresa Whitman	SBC Co-Chair

Meeting Summary

- The communications working group discussed plans for a community forum scheduled for October 8th at Essex Elementary School. They reviewed promotional materials, including a flyer with a QR code for the Zoom meeting and a postcard for direct mail distribution to Manchester and Essex residents. P.Beaudoin confirmed that save-the-date announcements would be sent through Parent Square and social media, with the meeting time corrected from 6:30 PM to 6:00 PM.
- The team discussed distributing information about community meetings through various channels. P. Beaudoin confirmed they would send updated branding materials, including a new seal and forest

green colors, for use on social media and newsletters. C. Dell Angelo and K. Provost agreed to share the save-the-date information across Facebook, Blackboard, Parent Square, and principal newsletters. Theresa suggested additional distribution methods, including town-based Facebook groups, local newspapers, and town hall mailing lists. The team planned to send direct mailers for each meeting, with further reminders through Parent Square two weeks before the event.

- The team discussed organizing town hall communications and distribution efforts for the upcoming community meeting. T. Whitman and others agreed to handle message board postings at both Essex and Manchester town halls, with T. Whitman coordinating distribution of approximately 30 flyers through local bulletin boards. P. Beaudoin confirmed that Minuteman Press would handle postcard printing and distribution, with M. Cresta providing contact information for their coordinator. The group also established that written communication would be used when dealing with the Gloucester Times, with P. Beaudoin offering to share Steve Henneman's contact information for press releases.
- The team further discussed the community meeting, focusing on explaining the MSBA process, project acceptance, and financial support for the district. C. Dell Angelo outlined the agenda, emphasizing the need to introduce the team, review the timeline, and discuss the preliminary design phase, including existing conditions and educational programs. They agreed to provide a detailed agenda, post the slide deck online, and create flyers with key topics for community forums. J. LaPosta stressed the importance of reassuring the community that no design decisions have been made and that multiple enrollment scenarios will be studied.
- The group discussed recording protocols for upcoming visioning sessions and community meetings. P. Beaudoin expressed concerns about recording educator feedback sessions, while T. Whitman noted the importance of balancing transparency with professional input. The discussion clarified that while community meetings would be open to the public, visioning sessions would focus on educator input and might not need recording. The group agreed to target PTOs and school councils for community representation, with C. Dell Angelo confirming that SBC members were invited to previous sessions from other projects she had worked on.

Sincerely,

Jacob Greco

DORE + WHITTIER
Jacob Greco
Assistant Project Manager

Cc: Attendees, File
The above is my summation of our meeting through the use of Zoom's automated summary. If you have any additions and/or corrections, please contact me for incorporation into these minutes

MEETING AGENDA

Meeting Date:	October 3, 2025
Meeting Time:	9:00AM – 10:00AM
Project Name:	Essex Elementary School Project
Meeting Purpose:	School Building Committee - Communications Working Group
Location:	Zoom

Join Zoom: https://us06web.zoom.us/j/88015570880

---

1. **October Community Meeting**
2. **Old Business**
3. **New Business**

MEETING NOTES

Meeting Date: October 3, 2025
Project Name: Essex Elementary School Project
Subject: EES Communications Working Group Meeting

Communication Working Group Members

Christina Dell Angelo	DWMP - Project Manager
Mike Burton	DWMP- Partner
Jacob Greco	DWMP - Assistant Project Manager
John Albright	DWMP – Project Manager
Jim LaPosta	JCJ – Design Principal
Fawn Pellegrini	JCJ – Associate Principal
Jeff Elliott	JCJ – Associate Design Principal
Lisa O'Donnell	Essex Planning Board
Kim Provost	Essex Elementary School Principal
Pam Beaudoin	MERSD Superintendent
Annie Cameron	Manchester Con Com
Michelle Cresta	MERSD Director of Finance & Operations
Theresa Whitman	SBC Co-Chair

Meeting Summary

- The team reviewed a slide deck for an upcoming community meeting about the Essex Elementary School project, which will follow the same agenda as the previous memorial project meeting. C. Dell Angelo explained that P. Beaudoin will kick off the presentation, followed by introductions from Dore & Whittier and JCJ, before discussing the MSBA process, reimbursement rates, and eligible project costs. The team noted that MSBA has increased their construction and site cost cap, as well as the cap for furniture, fixtures, and equipment, which is good news for the project. They also discussed the potential impact of various caps and ineligibles on the final reimbursement rate, using the memorial

project as an example. The team is considering whether to include estimated project timeline dates on the slide.

- The team discussed the scope and presentation of a feasibility study for a school project, focusing on the needs of Essex Elementary students. They clarified that the study would address pre-K through 5th grade needs, with Memorial School considered as a potential site. P. Beaudoin shared a slide format she had been using to explain the options and scenarios, and the group agreed to refine the presentation to avoid confusion about the scope of the feasibility study.
- The team discussed adding town votes and regional agreement details to a presentation slide, with P. Beaudoin agreeing to include "Essex Town vote" and "Manchester Town vote" to illustrate the complexity of the options. J. LaPosta emphasized the importance of clear presentation for the website, suggesting a visual funnel to show the multiple votes required for different projects. C. Dell Angelo mentioned that J. Greco was working on recreating the slide format and that the presentation would cover MSBA process, enrollments, existing conditions, and building details, with the team planning to clean up the format before the community meeting.
- The team discussed sharing photos and videos of school facilities to illustrate maintenance issues and the need for potential improvements. A. Cameron expressed concern about a community member's misleading claims about the school's structural condition and requested that any visual materials clearly highlight deterioration issues. J. LaPosta explained that while the school is well-maintained, its systems, including roofing and windows, are past their useful life and would require rebuilding.
- The team discussed using Mentimeter for gathering community feedback on school configurations and sites but decided against it due to concerns about self-selecting participants and potential misinterpretation of results. They agreed to collect opinions during the Q&A portion of the upcoming meeting instead, with L. O'Donnell noting that community members would be forthcoming with their views. J. LaPosta emphasized the importance of being prepared to act on any feedback collected, and C. Dell Angelo mentioned that feedback could be valuable for future community engagement efforts.
- The group discussed the evaluation of potential school sites and grade configuration options. They clarified that the current focus is on determining which physical sites are viable for further study, separate from the actual grade configuration decisions. J. LaPosta explained that while Apple Street may be eliminated due to infrastructure concerns, the Manchester Memorial site likely needs to be carried forward due to its previous identification in the statement of interest (SOI). The team agreed to seek clarification from MSBA about the process for eliminating sites and to communicate that they are still in the physical site analysis phase, focusing on land viability rather than specific configuration options.

Sincerely,

Jacob Greco

DORE + WHITTIER
Jacob Greco
Assistant Project Manager

Cc: Attendees, File
The above is my summation of our meeting through the use of Zoom's automated summary. If you have any additions and/or corrections, please contact me for incorporation into these minutes

MEETING AGENDA

Meeting Date:	October 27, 2025
Meeting Time:	10:00AM – 11:00AM
Project Name:	Essex Elementary School Project
Meeting Purpose:	School Building Committee - Communications Working Group
Location:	Zoom

Join Zoom: https://us06web.zoom.us/j/88015570880

---

1. Schedule Review
2. Upcoming Community Meetings

MEETING NOTES

Meeting Date: October 27, 2025
Project Name: Essex Elementary School Project
Subject: EES Communications Working Group Meeting

Communication Working Group Members

Christina Dell Angelo	DWMP - Project Manager
Mike Burton	DWMP- Partner
Jacob Greco	DWMP - Assistant Project Manager
John Albright	DWMP – Project Manager
Jim LaPosta	JCJ – Design Principal
Fawn Pellegrini	JCJ – Associate Principal
Jeff Elliott	JCJ – Associate Design Principal
Lisa O'Donnell	Essex Planning Board
Kim Provost	Essex Elementary School Principal
Pam Beaudoin	MERSD Superintendent
Annie Cameron	Manchester Con Com
Michelle Cresta	MERSD Director of Finance & Operations
Theresa Whitman	SBC Co-Chair

Meeting Summary

- The project team discussed updates to their timeline and schedule for the PDP phase of the feasibility study. They announced that Apple Street is no longer under consideration as a site, and explained that the PDP submission to the SBC will be at the end of December, with a community meeting scheduled for January to review alternates and discuss configuration. The team also noted that the PDP phase is not linked to a board meeting with MSBA, allowing for more time in reviewing alternates compared to the PSR and SD packages.
- The group discussed the cost and effectiveness of direct mailers for upcoming community meetings, with L. O'Donnell emphasizing their value for reaching unaware residents despite the high cost of

$3,000. A. Cameron suggested including a timeline on mailers to clarify the series of meetings, and C. Dell Angelo confirmed that the budget of $150,000 includes funds for such promotional materials. The group agreed to consider sending mailers for the next two meetings, with electronic reminders for the third, to maintain engagement throughout the process.

- The group discussed scheduling for community engagement meetings and mailers. They confirmed January 28th as the date for the third community meeting, though P. Beaudoin expressed some concerns about potential scheduling conflicts. The team also discussed the timing of an upcoming School Building Committee meeting, which was tentatively scheduled for either January 21st or 22nd, pending confirmation of the date.
- The team discussed creating a single mailer to cover multiple community meetings, building tours, and budget-related events scheduled between November 20th and January. L. O'Donnell suggested using a full letter-size sheet with a calendar format and stars to highlight key dates, which C. Dell Angelo and P. Beaudoin agreed with. They agreed to work with their teams to develop this concept, incorporating a QR code and posters for additional distribution.
- The working group decided to hold a recap meeting on December 9th at Memorial School, which will include a presentation of previous community meetings and a school tour. They also agreed to create flyers for November-December and January-February meetings. The possibility of providing childcare at future meetings was considered. Additionally, they addressed a request from the Board of Selectmen in Essex regarding cost estimates for the Apple Street project, with C. Dell Angelo and J. LaPosta explaining that accurate costs cannot be provided due to unknown factors.

Sincerely,

Jacob Greco

DORE + WHITTIER

Jacob Greco
Assistant Project Manager

Cc: Attendees, File
The above is my summation of our meeting through the use of Zoom's automated summary. If you have any additions and/or corrections, please contact me for incorporation into these minutes

MEETING AGENDA

Meeting Date:	November 18, 2025
Meeting Time:	10:00AM – 11:00AM
Project Name:	Essex Elementary School Project
Meeting Purpose:	School Building Committee - Communications Working Group
Location:	Zoom

Join Zoom: https://us06web.zoom.us/j/88015570880

---

1. Community Meeting No. 2
2. Schedule Review
3. General Communication Items

MEETING NOTES

Meeting Date: November 18, 2025
Project Name: Essex Elementary School Project
Subject: EES Communications Working Group Meeting

Communication Working Group Members

Christina Dell Angelo	DWMP - Project Manager
Mike Burton	DWMP- Partner
Jacob Greco	DWMP - Assistant Project Manager
John Albright	DWMP – Project Manager
Jim LaPosta	JCJ – Design Principal
Fawn Pellegrini	JCJ – Associate Principal
Jeff Elliott	JCJ – Associate Design Principal
Lisa O'Donnell	Essex Planning Board
Kim Provost	Essex Elementary School Principal
Pam Beaudoin	MERSD Superintendent
Annie Cameron	Manchester Con Com
Michelle Cresta	MERSD Director of Finance & Operations
Theresa Whitman	SBC Co-Chair

Meeting Summary

- C. Dell Angelo announced details for an upcoming community meeting on Thursday evening, which will include a building tour at 4:30 PM and a meeting starting at 6 PM. The agenda will cover project overview, site review, and alternatives, with P. Beaudoin introducing the building and school committees, followed by C. Dell Angelo presenting the feasibility phase schedule.
- The meeting focused on reviewing requirements for studying different types of buildings, including renovation, addition, and new construction, as part of a feasibility study agreement with the MSBA. C. Dell Angelo explained that the community had requested this study, which is being reviewed with the school building committee and will continue through the PDP and PSR phases. The discussion also

covered the need for an amendment to the regional agreement for Pre-K through 3 and Pre-K through 5 options at the memorial site, which requires votes in both towns. The JCJ team was set to present information on various sites studied, including opportunities and constraints, and to update details about the elimination of the Apple Street site from consideration.

- The team discussed including a criteria matrix slide with red, green, and yellow indicators to visually represent data, with J. Elliott working on incorporating this into the Apple Street site considerations. C. Dell Angelo emphasized the importance of communicating that the school building committee considered community feedback about the Apple Street site during their site evaluation process. J. LaPosta confirmed they would present a high-level overview of the developed options, explaining that these are not yet designed, and outlined the next steps, including a community meeting in December at the Memorial Project Site, seeking SBC PDP approval on January 6th, and a fourth community meeting at the Essex site on January 28th.
- The team discussed plans for an upcoming community meeting, confirming that tours of Manchester will be offered at 4:30 PM for those who haven't seen the school, followed by an agenda repeating the content of Meetings 1 and 2. C. Dell Angelo noted that the community would likely be interested in the alternatives analysis and different options, while emphasizing that, according to the feasibility study agreement with MSBA, the memorial site must be carried through the PDP phase before the SPC can eliminate it or consider enrollment changes.
- T. Whitman suggested making the timing of decisions clearer, particularly for those unfamiliar with acronyms like PDP. C. Dell Angelo proposed adding a slide explaining the MSBA process and its modules before the schedule slide. T. Whitman also emphasized the need to differentiate community meetings 1 and 2 to encourage attendance at the second meeting.
- The group discussed timeline planning for a fall 2026 project, with C. Dell Angelo suggesting a tentative date and a caveat about schedule changes. They had a constructive conversation about borrowing strategy, with P. Beaudoin and others discussing the possibility of staggered small bonds to align with debt schedules of the two towns. The team is preparing a presentation for Thursday night, with C.Dell Angelo confirming they have a clear agenda and are making final touches.
- The group discussed engaging KartoonEDU for creating informational videos about the implications of votes and debt exclusions, which would be fact-based and well-received. They planned to review a fee proposal for his services at the next communications working group meeting. P. Beaudoin mentioned working with KartoonEDU on regional superintendent pieces, and C. Dell Angelo highlighted his experience with MSBA projects. The team also discussed collaborating with 1623 Studios for a walkthrough of the Essex school, with Christina and others potentially assisting if professionals were unavailable. A. Cameron requested access to the slide deck for review once completed.

Sincerely,

Jacob Greco

DORE + WHITTIER

Jacob Greco
Assistant Project Manager

Cc: Attendees, File
The above is my summation of our meeting through the use of Zoom's automated summary. If you have any additions and/or corrections, please contact me for incorporation into these minutes

MEETING AGENDA

Meeting Date:	December 3, 2025
Meeting Time:	11:00AM – 12:00PM
Project Name:	Essex Elementary School Project
Meeting Purpose:	School Building Committee - Communications Working Group
Location:	Zoom

Join Zoom: https://us06web.zoom.us/j/87475732555

---

1. Community Meeting No. 3
2. Schedule Review
3. General Communication Items

MEETING NOTES

Meeting Date: December 3, 2025
Project Name: Essex Elementary School Project
Subject: EES Communications Working Group Meeting

Communication Working Group Members

Christina Dell Angelo	DWMP - Project Manager
Mike Burton	DWMP- Partner
Jacob Greco	DWMP - Assistant Project Manager
John Albright	DWMP – Project Manager
Jim LaPosta	JCJ – Design Principal
Fawn Pellegrini	JCJ – Associate Principal
Jeff Elliott	JCJ – Associate Design Principal
Lisa O'Donnell	Essex Planning Board
Kim Provost	Essex Elementary School Principal
Pam Beaudoin	MERSD Superintendent
Annie Cameron	Manchester Con Com
Michelle Cresta	MERSD Director of Finance & Operations
Theresa Whitman	SBC Co-Chair

Meeting Summary

- The team discussed the upcoming community meeting in Manchester, confirming they would present the same information as shared in the first two community meetings. R. Rincon explained she had combined the slides to streamline the presentation, which will cover the MSBA process, project timeline, and design alternatives for the three potential school sites. A. Cameron emphasized the importance of having representatives from both Manchester and Essex communities present at the same time to facilitate cross-community dialogue.
- C. Dell Angelo confirmed that mailers and electronic communications were distributed to both towns, and they noted that future meetings would continue to be held in a hybrid format with online

participation options. P. Beaudoin expressed concerns about low engagement from Manchester's boards, though A. Cameron suggested this might be due to the current preference for virtual meetings rather than a lack of interest. C. Dell Angelo proposed emphasizing the importance of community participation in future meetings and highlighting the availability of recordings and other resources on the project website.

- The group discussed informational video pillars for MSBA projects from KartoonEDU, priced at $795 each. P.Beaudoin suggested creating a combination video covering the PDP and PSR process after the holidays, followed by separate videos for schematic design and budget implications in the fall. A .Cameron agreed noting that the pricing was reasonable, noting that nine videos would cost approximately $7,200.
- The group discussed plans for a memorial site and upcoming meetings. C. Dell Angelo noted that the first walkthrough was well-attended and suggested showing the difference between the Essex School and a new school. A. Cameron encouraged people to attend the upcoming SBC meeting in person, where they will review the final evaluation of alternatives and discuss preliminary cost estimates. C. Dell Angelo mentioned that the project team is working on the preliminary design program submission to MSBA, which will be finalized and sent for review around the holidays, with approval sought in January.

Sincerely,

Jacob Greco

DORE + WHITTIER

Jacob Greco
Assistant Project Manager

Cc: Attendees, File
The above is my summation of our meeting through the use of Zoom's automated summary. If you have any additions and/or corrections, please contact me for incorporation into these minutes

MEETING AGENDA

Meeting Date:	October 10, 2025
Meeting Time:	10:00AM – 11:00AM
Project Name:	Essex Elementary School Project
Meeting Purpose:	School Building Committee – Site Logistics Working Group
Location:	Zoom

Join Zoom: https://us06web.zoom.us/j/87313076228

---

1. Review Site Selection Criteria Matrix
2. Review Current Essex Elementary Site
3. Review Apple Street
4. Review Manchester Memorial Site

MEETING NOTES

Meeting Date: October 10, 2025
Project Name: Lexington High School
Subject: EES Site Logistics Working Group Meeting

Site Logistics Working Group Members

Christina Dell Angelo	DWMP - Project Manager
Mike Burton	DWMP- Partner
Jacob Greco	DWMP - Assistant Project Manager
John Albright	DWMP – Project Manager
Jim LaPosta	JCJ – Design Principal
Fawn Pellegrini	JCJ – Associate Principal
Jeff Elliott	JCJ – Associate Design Principal
Lisa O'Donnell	Essex Planning Board
Gordon Brewster	Owners PM, Former Member of MERMHS & MMES SBC
Pam Beaudoin	MERSD Superintendent
Mike Gerhardt	Civil Engineer/Essex Parent
David Pareen	Resident/ Plumbing & Fire
Theresa Whitman	SBC Co-Chair
Jen Hocherman	Architect
Tyler Virden	Project Excutive

Agenda Item	Description
1.	**Review Site Selection Criteria Matrix** - The team reviewed site development criteria for three potential locations, focusing on Essex Elementary. J. Elliott presented slides detailing site characteristics, environmental concerns, and utility availability. The group discussed the need to verify electrical infrastructure capacity for an all-electric building. P. Beaudoin requested information about asbestos locations for

	parent concerns, and F. Pellegrini explained that Phase 1 environmental studies are ongoing, with Phase 2 testing to follow in the schematic design phase. The team also addressed the presence of a 100-foot wetlands buffer and clarified that it's not a complete no-fly zone for construction. - The team discussed the impact of different facility options on education and regional agreements, noting that disruptions would vary depending on the chosen path, whether renovation, addition, or new construction. J. LaPosta highlighted that even minimal options would result in some site loss for construction purposes, while C. Dell Angelo suggested keeping site viability considerations separate from configuration to allow for more detailed analysis in future phases. The group agreed to emphasize that outcomes depend on the selected option and to refine language to reflect these dependencies.
2.	**Review Current Essex Elementary Site, Manchester Memorial Site, & Apple Street Site** - The team discussed the viability of two school sites: Essex Elementary and Manchester Memorial. They agreed to focus on the land itself rather than the current buildings, as they need to study all options. P. Beaudoin offered to check for available flex space in the area for potential temporary relocation during construction. J. Elliott presented a detailed analysis of Manchester Memorial's site, noting constraints like environmental regulations and limited space. The team acknowledged the high costs and challenges of previous projects at this site. F. Pellegrini raised concerns about meeting MSBA silver rating requirements due to space limitations. The discussion concluded with considerations for site access, transportation impacts, and the need for a physical connection between new and existing buildings at Manchester Memorial. - The team discussed site options for a new school, focusing on the Memorial site, Apple Street, and potential impacts of consolidating students. They determined that the Memorial site's limited space and the need to relocate tennis courts made

	it challenging for consolidation. Apple Street was seen as a viable option physically but faced significant challenges with access, utilities, and potential environmental concerns. The team agreed to update their presentation slides with additional considerations, including busing issues and neighborhood impacts, for review at the upcoming SBC meeting on Tuesday. They also planned to provide documentation on why other potential sites were not considered further.

Sincerely,

Jacob Greco

DORE + WHITTIER

Jacob Greco
Assistant Project Manager

Cc: Attendees, File
The above is my summation of our meeting through Zoom's automated summary. If you have any additions and/or corrections, please contact me for incorporation into these minutes

MEETING AGENDA

Meeting Date:	October 23, 2025
Meeting Time:	12:00PM – 1:00PM
Project Name:	Essex Elementary School Project
Meeting Purpose:	School Building Committee – Sustainability Working Group
Location:	Zoom

Join Zoom: https://us06web.zoom.us/j/88932766675

---

1. Welcome and Team Introductions
2. Approach for Essex ES
3. MSBA Requirements
4. Incentives
5. Introduction to LEED
6. Design Features
    a. Construction
    b. Site
    c. Water
    d. Energy & Carbon
    e. Health & Wellness
    f. Operations
7. Next Steps

Essex Elementary School

October 30, 2025
School Sustainability Group Workshop #1 Meeting Notes

Meeting Date: October 23, 2025

Attendees:
JCJ: Dustin Lombardi, Eric Haggstrom, Fawn W. Pellegrini
Soden: Colleen Soden, Kelley Tapia
DW: Christina Dell Angelo, John Albright, Jacob Greco
MERSD: Kimberly Provost, Pam Beaudoin, Michelle Cresta
SBC: Mike Gerhardt

Notes – to be used in conjunction with the slide deck

The meeting started with introductions of attendees from Dore + Whittier, JCJ Architecture, Soden Sustainability, and the individuals on the SBC Sustainability Working Group

Workshop Purpose

The purpose of the meeting was to review requirements of the Massachusetts School Building Authority (MSBA) to meet LEED Silver rating, discuss the sustainable measures implemented at the Manchester Memorial Elementary School (MMES), and for the design team to share the proposed sustainable measures for the renovated or new Essex Elementary School. The sustainability workshop introduced key sustainability frameworks and considerations to inform decision-making for the new Essex Elementary School building. The team emphasized aligning sustainability strategies with educational value, cost-effectiveness, and long-term operational benefits.

Design Team's Sustainability Approach

- Focused on learning as the primary outcome.
- Emphasized healthy indoor environments, training opportunities, and maximizing value.
- Aimed to balance minimizing first costs with reducing long-term operations and maintenance costs.

Minimum MSBA Requirements

- Achieve LEED BD+C: Schools Silver under v4.0 with select credits upgraded to v4.1
- Required points:
    - Material Ingredients (20+ compliant products from 5 manufacturers)
    - Low Emitting Materials
    - Indoor Air Quality Assessment
- Must meet MA DOER Stretch Code and be solar-ready.

Incentives Overview

MSBA Enhanced Reimbursement:

- 3% for Opt-In Specialized Energy Code (Net Zero or All-Electric)
- 1% for additional indoor air/material quality credits
- Mass Save Incentives: Achieve EUI < 25 for meaningful savings
- Key Message: Incentives can offset added costs and maximize long-term value.
- Additional conversation: It is assumed, but confirmation from the SBC is needed, that there is agreement to move forward with 3% + 1% = 4% incentives.

Sustainable Design Opportunities

Construction – best practices

- Divert waste from landfill.
- Implement construction-phase air quality plans.

Site Design

- Protect sensitive lands and floodplains.
- Target 90th percentile stormwater events.
- Use native planting; no irrigation.
- EV charging: match or exceed 2 stations from Manchester Memorial.
    - Electric vehicle charging. The building code has been modified since the design of Manchester which provided one station with two plug-in points. Now, code requires 10% spaces to be EV ready.
    - EV-ready means installing conduit and power capacity now, leaving chargers for future installation — lower upfront cost, but less immediate benefit.
    - EV-installed provides immediate functionality and community value but has higher initial cost.
    - Quantity of spaces depends on the number of parking spots in the final design.
    - Discussion question: How might EV charging at the school serve both staff and the wider community, and what's the most value-forward way for us to plan for that—EV-ready or EV-installed now?
- Working Group confirmed design team shall provide covered bike parking and bike lanes.
    - Discussion question: Investing in covered bike racks and safe on-site bike lanes can reduce parking demand and support healthy, low-carbon transportation. As more families and staff look to bike to school, how should we plan for these features to support long-term use—and what level of investment feels appropriate now?
- Perform resiliency assessments for flood, fire, storms.
    - For every project site under consideration in the PSR (Preferred Schematic Report Feasibility Study) phase, the District and Design team must perform a written risk assessment / evaluation for environmental hazards specific to each site including (but not limited to) flooding, high winds, storm surges, power outages, extreme heat and

cold, winter storms, rain, snow, and any other applicable site vulnerability relative to site resiliency or climate change for the anticipated useful life of the building.
    - Will help gather sufficient information to make informed decisions regarding site selection, building location and massing, floor elevations of occupied areas and elevations of critical mechanical equipment, stormwater retention, building materials, emergency back-up systems, systems selection and any other relevant site and building design consideration.
- Light pollution mitigation – best practices
- Open space and rainwater management – both credits are based on the specific site selected. The intent of the Open space credit is to include exterior open space in the design that encourages interaction with the environment, social interaction, passive recreation, and physical activities. (can be hardscape and green).
- Rainwater management is a combination of both subsurface (person-made) filtration and storage as well as thoughtful + useful landscaping.
    - Raingardens; these help reduce the person-made infrastructure by slowing the waterflow and allowing water to infiltrate the soil gradually. This reduces peak flow into the municipal stormwater system — which is often what drives infrastructure costs up.
    - The potential benefits are smaller underground pipes, cleaner water entering local waterways, create hands-on learning spaces for students to learn about science, ecology, and climate resilience.
- MERSD team noted that they have not heard of challenges with the raingarden at MMES. Design Team will pursue raingardens for the EES project.
    - Mike G suggested permeable pavement.
    - Dustin L asked if Essex had Friends of Trees similar to Manchester-by the-Sea. The MERSD individuals stated they do not believe a similar group exists in Essex.

Water

- Target 35% indoor water use reduction.
    - Plumbing fixture flows are listed below – all recommendations match Manchester, with the exception of toilets. MMES toilet's were designed as 1.1 gpf.
    - MERSD team noted they have not heard challenges with the 1.1 gpf toilets and confirmed design team shall proceed with this for the EES project.
- Specify low-flow, code-compliant fixtures.
- Meter domestic hot water and plumbing.
    - Manchester metered:
        - Whole building (prereq)
        - HVAC heating boiler make-up water (Essex may choose to meter the plumbing fixtures)
        - Domestic hot water use

Energy & Carbon

- Target EUI < 25.

- Explore displacement ventilation system.
- Aim for 5% WBLCA reduction in embodied carbon with newer material technologies.
- Commissioning – A Commission team is required by MSBA. The Target for schools is typically 25 EUI. EUI of 25 or lower is threshold for Path 1 incentives with MASS.
- LEED Optimize has gotten harder since MMES.
- Displacement ventilation provides air at flow at floor level rather than at the ceiling. One advantage is the fresh, conditioned air (heat or cool) is at the space occupied by students and staff (as opposed to high at the ceiling).
- Not done at MMES but proposed for EES is mindfulness of embodied carbon. JCJ has the ability and software to provide this review. Just doing the study earns 1-point on the LEED scorecard.

Health & Wellness

- Use Red List-free, HPD/EPD-verified materials.
- Perform IAQ flush-out pre or post-occupancy.
- MERV 13+ filters, CO_2 monitoring, operable windows.
- Maximize daylight, use LED lighting and glare controls.
- Design team encourages operable windows. This typically needs to be balanced with control of the HVAC system. JCJ suggests one operable window in each classroom has been successful on our school projects.

Operations

- Plan for joint-use community facilities
- Adapt Manchester Memorial's LEED O+M Starter Kit.

Next Steps

- Sustainability Working Group to report to School Building Committee.
- Next SWG Meeting: November 17, 2025.
    - Design team to share LEED scorecard progress
- MSBA Submission Timeline:
    - PDP: January 2026
    - PSR: April 2026
- Schematic Design Phase: May–November 2026
    - Finalize Mass Save Memorandum of Understanding.

Action Items / Recommendations

- Pursue all available incentives.
- Match or exceed Manchester Memorial's sustainability benchmarks.
- Consider regenerative strategies that support curriculum and resilience.

MEETING AGENDA

Meeting Date:	November 17, 2025
Meeting Time:	10:30AM – 12:00PM
Project Name:	Essex Elementary School Project
Meeting Purpose:	School Building Committee – Sustainability Working Group
Location:	Zoom

Join Zoom: https://us06web.zoom.us/j/88932766675

---

1. Welcome
2. Homework Topics
3. Confirmation of Incentives
4. Draft LEED Scorecard for the Essex ES site
5. LEED Scorecard differences for MMES site
6. Next Step

COMPARATIVE PROBABLE COST ANALYSIS

SECTION 3.1.8.11

PDP Cost Estimate

Essex Elementary School

Essex, MA

PM&C LLC
20 Downer Avenue, Suite 5
Hingham, MA 02043
(T) 781-740-8007

Prepared for:

Dore + Whittier

December 9, 2025

Essex Elementary School
Essex, MA

9-Dec-25

PDP Cost Estimate

INTRODUCTION

NOTE: The costs for the various PDP Options indicated above are intended to be an analysis of the relative costs between options and NOT a prediction of the actual final cost of any individual option. Major variables such as geotechnical, site grading, structural system and final MEP systems have yet to be designed in detail so costs will vary significantly from the benchmark cost estimating included as part of this PDP cost analysis. The costs outlined in this report should not be represented as the FINAL construction budget.

This PDP Design Submission cost estimate was produced from narratives and outline drawings dated November 06, 2025 prepared by JCJ Architecture and their design team.

This estimate includes all direct construction costs, CM fees and design contingency. Cost escalation assumes start dates indicated.

Bidding conditions are expected to be public bidding under 149a of the Massachusetts General Laws to pre-qualified construction managers, and pre-qualified sub-contractors, open specifications for materials and manufacturers.

The estimate is based on prevailing wage rates for construction in this market and represents a reasonable opinion of cost. It is not a prediction of the successful bid from a contractor as bids will vary due to fluctuating market conditions, errors and omissions, proprietary specifications, lack or surplus of bidders, perception of risk, etc. Consequently the estimate is expected to fall within the range of bids from a number of competitive contractors or subcontractors, however we do not warrant that bids or negotiated prices will not vary from the final construction cost estimate.

ITEMS NOT CONSIDERED IN THIS ESTIMATE

Items not included in this estimate are:

- All professional fees and insurance
- Building Permit costs
- Rock excavation
- Land acquisition, feasibility, and financing costs
- All Furnishings, Fixtures and Equipment
- Items identified in the design as Not In Contract (NIC)
- Items identified in the design as by others
- Owner supplied and/or installed items (e.g. draperies, furniture and equipment)
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)

PM&C

Essex Elementary School
Essex, MA
PDP Cost Estimate

9-Dec-25

	Base Repair	Base Repair		Add Reno Essex ES Site		New at Story St. Site		New At Lincoln St. Site
Enrollment	**165**	**250**	**COSTS**	**165**	**250**	**165**	**250**	**515**
Option Name	**A0.1**	**A0.2**		**A1.1**	**A1.2**	**A2.1**	**A2.2**	**B1.1**
New Addition SF			$ 562	7,741				41,899
New Addition SF			$ 551	0	20,637			
New Addition SF			$ 539					
New Building			$ 541			60,777	73,673	
New Building			$ 537					
Reno SF	53,036	53,036	$ 484	53,036				
Reno SF	0	0	$ 484	0	53,036			
Reno SF			$ 438					5,000
Total SF	**53,036**	**53,036**	$ 324	**60,777**	**73,673**	**60,777**	**73,673**	**46,899**
Trade Costs	**$ 17,162,307**	**$ 17,162,307**		**$ 30,011,432**	**$ 37,028,371**	**$ 32,865,916**	**$ 39,549,955**	**$ 24,684,189**
				7,741	20,637	42,544	51,571	23,044
Ground Improvements - assumed NR			$ 15	**$ 116,115**	**$ 309,555**	**$ 638,160**	**$ 773,565**	**$ 345,660**
	0	0	$ -	0	53,036	53,036	53,036	
Demolition	0	0	$ 10	**$ -**	**$ -**	**$ 530,360**	**$ 530,360**	**$ -**
HazMat Removals	**$ 450,000**	**$ 450,000**	$ 450,000	**$ 450,000**	**$ 450,000**	**$ 450,000**	**$ 450,000**	
Phased Construction	Yes	Yes		Yes	Yes	No	No	Yes
Start of Construction	Jan 29'	June 28'		Jan 29'	June 28'	Jan 29'	June 28'	Jan 29'
Total Construction Duration	30	36	$ 160,000	42	48	42	42	32
GC/GR's	**$ 4,800,000**	**$ 5,760,000**		**$ 6,720,000**	**$ 7,680,000**	**$ 6,720,000**	**$ 6,720,000**	**$ 5,120,000**
GR's	**$ 786,871**	**$ 686,492**	4%	**$ 1,533,558**	**$ 1,831,235**	**$ 1,649,857**	**$ 1,934,218**	**$ 1,405,946**
Phasing Percentage	**$ 983,589**	**$ 858,115**	5%	**$ 1,916,947**	**$ 2,289,044**	**$ -**		**$ 1,757,433**
Modulars	No	Yes				No	No	No
Size	-	4,000		0	0	-	-	-
	$ -	**$ 1,400,000**	$ -	**$ -**	**0**	**$ -**		
Site Work								
Base Sitework	**$ 2,059,477**	**$ 2,059,477**	12%					
			22%	**$ 6,602,515**	**$ 6,602,515**	**$ 7,230,502**	**$ 7,230,502**	
Site Premiums								**$ 8,639,466**
			35%					
Playground	**$ -**	**$ -**		**$ 425,000**	**$ 850,000**	**$ 850,000**	**$ 1,275,000**	**$ 1,275,000**
Courtyard				**$ 200,000**	**$ 200,000**	**$ -**	**$ -**	**$ 200,000**
Play Field			300000	**$ 300,000**	**$ 300,000**	**$ 300,000**	**$ 300,000**	**$ -**
Site Phasing/Temp Parking				**$ 350,000**	**$ 350,000**	**$ -**	**$ -**	**$ 350,000**
TRADE SUBTOTAL	**$ 26,242,244**	**$ 28,376,391**		**$ 48,625,567**	**$ 57,890,721**	**$ 51,234,795**	**$ 58,763,600**	**$ 43,777,695**
D+P Contingency	**$ 3,149,069**	**$ 3,405,167**	12%	**$ 5,835,068**	**$ 6,946,887**	**$ 6,148,175**	**$ 7,051,632**	**$ 5,253,323**
Escalation to Start 2029	**$ 2,361,802**	**$ 2,128,229**	9.0%	**$ 4,376,301**	**$ 4,341,804**	**$ 4,611,132**	**$ 4,407,270**	**$ 3,939,993**
Escalation to Start 2028			7.5%					
SUBTOTAL w/Contingencies	**$ 31,753,115**	**$ 33,909,787**		**$ 58,836,936**	**$ 69,179,412**	**$ 61,994,101**	**$ 70,222,502**	**$ 52,971,011**
Bonds + Insurance	**$ 793,828**	**$ 847,745**	2.5%	**$ 1,470,923**	**$ 1,729,485**	**$ 1,549,853**	**$ 1,755,563**	**$ 1,324,275**
FEE	**$ 650,939**	**$ 695,151**	2.0%	**$ 1,206,157**	**$ 1,418,178**	**$ 1,270,879**	**$ 1,439,561**	**$ 1,085,906**
GMP Contingency	**$ 793,828**	**$ 847,745**	2.5%	**$ 1,470,923**	**$ 1,729,485**	**$ 1,549,853**	**$ 1,755,563**	**$ 1,324,275**
ECC TOTAL	**$ 33,991,710**	**$ 36,300,427**		**$ 62,984,940**	**$ 74,056,560**	**$ 66,364,686**	**$ 75,173,188**	**$ 56,705,467**
Cost per SF	$ 640.92	$ 684.45		$ 1,036.33	$ 1,005.21	$ 1,091.94	$ 1,020.36	$ 1,209.10

PM&C

Essex Elementary School
Essex, MA

9-Dec-25

PDP Cost Estimate

CONSTRUCTION COST SUMMARY

	BUILDING SYSTEM	Code Upgrade/Base Repair A0.1	Code Upgrade/Base Repair A0.2	Addition A1.1	Renovation A1.1	Addition A1.2	Renovation A1.2	New Construction A2.1	New Construction A2.2	Addition B1.1	Renovation B1.1	NEW	RENO STORY	RENO LINCOLN	CODE
		53,036	53,036	7,741	53,036	20,637	53,036	60,777	73,673	41,899	5,000	*$/sf*	*$/sf*	*$/sf*	*$/sf*
A10	**FOUNDATIONS**														
A1010	Standard Foundations			$154,820	$530,360	$412,740	$530,360	$1,215,540	$1,473,460	$837,980	$25,000	*$20.00*	*$10.00*	*$5.00*	
A1020	Special Foundations														
A1030	Lowest Floor Construction			$77,410	$424,288	$206,370	$424,288	$607,770	$736,730	$418,990	$40,000	*$10.00*	*$8.00*	*$8.00*	
B10	**SUPERSTRUCTURE**														
B1010	Upper Floor Construction			$154,820	$530,360	$412,740	$530,360	$1,215,540	$1,473,460	$837,980	$50,000	*$20.00*	*$10.00*	*$10.00*	
B1020	Roof Construction			$270,935	$265,180	$722,295	$265,180	$2,127,195	$2,578,555	$1,466,465	$25,000	*$35.00*	*$5.00*	*$5.00*	
B20	**EXTERIOR CLOSURE**														
B2010	Exterior Walls			$436,437	$2,982,457	$1,573,253	$2,982,457	$3,417,769	$4,142,970	$2,356,173	$281,173	*$56.23*	*$56.23*	*$56.23*	
B2020	Windows	$1,073,277	$1,073,277	$156,653	$1,073,277	$417,626	$1,073,277	$1,229,930	$1,490,903	$847,900	$101,184	*$20.24*	*$20.24*	*$20.24*	*$20.24*
B2030	Exterior Doors	$100,829	$100,829	$14,717	$100,829	$39,234	$100,829	$115,546	$140,063	$79,656	$9,506	*$1.90*	*$1.90*	*$1.90*	*$1.90*
B30	**ROOFING**														
B3010	Roof Coverings			$218,005	$1,493,620	$581,187	$1,493,620	$1,711,625	$2,074,806	$1,179,975	$25,000	*$28.16*	*$28.16*	*$5.00*	
B3020	Roof Openings			$182	$1,250	$486	$1,250	$1,432	$1,736	$987		*$0.02*	*$0.02*		
C10	**INTERIOR CONSTRUCTION**														
C1010	Partitions	$265,180	$265,180	$277,192	$1,327,675	$738,022	$1,327,675	$2,173,513	$2,634,701	$1,498,396	$125,167	*$35.76*	*$25.03*	*$25.03*	*$5.00*
C1020	Interior Doors	$159,108	$159,108	$75,134	$514,767	$200,303	$514,767	$589,901	$715,070	$406,671	$48,530	*$9.71*	*$9.71*	*$9.71*	*$3.00*
C1030	Specialties/Millwork	$613,332	$613,332	$89,520	$613,332	$238,655	$613,332	$702,852	$851,987	$484,539	$57,822	*$11.56*	*$11.56*	*$11.56*	*$11.56*
C20	**STAIRCASES**														
C2010	Stair Construction	$53,036	$53,036	$80,000	$53,036	$64,602	$53,036	$390,256	$430,626	$131,161		*$3.13*	*$1.00*		*$1.00*
C2020	Stair Finishes	$50,773	$50,773	$30,000	$50,773	$19,756	$50,773	$58,184	$70,529	$40,111		*$0.96*	*$0.96*		*$0.96*
C30	**INTERIOR FINISHES**														
C3010	Wall Finishes	$424,288	$424,288	$100,633	$689,468	$268,281	$689,468	$790,101	$957,749	$544,687	$65,000	*$13.00*	*$13.00*	*$13.00*	*$8.00*
C3020	Floor Finishes	$636,432	$636,432	$92,892	$636,432	$247,644	$636,432	$729,324	$884,076	$502,788	$60,000	*$12.00*	*$12.00*	*$12.00*	*$12.00*
C3030	Ceiling Finishes	$742,504	$742,504	$108,374	$742,504	$288,918	$742,504	$850,878	$1,031,422	$586,586	$70,000	*$14.00*	*$14.00*	*$14.00*	*$14.00*
D10	**CONVEYING SYSTEMS**														
D1010	Elevator				$220,000		$220,000	$310,000	$310,000						
D20	**PLUMBING**														
D20	Plumbing	$1,325,900	$1,325,900	$193,525	$1,325,900	$515,925	$1,325,900	$1,519,425	$1,841,825	$1,047,475	$125,000	*$25.00*	*$25.00*	*$25.00*	*$25.00*
D30	**HVAC**														
D30	HVAC	$6,099,140	$6,099,140	$890,215	$6,099,140	$2,373,255	$6,099,140	$6,989,355	$8,472,395	$4,818,385	$575,000	*$115.00*	*$115.00*	*$115.00*	*$115.00*
D40	**FIRE PROTECTION**														
D40	Fire Protection	$530,360	$530,360	$77,410	$530,360	$206,370	$530,360	$607,770	$736,730	$418,990	$50,000	*$10.00*	*$10.00*	*$10.00*	*$10.00*
D50	**ELECTRICAL**														
D5010	Service & Distribution	$955,450	$955,450	$139,455	$955,450	$371,778	$955,450	$1,094,905	$1,327,228	$754,816	$90,076	*$18.02*	*$18.02*	*$18.02*	*$18.02*
D5020	Lighting & Power	$1,092,542	$1,092,542	$159,465	$1,092,542	$425,122	$1,092,542	$1,252,006	$1,517,664	$863,119	$103,000	*$20.60*	*$20.60*	*$20.60*	*$20.60*
D5030	Communication & Security	$1,166,792	$1,166,792	$170,302	$1,166,792	$454,014	$1,166,792	$1,337,094	$1,620,806	$921,778	$110,000	*$22.00*	*$22.00*	*$22.00*	*$22.00*
D5040	Other Electrical Systems	$318,716	$318,716	$46,519	$318,716	$124,017	$318,716	$365,235	$442,732	$251,789	$30,047	*$6.01*	*$6.01*	*$6.01*	*$6.01*
E10	**EQUIPMENT**														
E10	Equipment (Kitchen)	$600,000	$600,000		$600,000		$600,000	$600,000	$600,000	$600,000					
E10	Equipment (Gym)			$255,000		$255,000		$255,000	$255,000	$255,000					
E20	**FURNISHINGS**														
E2010	Fixed Furnishings	$530,360	$530,360	$77,410	$530,360	$206,370	$530,360	$607,770	$736,730	$418,990	$50,000	*$10.00*	*$10.00*	*$10.00*	*$10.00*
E2020	Movable Furnishings														
F20	**BUILDING DEMOLITION**														
F2010	Building Elements Demolition	$424,288	$424,288		$795,540		$795,540				$75,000		*$15.00*	*$15.00*	*$8.00*
TOTAL DIRECT COST (Trade Costs)		***$17,162,307***	***$17,162,307***	***$4,347,025***	***$25,664,407***	***$11,363,964***	***$25,664,407***	***$32,865,916***	***$39,549,955***	***$22,571,388***	***$2,191,505***				
		$323.60	$323.60	$561.56	$483.91	$550.66	$483.91	$541	$537	$539	$438				

A.M. Fogarty
& Assoc., Inc.
175 Derby St., Suite 5, Hingham, MA 0204
TEL: (781) 749-7272 ● FAX: (781) 740-2652
ptim@amfogarty.com
"Construction Cost Consultants"

Essex Elementary School
Essex, MA

December 10, 2025

PDP ESTIMATE
GRAND SUMMARY

	GSF	CM @ Risk TOTAL	D/B Chprt 149 TOTAL
BASE REPAIR:			
A0.1 CODE UPGRADE/BASE REPAIR K-3	53,036	$36,648,192	$34,082,818
A0.2 CODE UPGRADE/BASE REPAIR K-5	53,056	$38,965,110	$36,237,553
RENOVATION & ADDITION:			
A1.1 (SITE A, K-3)	60,777	$63,106,750	$58,689,277
A1.2 (SITE A, K-5)	73,673	$72,870,669	$67,769,722
B1.1 (SITE B, K-5)	119,001	$54,002,066	$50,221,921
NEW CONSTRUCTION:			
A2.1 K-3	60,777	$69,350,135	$64,495,625
A2.2 K-5	73,673	$77,424,145	$72,004,455

A.M. Fogarty
& Assoc., Inc.
175 Derby St., Suite 5, Hingham, MA 02043
TEL: (781) 749-7272 ● FAX: (781) 740-2652
ptim@amfogarty.com
"Construction Cost Consultants"

PDP
Essex Elementary School
Essex, MA

10-Dec-25

Designer: JCJ Architecture

OPTION A 0.1 CODE/BASE REPAIR (K-3)

	GSF		COST PER S.F.	TOTAL
RENOVATION	53,036	**GSF**	$353.25	**$18,734,961**
HAZARDOUS WASTE REMOVAL				**$450,000**
SITEWORK				**$2,080,728**

TOTAL DIRECT COST				$21,265,688
CM CHPTR 149a				
DESIGN CONTINGENCY		12%		$2,551,883
CM CONTINGENCY		3%		$714,527
ESCALATION (bid winter 2029)		13%		$3,096,284
GENERAL CONDITIONS	30	MOS	$168,000	$5,040,000
GENERAL REQUIREMENTS/PHASING		6.0%		$1,960,103
BUILDING PERMIT		waived		
P&P BOND & GL INSURANCE		2.75%		$952,283
PROFIT		3%		$1,067,423

TOTAL CONSTRUCTION COST				$36,648,192
COST PER SF				**$691.01**

A.M. Fogarty
& Assoc., Inc.
175 Derby St., Suite 5, Hingham, MA 02043
TEL: (781) 749-7272 • FAX: (781) 740-2652
ptim@amfogarty.com
"Construction Cost Consultants"

PDP
Essex Elementary School
Essex, MA

10-Dec-25

Designer: JCJ Architecture

OPTION A 0.2 CODE/BASE REPAIR (K-5)

	GSF		COST PER S.F.	TOTAL
RENOVATION	53,036	**GSF**	$353.25	**$18,734,961**
HAZARDOUS WASTE REMOVAL				**$450,000**
SITEWORK				**$2,080,728**
TEMPORARY CLASSROOMS				**$1,400,000**

	TOTAL DIRECT COST			$22,665,688
CM CHPTR 149a				
DESIGN CONTINGENCY		12%		$2,719,883
CM CONTINGENCY		3%		$761,567
ESCALATION (bid summer 2028)		10%		$2,538,557
GENERAL CONDITIONS	36	MOS	$168,000	$6,048,000
GENERAL REQUIREMENTS/PHASING		6.0%		$2,084,022
BUILDING PERMIT		waived		
P&P BOND & GL INSURANCE		2.75%		$1,012,487
PROFIT		3%		$1,134,906

	TOTAL CONSTRUCTION COST			$38,965,110
	COST PER SF			**$734.69**

A.M. Fogarty
& Assoc., Inc.
175 Derby St., Suite 5, Hingham, MA 02043
TEL: (781) 749-7272 • FAX: (781) 740-2652
ptim@amfogarty.com
"Construction Cost Consultants"

PDP
Essex Elementary School
Essex, MA

10-Dec-25

Designer: JCJ Architecture

OPTION A 1.1 ADDITION/RENOVATION (K-3)

	GSF		COST PER S.F.	TOTAL
ADDITION	7,741	**GSF**	$635.19	**$4,917,031**
RENOVATION	53,036	**GSF**	$459.20	**$24,354,170**
HAZARDOUS WASTE REMOVAL				**$450,000**
SITEWORK				**$8,558,836**

TOTAL DIRECT COST				$38,280,036
CM CHPTR 149a				
DESIGN CONTINGENCY		12%		$4,593,604
CM CONTINGENCY		3%		$1,286,209
ESCALATION (bid winter 2029)		13%		$5,573,573
GENERAL CONDITIONS	42	MOS	$168,000	$7,056,000
GENERAL REQUIREMENTS/PHASING		5.0%		$2,839,471
BUILDING PERMIT		waived		
P&P BOND & GL INSURANCE		2.75%		$1,639,795
PROFIT		3%		$1,838,061

TOTAL CONSTRUCTION COST				$63,106,750
COST PER SF				**$1,038.33**

A.M. Fogarty
& Assoc., Inc.
175 Derby St., Suite 5, Hingham, MA 02043
TEL: (781) 749-7272 • FAX: (781) 740-2652
ptim@amfogarty.com
"Construction Cost Consultants"

PDP
Essex Elementary School
Essex, MA

10-Dec-25

Designer: JCJ Architecture

OPTION A 1.2 ADDITION/RENOVATION (K-3)

	GSF		COST PER S.F.	TOTAL
ADDITION	20,637	**GSF**	$602.11	**$12,425,674**
RENOVATION	53,036	**GSF**	$442.73	**$23,480,530**
HAZARDOUS WASTE REMOVAL				**$450,000**
SITEWORK				**$9,086,212**

TOTAL DIRECT COST				$45,442,416
CM CHPTR 149a				
DESIGN CONTINGENCY		12%		$5,453,090
CM CONTINGENCY		3%		$1,526,865
ESCALATION (bid summer 2028)		10%		$5,089,551
GENERAL CONDITIONS	48	MOS	$168,000	$8,064,000
GENERAL REQUIREMENTS/PHASING		5.0%		$3,278,796
BUILDING PERMIT		waived		
P&P BOND & GL INSURANCE		2.75%		$1,893,505
PROFIT		3%		$2,122,447

TOTAL CONSTRUCTION COST				$72,870,669
COST PER SF				**$989.11**

A.M. Fogarty
& Assoc., Inc.
175 Derby St., Suite 5, Hingham, MA 02043
TEL: (781) 749-7272 • FAX: (781) 740-2652
ptim@amfogarty.com
"Construction Cost Consultants"

PDP
Essex Elementary School
Essex, MA

10-Dec-25

Designer: JCJ Architecture

OPTION B 1.1 ADDITION/RENOVATION (K-5)

	GSF		COST PER S.F.	TOTAL
ADDITION	41,899	**GSF**	$526.21	**$22,047,695**
RENOVATION	5,000	**GSF**	$291.54	**$1,457,708**
HAZARDOUS WASTE REMOVAL			n/a	
SITEWORK				**$10,487,656**

TOTAL DIRECT COST				$33,993,059
CM CHPTR 149a				
DESIGN CONTINGENCY		12%		$4,079,167
CM CONTINGENCY		3%		$1,142,167
ESCALATION (bid winter 2029)		13%		$4,949,389
GENERAL CONDITIONS	32	MOS	$168,000	$5,376,000
GENERAL REQUIREMENTS/PHASING		3.0%		$1,486,193
BUILDING PERMIT		waived		
P&P BOND & GL INSURANCE		2.75%		$1,403,214
PROFIT		3%		$1,572,876

TOTAL CONSTRUCTION COST				$54,002,066
COST PER SF				**$1,151.45**

A.M. Fogarty
& Assoc., Inc.
175 Derby St., Suite 5, Hingham, MA 02043
TEL: (781) 749-7272 • FAX: (781) 740-2652
ptim@amfogarty.com
"Construction Cost Consultants"

PDP
Essex Elementary School
Essex, MA

10-Dec-25

Designer: JCJ Architecture

OPTION A 2.1 NEW CONSTRUCTION (K-3)

	GSF		COST PER S.F.	TOTAL
NEW CONSTRUCTION	60,777	**GSF**	$550.23	**$33,441,035**
HAZARDOUS WASTE REMOVAL				**$450,000**
BUILDING DEMOLITION	53,036	**GSF**	$12.50	**$662,950**
SITEWORK				**$9,222,149**
TOTAL DIRECT COST				$43,776,134
CM CHPTR 149a				
DESIGN CONTINGENCY		12%		$5,253,136
CM CONTINGENCY		3%		$1,470,878
ESCALATION (bid winter 2029)		13%		$6,373,805
GENERAL CONDITIONS	42	MOS	$168,000	$7,056,000
GENERAL REQUIREMENTS		2.5%		$1,598,249
BUILDING PERMIT		waived		
P&P BOND & GL INSURANCE		2.75%		$1,802,026
PROFIT		3%		$2,019,907
TOTAL CONSTRUCTION COST				$69,350,135
COST PER SF				**$1,141.06**

A.M. Fogarty & Assoc., Inc.
175 Derby St., Suite 5, Hingham, MA 02043
TEL: (781) 749-7272 • FAX: (781) 740-2652
ptim@amfogarty.com
"Construction Cost Consultants"

PDP
Essex Elementary School
Essex, MA

10-Dec-25

Designer: JCJ Architecture

OPTION A 2.2 NEW CONSTRUCTION (K-5)

	GSF		COST PER S.F.	TOTAL
NEW CONSTRUCTION	73,673	**GSF**	$542.67	**$39,980,055**
HAZARDOUS WASTE REMOVAL				**$450,000**
BUILDING DEMOLITION	53,036	**GSF**	$12.50	**$662,950**
SITEWORK				**$9,726,311**

TOTAL DIRECT COST				$50,819,315
CM CHPTR 149a				
DESIGN CONTINGENCY		12%		$6,098,318
CM CONTINGENCY		3%		$1,707,529
ESCALATION (bid summer 2028)		10%		$5,691,763
GENERAL CONDITIONS	42	MOS	$168,000	$7,056,000
GENERAL REQUIREMENTS		2.5%		$1,784,323
BUILDING PERMIT		waived		
P&P BOND & GL INSURANCE		2.75%		$2,011,824
PROFIT		3%		$2,255,072

TOTAL CONSTRUCTION COST				$77,424,145
COST PER SF				**$1,050.92**

PROJECT: Essex Elementary School
LOCATION: Essex, MA
CLIENT: JCJ Architets
DATE: 10-Dec-25

SUMMARY

No.: 18021

	CODE UPGRADE TOTAL	ADDITION A 1.1 TOTAL	ADDITION A 1.2 TOTAL	ADDITION B1.1 TOTAL	RENOVATION A 1.1 TOTAL	RENOVATION A 1.2 TOTAL	RENOVATION B1.1 TOTAL
A. SUBSTRUCTURE							
A10 - FOUNDATIONS							
A1010 STANDARD FOUNDATIONS	$106,072	$193,525	$515,925	$576,111	$106,072	$106,072	$0
A1020 SPECIAL FOUNDATIONS	$0	$154,820	$412,740	$460,889	$0	$0	$0
A1030 SLAB ON GRADE	$106,072	$135,468	$361,148	$403,278	$106,072	$106,072	$0
B. SHELL							
B10 - SUPERSTRUCTURE							
B1010 FLOOR CONSTRUCTION	$265,180	$0	$0	$1,127,691	$265,180	$265,180	$0
B1020 ROOF CONSTRUCTION	$265,180	$426,664	$969,199	$1,070,480	$265,180	$265,180	$0
B20 - EXTERIOR ENCLOSURE							
B2010 EXTERIOR WALLS	$0	$402,532	$1,073,124	$2,178,748	$2,970,016	$2,970,016	$0
B2020 EXTERIOR WINDOWS	$1,007,684	$147,079	$392,103	$796,081	$1,007,684	$1,007,684	$0
B2030 EXTERIOR DOORS	$228,700	$62,000	$145,200	$145,200	$228,700	$228,700	$0
B30 - ROOFING							
B3010 ROOF COVERINGS	$1,856,260	$270,935	$722,295	$806,556	$1,988,850	$1,988,850	$0
B3020 ROOF OPENINGS	$90,500	$90,500	$90,500	$90,500	$0	$0	$0
C. INTERIORS							
C10 - INTERIOR CONSTRUCTION							
C1010 PARTITIONS	$132,590	$270,935	$722,295	$1,466,465	$1,591,080	$1,591,080	$175,000
C1020 INTERIOR DOORS	$106,072	$59,993	$159,937	$324,717	$411,029	$411,029	$38,750
C1030 FITTINGS	$265,180	$100,633	$268,281	$544,687	$265,180	$265,180	$25,000
C20 - STAIRS							
C2010 STAIR CONSTRUCTION	$0	$0	$0	$203,500	$0	$0	$0
C2020 STAIR FINISHES	$0	$0	$0	$86,200	$0	$0	$0
C30 - INTERIOR FINISHES							
C3010 WALL FINISHES	$265,180	$100,633	$268,281	$544,687	$265,180	$265,180	$25,000
C3020 FLOOR FINISHES	$106,072	$108,374	$288,918	$586,586	$106,072	$106,072	$10,000
C3030 CEILING FINISHES	$689,468	$100,633	$268,281	$544,687	$689,468	$689,468	$65,000
D. SERVICES							
D10 - CONVEYING							
D1010 ELEVATORS & LIFTS	$0	$0	$0	$170,000	$0	$0	$0
D20 - PLUMBING							
D2010 PLUMBING	$1,345,758	$194,488	$518,493	$1,052,689	$1,345,758	$1,345,758	$0
D30 - HVAC							
D3010 HVAC	$6,233,934	$906,019	$2,415,387	$4,903,924	$6,233,934	$6,233,934	$587,708
D40 - FIRE PROTECTION							
D4010 SPRINKLERS	$487,547	$111,928	$215,096	$385,192	$437,547	$437,547	$41,250

Essex Elementary School - ADD/RENO	CODE UPGRADE TOTAL	ADDITION A 1.1 TOTAL	ADDITION A 1.2 TOTAL	ADDITION B1.1 TOTAL	RENOVATION A 1.1 TOTAL	RENOVATION A 1.2 TOTAL	RENOVATION B1.1 TOTAL
D50 - ELECTRICAL							
D5010 ELECTRICAL SERVICE & DISTRIBUTION	$884,914	$360,151	$502,007	$735,889	$884,914	$609,914	$57,500
D5020 LIGHTING & BRANCH WIRING	$867,139	$126,565	$337,415	$685,049	$867,139	$867,139	$81,750
D5030 COMMUNICATION & SECURITY	$1,020,943	$149,014	$397,262	$806,556	$1,020,943	$1,020,943	$96,250
D5090 OTHER ELECTRICAL SYSTEMS	$798,192	$116,502	$310,587	$630,580	$798,192	$798,192	$75,250
E. EQUIPMENT & FURNISHINGS							
E10 - EQUIPMENT							
E1010 COMMERCIAL EQUIPMENT	$598,640	$0	$598,640	$0	$598,640	$0	$0
E1090 OTHER EQUIPMENT	$0	$236,150	$236,150	$241,150	$0	$0	$0
E20 - FURNISHINGS							
E 2010 FIXED FURNISHINGS	$106,072	$83,990	$223,911	$454,604	$575,441	$575,441	$54,250
E2020 MOVABLE FURNISHINGS	$0	$0	$0	$0	$0	$0	$0
F. SPECIAL CONSTRUCTION & DEMOLITION							
F10 - SPECIAL CONSTRUCTION							
F1010 SPECIAL STRUCTURES	$0	$0	$0	$0	$0	$0	$0
F20 - SELECTIVE BUILDING DEMOLITION							
F2010 BUILDING ELEMENTS DEMOLITION	$901,612	$7,500	$12,500	$25,000	$1,325,900	$1,325,900	$125,000
F2020 HAZARDOUS COMPONENTS ABATEMENT	$0	$0	$0	$0	$0	$0	$0
TOTAL BUILDING COST	**18,734,961**	**4,917,031**	**12,425,674**	**22,047,695**	**24,354,170**	**23,480,530**	**1,457,708**
G. BUILDING SITEWORK							
G10 - SITE PREPARATION							
G1010 SITE CLEARING	$228,660	$389,892	$389,892	$448,378	$0	$0	$0
G1020 SITE DEMOLITION & RELOCATIONS	$537,792	$631,146	$631,146	$669,013	$0	$0	$0
G1030 SITE EARTHWORK	$55,556	$778,493	$778,493	$898,231	$0	$0	$0
G20 - SITE IMPROVEMENTS							
G2010 ROADWAYS	$144,111	$1,393,000	$1,393,000	$1,393,000	$0	$0	$0
G2020 PARKING LOTS	$0	$0	$0	$0	$0	$0	$0
G2030 PEDESTRIAN PAVING	$164,543	$484,029	$484,029	$484,029	$0	$0	$0
G2040 SITE DEVELOPMENT	$306,500	$1,510,700	$1,960,700	$1,960,700	$0	$0	$0
G2050 LANDSCAPING	$222,167	$969,730	$969,730	$1,140,639	$0	$0	$0
G30 - SITE MECHANICAL UTILITIES							
G3010 WATER SUPPLY	$239,000	$239,000	$239,000	$239,000	$0	$0	$0
G3020 SANITARY SEWER	$182,400	$182,400	$182,400	$182,400	$0	$0	$0
G3030 STORM SEWER	$0	$1,126,446	$1,203,822	$2,218,267	$0	$0	$0
G40 - SITE ELECTRICAL UTILITIES							
G4010 ELECTRICAL DISTRIBUTION	$0	$574,000	$574,000	$574,000	$0	$0	$0
G4020 SITE LIGHTING	$0	$280,000	$280,000	$280,000	$0	$0	$0
TOTAL SITE COST	**$2,080,728**	**$8,558,836**	**$9,086,212**	**$10,487,656**			
TOTAL CONSTRUCTION COST	**$20,815,688**	**$13,475,866**	**$21,511,886**	**$32,535,351**	**$24,354,170**	**$23,480,530**	**$1,457,708**

DESCRIPTION	UNIT COST	UNIT	BASE REPAIR QUANTITY	BASE REPAIR TOTAL	ADDITION A 1.1 QUANTITY	ADDITION A 1.1 TOTAL	ADDITION A 1.2 QUANTITY	ADDITION A 1.2 TOTAL	ADDITION B.1 QUANTITY	ADDITION B.1 TOTAL	RENOVATION A 1.1 QUANTITY	RENOVATION A 1.1 TOTAL	RENOVATION A 1.2 QUANTITY	RENOVATION A 1.2 TOTAL	RENOVATION B.1 QUANTITY	RENOVATION B.1 TOTAL
A. SUBSTRUCTURE																
A10 - FOUNDATIONS																
A1010 STANDARD FOUNDATIONS																
Foundation, Earthwork	$25.00	GSF			7,741	$193,525	20,637	$515,925	23,044	$576,111						
Allow for repairs and seismic foundatic	$2.00	GSF	53,036	$106,072							53,036	$106,072	53,036	$106,072		
				$106,072		$193,525		$515,925		$576,111		$106,072		$106,072		0
A1020 SPECIAL FOUNDATIONS																
Soil Improvement Allowance: Ground Improvement	$20.00	FTP			7,741	$154,820	20,637	$412,740	23,044	$460,889						
				$0		$154,820		$412,740		$460,889		$0		$0		0
A1030 SLAB ON GRADE																
5" Slab, Gravel, insul	$17.50	FTP			7,741	$135,468	20,637	$361,148	23,044	$403,278						
Slab patch at plumbing and structural	$2.00	FTP	53,036	$106,072							53,036	$106,072	53,036	$106,072		
				$106,072		$135,468		$361,148		$403,278		$106,072		$106,072		0
TOTAL A10 FOUNDATIONS				**$212,144**		**$483,813**		**$1,289,813**		**$1,440,278**		**$212,144**		**$212,144**		**0**
B. SHELL																
B10 - SUPERSTRUCTURE																
B1010 FLOOR CONSTRUCTION																
Typ. Floor frame (15.3 lbs / SF)	$5,400.00	TONS							144.24	$778,881						
3 1/2" LW Deck Fill	$12.00	SF							18,855	$226,255						
1 1/2" x 20 Ga Comp. deck	$6.50	SF							18,855	$122,555						
Reinforce roof	$5.00	GSF	53,036	$265,180							53,036	$265,180	53,036	$265,180		
				$265,180		$0		$0		$1,127,691		$265,180		$265,180		0
B1020 ROOF CONSTRUCTION																
051200 STRUCTURAL STEEL																
Typ. flat roof frame (13.1 lbs / SF)	$5,400.00	TONS			51	$273,799	135	$729,931	151	$815,082						
Galv. RTU dunnage - allow	$6,500.00	TONS			4	$26,000	4	$26,000	4	$26,000						
Roof Screen Frame	$6,200.00	TONS			6	$37,200	6	$37,200	6	$37,200						
1 1/2" x 20 Ga roof deck	$6.20	SF			1,741	$10,794	14,637	$90,749	17,044	$105,676						
2" x 20 Ga Acoustical Roof Deck	$13.00	SF			6,000	$78,000	6,000	$78,000	6,000	$78,000						
Fireproofing - beam & column	$0.50	SF			1,741	$871	14,637	$7,319	17,044	$8,522						
Reinforce roof	$5.00	GSF	53,036	$265,180							53,036	$265,180	53,036	$265,180		
				$265,180		$426,664		$969,199		$1,070,480		$265,180		$265,180		0
TOTAL B10 SUPERSTRUCTURE				**$530,360**		**$426,664**		**$969,199**		**$2,198,171**		**$530,360**		**$530,360**		**0**
B20 - EXTERIOR ENCLOSURE																
B2010 EXTERIOR WALLS																

DESCRIPTION	UNIT COST	UNIT	BASE REPAIR QUANTITY	BASE REPAIR TOTAL	ADDITION A 1.1 QUANTITY	ADDITION A 1.1 TOTAL	ADDITION A 1.2 QUANTITY	ADDITION A 1.2 TOTAL	ADDITION B.1 QUANTITY	ADDITION B.1 TOTAL	RENOVATION A 1.1 QUANTITY	RENOVATION A 1.1 TOTAL	RENOVATION A 1.2 QUANTITY	RENOVATION A 1.2 TOTAL	RENOVATION B.1 QUANTITY	RENOVATION B.1 TOTAL
Exterior Wall Assembly	$52.00	GSF			7,741	$402,532	20,637	$1,073,124	41,899	$2,178,748						
Replace exterior wall assembly	$56.00	GSF									53,036	$2,970,016	53,036	$2,970,016		
				$0		$402,532		$1,073,124		$2,178,748		$2,970,016		$2,970,016		0
B2020 EXTERIOR WINDOWS																
Window Systems	$19.00	GSF	53,036	$1,007,684	7,741	$147,079	20,637	$392,103	41,899	$796,081	53,036	$1,007,684	53,036	$1,007,684		
				$1,007,684		$147,079		$392,103		$796,081		$1,007,684		$1,007,684		0
B2030 EXTERIOR DOORS																
7' Alum. Doors (Incl. Hardware):																
Main Entry - dbl	$20,000.00	EA	6	$120,000							6	$120,000	6	$120,000		
Stair Entries - dbl	$20,000.00	EA	2	$40,000	2	$40,000	4	$80,000	4	$80,000	2	$40,000	2	$40,000		
Misc . Alum Egree - sgl	$10,000.00	EA	2	$20,000			2	$20,000	2	$20,000	2	$20,000	2	$20,000		
Auto opener - allow	$11,000.00	PR	2	$22,000	2	$22,000	2	$22,000	2	$22,000	2	$22,000	2	$22,000		
081113 HOLLOW METALWORK																
Insulated HM Doors and Frame:																
Receiving - dbl	$3,500.00	EA	1	$3,500			1	$3,500	1	$3,500	1	$3,500	1	$3,500		
Elec/mech rm - dbl	$3,500.00	EA	2	$7,000			1	$3,500	1	$3,500	2	$7,000	2	$7,000		
Gym - dbl	$7,500.00	EA	2	$15,000			2	$15,000	2	$15,000	2	$15,000	2	$15,000		
090007 PAINTING*																
Paint HM Door & frame - dbl	$300.00	EA	4	$1,200			4	$1,200	4	$1,200	4	$1,200	4	$1,200		
				$228,700		$62,000		$145,200		$145,200		$228,700		$228,700		0
TOTAL B20 - EXTERIOR ENCLOSURE				**$1,236,384**		**$611,611**		**$1,610,427**		**$3,120,029**		**$4,206,400**		**$4,206,400**		**0**
B30 - ROOFING																
B3010 ROOF COVERINGS																
Roofing and Flashing	$35.00	SF	53,036	$1,856,260	7,741	$270,935	20,637	$722,295	23,044	$806,556	53,036	$1,856,260	53,036	$1,856,260		
Remove Exsitng Roofing	$2.50	SF	53,036								53,036	$132,590	53,036	$132,590		
Patch exisitng Roof	$2.00	SF													0	0
				$1,856,260		$270,935		$722,295		$806,556		$1,988,850		$1,988,850		0
B3020 ROOF OPENINGS																
077200 ROOF ACCESSORIES																
Roof hatch	$8,000.00	EA	1	$8,000	1	$8,000	1	$8,000	1	$8,000						
New Skylight	$165.00	SF	500	$82,500	500	$82,500	500	$82,500	500	$82,500						
*Mechanical equip screen is included with B1020 & B2010																
				$90,500		$90,500		$90,500		$90,500		$0		$0		0
TOTAL B30 ROOFING				**$1,946,760**		**$361,435**		**$812,795**		**$897,056**		**$1,988,850**		**$1,988,850**		**0**
C. INTERIORS																
C10 - INTERIOR CONSTRUCTION																
C1010 PARTITIONS																

DESCRIPTION	UNIT COST	UNIT	BASE REPAIR QUANTITY	BASE REPAIR TOTAL	ADDITION A 1.1 QUANTITY	ADDITION A 1.1 TOTAL	ADDITION A 1.2 QUANTITY	ADDITION A 1.2 TOTAL	ADDITION B.1 QUANTITY	ADDITION B.1 TOTAL	RENOVATION A 1.1 QUANTITY	RENOVATION A 1.1 TOTAL	RENOVATION A 1.2 QUANTITY	RENOVATION A 1.2 TOTAL	RENOVATION B.1 QUANTITY	RENOVATION B.1 TOTAL
Interior Partitions	$35.00	GSF			7,741	$270,935	20,637	$722,295	41,899	$1,466,465					5,000	175,000
Minor Repair and Rework - 70%	$30.00	GSF									53,036	$1,591,080	53,036	$1,591,080		
Cut and patch at New MEP	$2.50	GSF	53,036	$132,590												
				$132,590		$270,935		$722,295		$1,466,465		$1,591,080		$1,591,080		175,000
C1020 INTERIOR DOORS																
081113 HOLLOW METALWORK 081416 WOOD AND PLASTIC DOORS 087100 DOOR HARDWARE																
Interior Door frame and Hardware	$7.75	GSF			7,741	$59,993	20,637	$159,937	41,899	$324,717	53,036	$411,029	53,036	$411,029	5,000	38,750
ADA Door and Hardware upgrade	$2.00	GSF	53,036	$106,072												
				$106,072		$59,993		$159,937		$324,717		$411,029		$411,029		38,750
C1030 FITTINGS																
Fittings and Specialties	$13.00	GSF			7,741	$100,633	20,637	$268,281	41,899	$544,687						
Minor Fitting Replacement	$5.00	GSF	53,036	$265,180							53,036	$265,180	53,036	$265,180	5,000	25,000
				$265,180		$100,633		$268,281		$544,687		$265,180		$265,180		25,000
TOTAL C10 - INTERIOR CONSTRUCTION				**$503,842**		**$431,561**		**$1,150,513**		**$2,335,869**		**$2,267,289**		**$2,267,289**		**238,750**
C20 - STAIRS																
C2010 STAIR CONSTRUCTION																
Egress Stair	$55,000.00	FLTS							2	$110,000						
Stage Stair	$5,500.00	FLTS							2	$11,000						
Floor opening Railing	$550.00	LF							150	$82,500						
				$0		$0		$0		$203,500		$0		$0		0
C2020 STAIR FINISHES																
Stage Stair	$1,500.00	EA							2	$3,000						
Rubber tread and riser finish	$2,850.00	EA							12	$34,200						
Paint Stair Structure	$3,500.00	EA							14	$49,000						
				$0		$0		$0		$86,200		$0		$0		0
TOTAL C20 - STAIRS				**$0**		**$0**		**$0**		**$289,700**		**$0**		**$0**		**0**
C30 - INTERIOR FINISHES																
C3010 WALL FINISHES																
Wall Finish	$13.00	GSF			7,741	$100,633	20,637	$268,281	41,899	$544,687						
Interior Painting - only	$5.00	GSF	53,036	$265,180							53,036	$265,180	53,036	$265,180	5,000	25,000
				$265,180		$100,633		$268,281		$544,687		$265,180		$265,180		25,000
C3020 FLOOR FINISHES																
New Floor Finish	$14.00	GSF			7,741	$108,374	20,637	$288,918	41,899	$586,586						
Patch and Repair Flooring	$2.00	GSF	53,036	$106,072							53,036	$106,072	53,036	$106,072	5,000	10,000

DESCRIPTION	UNIT COST	UNIT	BASE REPAIR QUANTITY	BASE REPAIR TOTAL	ADDITION A 1.1 QUANTITY	ADDITION A 1.1 TOTAL	ADDITION A 1.2 QUANTITY	ADDITION A 1.2 TOTAL	ADDITION B.1 QUANTITY	ADDITION B.1 TOTAL	RENOVATION A 1.1 QUANTITY	RENOVATION A 1.1 TOTAL	RENOVATION A 1.2 QUANTITY	RENOVATION A 1.2 TOTAL	RENOVATION B.1 QUANTITY	RENOVATION B.1 TOTAL
				$106,072		$108,374		$288,918		$586,586		$106,072		$106,072		10,000
C3030 CEILING FINISHES																
Ceiling Finish	$13.00	GSF	53,036	$689,468	7,741	$100,633	20,637	$268,281	41,899	$544,687	53,036	$689,468	53,036	$689,468	5,000	65,000
				$689,468		$100,633		$268,281		$544,687		$689,468		$689,468		65,000
TOTAL C30 - INTERIOR FINISHES				**$1,060,720**		**$309,640**		**$825,480**		**$1,675,960**		**$1,060,720**		**$1,060,720**		**100,000**
D. SERVICES																
D10 - CONVEYING																
D1010 ELEVATORS & LIFTS																
Passenger - Hydraulic	$80,000.00	STOP							2	$160,000						
Elev Metals	$10,000.00	LS							1	$10,000						
				$0		$0		$0		$170,000		$0		$0		0
TOTAL D10 - CONVEYING				**$0**		**$0**		**$0**		**$170,000**		**$0**		**$0**		**0**
D20 - PLUMBING																
D2010 PLUMBING FIXTURES																
Plumbing	$25.12	GSF	53,036	$1,332,499	7,741	$194,488	20,637	$518,493	41,899	$1,052,689	53,036	$1,332,499	53,036	$1,332,499		
Selective Demo	$0.25	GSF	53,036	$13,259		$0		$0		$0	53,036	$13,259	53,036	$13,259		
*see new bldg for detail																
				$1,345,758		$194,488		$518,493		$1,052,689		$1,345,758		$1,345,758		0
TOTAL D20 - PLUMBING				**$1,345,758**		**$194,488**		**$518,493**		**$1,052,689**		**$1,345,758**		**$1,345,758**		**0**
D30 - HVAC																
D3010 HVAC																
HVAC - AIR TO WATER HP	$117.04	GSF	53,036	$6,207,416	7,741	$906,019	20,637	$2,415,387	41,899	$4,903,924	53,036	$6,207,416	53,036	$6,207,416	5,000	585,208
Selective Demo	$0.50	GSF	53,036	$26,518							53,036	$26,518	53,036	$26,518	5,000	2,500
				$6,233,934		$906,019		$2,415,387		$4,903,924		$6,233,934		$6,233,934		587,708
TOTAL D30 - HVAC			**$117.54**	**$6,233,934**		**$906,019**		**$2,415,387**		**$4,903,924**		**$6,233,934**		**$6,233,934**		**587,708**
D40 - FIRE PROTECTION																
D4010 SPRINKLERS																
210001 FIRE SUPPRESSION*																
Sprinkler system - wet	$8.00	GSF	53,036	$424,288	7,741	$61,928	20,637	$165,096	41,899	$335,192	53,036	$424,288	53,036	$424,288	5,000	40,000
Fire Pump	$50,000.00	LS	1.00	$50,000	1.00	$50,000	1.00	$50,000	1.00	$50,000						
Selective Demo	$0.25	GSF	53,036	$13,259				$0		$0	53,036	$13,259	53,036	$13,259	5,000	1,250
				$487,547		$111,928		$215,096		$385,192		$437,547		$437,547		41,250

DESCRIPTION	UNIT COST	UNIT	BASE REPAIR QUANTITY	BASE REPAIR TOTAL	ADDITION A 1.1 QUANTITY	ADDITION A 1.1 TOTAL	ADDITION A 1.2 QUANTITY	ADDITION A 1.2 TOTAL	ADDITION B.1 QUANTITY	ADDITION B.1 TOTAL	RENOVATION A 1.1 QUANTITY	RENOVATION A 1.1 TOTAL	RENOVATION A 1.2 QUANTITY	RENOVATION A 1.2 TOTAL	RENOVATION B.1 QUANTITY	RENOVATION B.1 TOTAL
TOTAL D40 - FIRE PROTECTION				**$487,547**		**$111,928**		**$215,096**		**$385,192**		**$437,547**		**$437,547**		**41,250**
D50 - ELECTRICAL																
D5010 ELECTRICAL SERVICE & DISTRIBUTION																
260001 ELECTRICAL*																
Selective Demo	$0.50	GSF	53,036	$26,518		$0		$0		$0	53,036	$26,518	53,036	$26,518	5,000	2,500
Service Panel and Feeders	$11.00	GSF	53,036	$583,396	7,741	$85,151	20,637	$227,007	41,899	$460,889	53,036	$583,396	53,036	$583,396	5,000	55,000
400KW Emergency Generator	$275,000.00	LS	1	$275,000	1	$275,000	1	$275,000	1	$275,000	1	$275,000				
				$884,914		$360,151		$502,007		$735,889		$884,914		$609,914		57,500
D5020 LIGHTING & BRANCH WIRING																
260001 ELECTRICAL*																
Lighting	$12.00	GSF	53,036	$636,432	7,741	$92,892	20,637	$247,644	41,899	$502,788	53,036	$636,432	53,036	$636,432	5,000	60,000
Lighting Control	$2.85	GSF	53,036	$151,153	7,741	$22,062	20,637	$58,815	41,899	$119,412	53,036	$151,153	53,036	$151,153	5,000	14,250
Branch Wiring	$1.50	GSF	53,036	$79,554	7,741	$11,612	20,637	$30,956	41,899	$62,849	53,036	$79,554	53,036	$79,554	5,000	7,500
				$867,139		$126,565		$337,415		$685,049		$867,139		$867,139		81,750
D5030 COMMUNICATION & SECURITY																
260001 ELECTRICAL*																
Security	$9.00	GSF	53,036	$477,324	7,741	$69,669	20,637	$185,733	41,899	$377,091	53,036	$477,324	53,036	$477,324	5,000	45,000
Tele/data cabling, racks and switches	$9.00	GSF	53,036	$477,324	7,741	$69,669	20,637	$185,733	41,899	$377,091	53,036	$477,324	53,036	$477,324	5,000	45,000
Speech Reinforcement	$1.25	GSF	53,036	$66,295	7,741	$9,676	20,637	$25,796	41,899	$52,374	53,036	$66,295	53,036	$66,295	5,000	6,250
				$1,020,943		$149,014		$397,262		$806,556		$1,020,943		$1,020,943		96,250
D5090 OTHER ELECTRICAL SYSTEMS																
260001 ELECTRICAL*																
Fire Alarm	$5.00	GSF	53,036	$265,180	7,741	$38,705	20,637	$103,185	41,899	$209,495	53,036	$265,180	53,036	$265,180	5,000	25,000
Devices	$3.45	GSF	53,036	$182,974	7,741	$26,706	20,637	$71,198	41,899	$144,552	53,036	$182,974	53,036	$182,974	5,000	17,250
Clocks and PA	$1.75	GSF	53,036	$92,813	7,741	$13,547	20,637	$36,115	41,899	$73,323	53,036	$92,813	53,036	$92,813	5,000	8,750
Gym/Café Sound System	$0.75	GSF	53,036	$39,777	7,741	$5,806	20,637	$15,478	41,899	$31,424	53,036	$39,777	53,036	$39,777	5,000	3,750
Lighting Protection	$0.50	GSF	53,036	$26,518	7,741	$3,871	20,637	$10,319	41,899	$20,950	53,036	$26,518	53,036	$26,518	5,000	2,500
Mechanical Wiring	$2.00	GSF	53,036	$106,072	7,741	$15,482	20,637	$41,274	41,899	$83,798	53,036	$106,072	53,036	$106,072	5,000	10,000
Misc. Electrical	$1.00	GSF	53,036	$53,036	7,741	$7,741	20,637	$20,637	41,899	$41,899	53,036	$53,036	53,036	$53,036	5,000	5,000
Bi-Direction Antenna	$0.60	GSF	53,036	$31,822	7,741	$4,645	20,637	$12,382	41,899	$25,139	53,036	$31,822	53,036	$31,822	5,000	3,000
				$798,192		$116,502		$310,587		$630,580		$798,192		$798,192		75,250
TOTAL D50 - ELECTRICAL			$67.34	**$3,571,187**		**$752,233**		**$1,547,271**		**$2,858,073**		**$3,571,187**		**$3,296,187**		**310,750**
E. EQUIPMENT & FURNISHINGS																
E10 - EQUIPMENT																
E1010 COMMERCIAL EQUIPMENT																
114000 FOOD SERVICE EQUIPMENT																
Kitchen equipment - new	$598,640.00	LS	1	$598,640			1	$598,640			1	$598,640				
				$598,640		$0		$598,640		$0		$598,640		$0		0

DESCRIPTION	UNIT COST	UNIT	BASE REPAIR QUANTITY	BASE REPAIR TOTAL	ADDITION A 1.1 QUANTITY	ADDITION A 1.1 TOTAL	ADDITION A 1.2 QUANTITY	ADDITION A 1.2 TOTAL	ADDITION B.1 QUANTITY	ADDITION B.1 TOTAL	RENOVATION A 1.1 QUANTITY	RENOVATION A 1.1 TOTAL	RENOVATION A 1.2 QUANTITY	RENOVATION A 1.2 TOTAL	RENOVATION B.1 QUANTITY	RENOVATION B.1 TOTAL
E1090 OTHER EQUIPMENT																
113100 APPLIANCES																
Staff kitchen refrigerator	$1,000.00	EA							2	$2,000						
Staff kitchen microwave	$500.00	EA							2	$1,000						
Medical office refrigerator w/ice	$1,000.00	EA							2	$2,000						
116600 ATHLETIC & SPORTS EQUIPMENT																
Basketball backstops - electric	$9,500.00	EA			6	$57,000	6	$57,000	6	$57,000						
Wall padding - 6'	$15.00	SF			750	$11,250	750	$11,250	750	$11,250						
Roll up curtain	$20.00	SF			1,600	$32,000	1,600	$32,000	1,600	$32,000						
Volley ball court equip.	$700.00	EA			2	$1,400	2	$1,400	2	$1,400						
Scoreboard and shot clock	$24,000.00	EA			1	$24,000	1	$24,000	1	$24,000						
Bleachers	$35,000.00	LS			1	$35,000	1	$35,000	1	$35,000						
Misc. Gym Equipment	$20,000.00	LS			1	$20,000	1	$20,000	1	$20,000						
115213 PROJECTION SCREENS																
Projection screen - various areas	$20,000.00	EA			1	$20,000	1	$20,000	1	$20,000						
116143 THEATRICAL EQUIPMENT																
Stage Curtains	$32,000.00	LS			1	$32,000	1	$32,000	1	$32,000						
119000 MISC. EQUIPMENT																
Kiln	$3,500.00	EA			1	$3,500	1	$3,500	1	$3,500						
				$0		$236,150		$236,150		$241,150		$0		$0		0
TOTAL E10 - EQUIPMENT				**$598,640**		**$236,150**		**$834,790**		**$241,150**		**$598,640**		**$0**		**0**
E20 - FURNISHINGS																
E 2010 FIXED FURNISHINGS																
129000 MISC. FURNISHINGS																
Window Treatment	$0.85	GSF			7,741	$6,580	20,637	$17,541	41,899	$35,614	53,036	$45,081	53,036	$45,081	5,000	4,250
123553 CLASSROOM CASEWORK																
Casework	$10.00	GSF			7,741	$77,410	20,637	$206,370	41,899	$418,990	53,036	$530,360	53,036	$530,360	5,000	50,000
Minor Rework of exisitng	$2.00	GSF	53,036	$106,072												
				$106,072		$83,990		$223,911		$454,604		$575,441		$575,441		54,250
TOTAL E20 - FURNISHINGS				**$106,072**		**$83,990**		**$223,911**		**$454,604**		**$575,441**		**$575,441**		**54,250**
F20 - SELECTIVE BUILDING DEMOLITION																
F2010 BUILDING ELEMENTS DEMOLITION																
BUILDING DEMOLITION																
Selective Interior Demolition	$12.00	GSF	53,036	$636,432												
Selective Interior Demolition	$20.00	GSF									53,036	$1,060,720	53,036	$1,060,720	5,000	100,000
Remove Exterior wall at Addition	$25.00	SF			300	$7,500	500	$12,500	1,000	$25,000						
Misc. Exterior Demolition	$5.00	GSF	53,036	$265,180							53,036	$265,180	53,036	$265,180	5,000	25,000
				$901,612		$7,500		$12,500		$25,000		$1,325,900		$1,325,900		125,000
F2020 HAZARDOUS COMPONENTS ABATEMENT																

DESCRIPTION	UNIT COST	UNIT	BASE REPAIR QUANTITY	BASE REPAIR TOTAL	ADDITION A 1.1 QUANTITY	ADDITION A 1.1 TOTAL	ADDITION A 1.2 QUANTITY	ADDITION A 1.2 TOTAL	ADDITION B.1 QUANTITY	ADDITION B.1 TOTAL	RENOVATION A 1.1 QUANTITY	RENOVATION A 1.1 TOTAL	RENOVATION A 1.2 QUANTITY	RENOVATION A 1.2 TOTAL	RENOVATION B.1 QUANTITY	RENOVATION B.1 TOTAL
Hazardous Waste Allowance	SEE SUMMARY PAGE															
				$0		$0		$0		$0		$0		$0		0
TOTAL F20 - SELECTIVE BUILDING DEMOLITION				**$901,612**		**$7,500**		**$12,500**		**$25,000**		**$1,325,900**		**$1,325,900**		**125,000**
G. BUILDING SITEWORK																
G10 - SITE PREPARATION																
G1010 SITE CLEARING																
311000 SITE PREPARATION & CLEARING																
Construction fence	18.00	LF	4,100	$73,800	4,100	$73,800	4,100	$73,800	4,500	$81,000		$0				
Construction entrance pad	11.00	SF	1	$11	1	$11	1	$11	1	$11		$0				
Construction gates	1,200.00	EA	1	$1,200	1	$1,200	1	$1,200	1	$1,200		$0				
Clear and Grub	0.15	SF	424,710	$63,707	424,710	$63,707	424,710	$63,707	495,000	$74,250		$0				
Strip and dispose 6" top soil	41.00	CY			3,933	$161,233	3,933	$161,233	4,583	$187,917		$0				
Protect tree	5,000.00	LS	1	$5,000	1	$5,000	1	$5,000	1	$5,000		$0				
General Site Prep	0.20	SF	424,710	$84,942	424,710	$84,942	424,710	$84,942	495,000	$99,000		$0				
				$228,660		$389,892		$389,892		$448,378		$0		$0		0
G1020 SITE DEMOLITION & RELOCATIONS																
Erosion control	10.00	LF	3,690	$36,900	3,690	$36,900	3,690	$36,900	4,050	$40,500		$0				
Inlet Protection	110.00	EA	20	$2,200	20	$2,200	20	$2,200	20	$2,200		$0				
Erosion Control Maintance	10,000.00	LS	1	$10,000	1	$10,000	1	$10,000	1	$10,000		$0				
Remove paved area	1.15	SF	25,000	$28,750	106,178	$122,104	106,178	$122,104	123,750	$142,313		$0				
Remove Utilities	50,000.00	LS	1	$50,000	1	$50,000	1	$50,000	1	$50,000		$0				
Misc. Site Removal	0.20	SF	424,710	$84,942	424,710	$84,942	424,710	$84,942	495,000	$99,000		$0				
Temporary Measures:																
Temporary Parking and Access	50,000.00	LS	1	$50,000	1	$50,000	1	$50,000	1	$50,000		$0				
Snow removal	25,000.00	LS	1	$25,000	1	$25,000	1	$25,000	1	$25,000		$0				
Phasing logistics	250,000.00	LS	1	$250,000	1	$250,000	1	$250,000	1	$250,000		$0				
				$537,792		$631,146		$631,146		$669,013		$0		$0		0
G1030 SITE EARTHWORK																
310000 EARTHWORK																
Site Grading	2.70	SY			47,190	$127,413	47,190	$127,413	55,000	$148,500		$0				
Site Cut to fill	32.00	CY			7,865	$251,680	7,865	$251,680	9,167	$293,333		$0				
Site Fill - Import	23.00	CY			612	$14,070	612	$14,070	713	$16,398		$0				
Site Cut - disposal	60.00	CY	926	$55,556	5,506	$330,330	5,506	$330,330	6,417	$385,000		$0				
Ledge Removal	55.00	CY			1,000	$55,000	1,000	$55,000	1,000	$55,000		$0				
				$55,556		$778,493		$778,493		$898,231		$0		$0		0
G1040 HAZARDOUS WASTE REMEDIATION																
Soil classifications		NIC														
				$0		$0		$0		$0		$0		$0		0
TOTAL G10 - SITE PREPARATION				**$822,007**		**$1,799,531**		**$1,799,531**		**$2,015,622**		**$0**		**$0**		**0**
G20 - SITE IMPROVEMENTS																

DESCRIPTION	UNIT COST	UNIT	BASE REPAIR QUANTITY	BASE REPAIR TOTAL	ADDITION A 1.1 QUANTITY	ADDITION A 1.1 TOTAL	ADDITION A 1.2 QUANTITY	ADDITION A 1.2 TOTAL	ADDITION B.1 QUANTITY	ADDITION B.1 TOTAL	RENOVATION A 1.1 QUANTITY	RENOVATION A 1.1 TOTAL	RENOVATION A 1.2 QUANTITY	RENOVATION A 1.2 TOTAL	RENOVATION B.1 QUANTITY	RENOVATION B.1 TOTAL
G2010 ROADWAYS																
321000 PAVING AND CURBING																
Site:																
Bituminous - Road and parking	$5.30	SF	15,000	$79,500	135,000	$715,500	135,000	$715,500	135,000	$715,500		$0				
12" Gravel base @ vehicular pave.	$65.00	CY	556	$36,111	5,000	$325,000	5,000	$325,000	5,000	$325,000		$0				
Granite Curbing - road/parking	$48.00	LF	500	$24,000	6,500	$312,000	6,500	$312,000	6,500	$312,000		$0				
Parking/traffic signage	$0.10	SF	15,000	$1,500	135,000	$13,500	135,000	$13,500	135,000	$13,500		$0				
Parking line panting & markings	$0.20	SF	15,000	$3,000	135,000	$27,000	135,000	$27,000	135,000	$27,000		$0				
				$144,111		$1,393,000		$1,393,000		$1,393,000		$0		$0		0
G2030 PEDESTRIAN PAVING																
321000 PAVING AND CURBING																
Sidewalk :																
4" Concrete Pavement	$12.00	SF	10,000	$120,000	30,000	$360,000	30,000	$360,000	30,000	$360,000		$0				
Unit Pavers	$4.10	SF			5,000	$20,500	5,000	$20,500	5,000	$20,500		$0				
Bit Walkway	$4.10	SF	5,000	$20,500	10,000	$41,000	10,000	$41,000	10,000	$41,000		$0				
8" Gravel base @ ped. pavement	$39.00	CY	370	$14,443	1,111	$43,329	1,111	$43,329	1,111	$43,329		$0				
Tactile warning paver	$1,200.00	EA	8	$9,600	16	$19,200	16	$19,200	16	$19,200		$0				
				$164,543		$484,029		$484,029		$484,029		$0		$0		0
G2040 SITE DEVELOPMENT																
323000 SITE IMPROVEMENTS																
New Playground	$450,000.00	LS			1	$450,000	2	$900,000	2	$900,000						
Outdoor learning	$100,000.00	LS	1	$100,000	1	$100,000	1	$100,000	1	$100,000		$0				
												$0				
Dumpster pad and enclosure	$50,000.00	LS	1	$50,000	1	$50,000	1	$50,000	1	$50,000		$0				
Trash Receptacle	$2,100.00	EA	2	$4,200	4	$8,400	4	$8,400	4	$8,400						
Flag pole	$11,000.00	EA	1	$11,000	1	$11,000	1	$11,000	1	$11,000						
Benches	$25,000.00	EA	1	$25,000	1	$25,000	1	$25,000	1	$25,000						
Decorative bollard	$2,500.00	EA	25	$62,500	25	$62,500	25	$62,500	25	$62,500		$0				
Utility Bollard	$1,100.00	EA	10	$11,000	10	$11,000	10	$11,000	10	$11,000		$0				
Bike Loop	$650.00	EA	12	$7,800	12	$7,800	12	$7,800	12	$7,800		$0				
Site sign	$35,000.00	LS	1	$35,000	1	$35,000	1	$35,000	1	$35,000		$0				
Site Fencing	$250,000.00	LS			1	$250,000	1	$250,000	1	$250,000		$0				
Misc. site improvements	$500,000.00	LS			1	$500,000	1	$500,000	1	$500,000		$0				
				$306,500		$1,510,700		$1,960,700		$1,960,700		$0		$0		0
G2050 LANDSCAPING																
329000 PLANTING																
Planting Allowance	$0.50	SF			424,710	$212,355	424,710	$212,355	495,000	$247,500		$0				
Rain Garden	$75,000.00	LS			1	$75,000	1	$75,000	1	$75,000		$0				
												$0				
Loam:																
12" Planting Bed - import	$80.00	CY			500	$40,000	500	$40,000	500	$40,000						
12" Field Drainage layer	$65.00	CY	1,111	$72,222	1,111	$72,222	1,111	$72,222	1,111	$72,222		$0				
Field underdrain	$0.75	SF	30,000	$22,500	30,000	$22,500	30,000	$22,500	30,000	$22,500		$0				
12" Loam Athletic Field - import	$58.00	CY	1,111	$64,444	1,111	$64,444	1,111	$64,444	1,111	$64,444		$0				
6" Loam Lawn - import	$80.00	CY			3,976	$318,089	3,976	$318,089	5,278	$422,222		$0				
Mulch	$55.00	CY			100	$5,500	100	$5,500	100	$5,500		$0				
												$0				
Sod - Athletic Field	$1.10	SF	30,000	$33,000	30,000	$33,000	30,000	$33,000	30,000	$33,000						
Hydroseed - lawn	$0.45	SF			214,710	$96,620	214,710	$96,620	285,000	$128,250		$0				
Irrigation system - athletic fields	$1.00	SF	30,000	$30,000	30,000	$30,000	30,000	$30,000	30,000	$30,000		$0				
				$222,167		$969,730		$969,730		$1,140,639		$0		$0		0

DESCRIPTION	UNIT COST	UNIT	BASE REPAIR QUANTITY	BASE REPAIR TOTAL	ADDITION A 1.1 QUANTITY	ADDITION A 1.1 TOTAL	ADDITION A 1.2 QUANTITY	ADDITION A 1.2 TOTAL	ADDITION B.1 QUANTITY	ADDITION B.1 TOTAL	RENOVATION A 1.1 QUANTITY	RENOVATION A 1.1 TOTAL	RENOVATION A 1.2 QUANTITY	RENOVATION A 1.2 TOTAL	RENOVATION B.1 QUANTITY	RENOVATION B.1 TOTAL
TOTAL G20 - SITE IMPROVEMENTS				**$837,321**		**$4,357,459**		**$4,807,459**		**$4,978,368**		**$0**		**$0**		**0**
G30 - SITE MECHANICAL UTILITIES																
G3010 WATER SUPPLY																
330000 UTILITIES																
Street Connection	$30,000.00	LOC	1	$30,000	1	$30,000	1	$30,000	1	$30,000		$0				
St pavement cut & patch	$10,000.00	LOC	1	$10,000	1	$10,000	1	$10,000	1	$10,000		$0				
8" Main loop	$110.00	LF	1,200	$132,000	1,200	$132,000	1,200	$132,000	1,200	$132,000		$0				
6" Fire Service	$92.00	LF	100	$9,200	100	$9,200	100	$9,200	100	$9,200		$0				
4" Domestic	$78.00	LF	100	$7,800	100	$7,800	100	$7,800	100	$7,800		$0				
8" Gate valve main	$1,850.00	EA	4	$7,400	4	$7,400	4	$7,400	4	$7,400		$0				
6" Gate valve dom	$1,600.00	EA	4	$6,400	4	$6,400	4	$6,400	4	$6,400		$0				
Fire Hydrant	$3,100.00	EA	2	$6,200	2	$6,200	2	$6,200	2	$6,200		$0				
Test, sanitize, thrust block , misc.	$30,000.00	LS	1	$30,000	1	$30,000	1	$30,000	1	$30,000		$0				
				$239,000		$239,000		$239,000		$239,000		$0		$0		0
G3020 SANITARY SEWER																
330000 UTILITIES																
8" PVC San Main	$110.00	LF	800	$88,000	800	$88,000	800	$88,000	800	$88,000		$0				
Grease Trap - 3,000 gal	$40,000.00	EA	1	$40,000	1	$40,000	1	$40,000	1	$40,000		$0				
Int Grease interceptor	W / plumbing															
Site manhole	$4,800.00	EA	3	$14,400	3	$14,400	3	$14,400	3	$14,400		$0				
St pavement cut & patch	$10,000.00	LOC	1	$10,000	1	$10,000	1	$10,000	1	$10,000		$0				
Street Connection	$30,000.00	LS	1	$30,000	1	$30,000	1	$30,000	1	$30,000		$0				
				$182,400		$182,400		$182,400		$182,400		$0		$0		0
G3030 STORM SEWER																
330000 UTILITIES																
On site Storage System:																
Building Area	6.00	SFFP			7,741	$46,446	20,637	$123,822	23,044	$138,267		$0				
Site Pavement	6.00	SFFP	30,000		180,000	$1,080,000	180,000	$1,080,000	180,000	$1,080,000		$0				
Dranaige Premium	1,000,000.00	LS							1	$1,000,000						
				$0		$1,126,446		$1,203,822		$2,218,267		$0		$0		0
TOTAL G30 - SITE MECHANICAL UTILITIES				**$421,400**		**$1,547,846**		**$1,625,222**		**$2,639,667**		**$0**		**$0**		**0**
G40 - SITE ELECTRICAL UTILITIES																
G4010 ELECTRICAL DISTRIBUTION																
330000 UTILITIES																
Primary ductbank	$125.00	LF			750	$93,750	750	$93,750	750	$93,750						
Secondary Ductbank	$1,600.00	LF			100	$160,000	100	$160,000	100	$160,000		$0				
Tele comm ductbank	$105.00	LF			850	$89,250	850	$89,250	850	$89,250						
Generator Ductbank	$975.00	LF			100	$97,500	100	$97,500	100	$97,500						
EV Station	$20,000.00	EA			4	$80,000	4	$80,000	4	$80,000						
Future EV Station	$50,000.00	LS			1	$50,000	1	$50,000	1	$50,000		$0				
Pole dressing	$3,500.00	EA			1	$3,500	1	$3,500	1	$3,500		$0				
				$0		$574,000		$574,000		$574,000		$0		$0		0
G4020 SITE LIGHTING																

DESCRIPTION	UNIT COST	UNIT	BASE REPAIR QUANTITY	BASE REPAIR TOTAL	ADDITION A 1.1 QUANTITY	ADDITION A 1.1 TOTAL	ADDITION A 1.2 QUANTITY	ADDITION A 1.2 TOTAL	ADDITION B.1 QUANTITY	ADDITION B.1 TOTAL	RENOVATION A 1.1 QUANTITY	RENOVATION A 1.1 TOTAL	RENOVATION A 1.2 QUANTITY	RENOVATION A 1.2 TOTAL	RENOVATION B.1 QUANTITY	RENOVATION B.1 TOTAL
260001 ELECTRICAL*																
Lighting Fixtures:																
Roadway/Parking Fixtures	$5,000.00	EA			35	$175,000	35	$175,000	35	$175,000		$0				
Pedestrian Lighting	$4,000.00	EA			20	$80,000	20	$80,000	20	$80,000		$0				
Misc. Specialty site lighting	$25,000.00	LS			1	$25,000	1	$25,000	1	$25,000		$0				
				$0		$280,000		$280,000		$280,000		$0		$0		0

PROJECT: Essex Elementary School
LOCATION: Essex, MA
CLIENT: JCJ Architets
DATE: 10-Dec-25

SUMMARY

No.: 18021

	NEW OPT A 2.1 TOTAL	NEW OPT A 2.2 TOTAL
A. SUBSTRUCTURE		
A10 - FOUNDATIONS		
A1010 STANDARD FOUNDATIONS	$1,093,986	$1,326,114
A1020 SPECIAL FOUNDATIONS	$850,878	$1,031,422
A1030 SLAB ON GRADE	$744,518	$902,494
B. SHELL		
B10 - SUPERSTRUCTURE		
B1010 FLOOR CONSTRUCTION	$1,147,956	$1,391,536
B1020 ROOF CONSTRUCTION	$2,137,663	$2,541,360
B20 - EXTERIOR ENCLOSURE		
B2010 EXTERIOR WALLS	$3,160,404	$3,830,996
B2020 EXTERIOR WINDOWS	$1,154,763	$1,399,787
B2030 EXTERIOR DOORS	$229,400	$229,400
B30 - ROOFING		
B3010 ROOF COVERINGS	$1,489,037	$1,804,989
B3020 ROOF OPENINGS	$90,500	$90,500
C. INTERIORS		
C10 - INTERIOR CONSTRUCTION		
C1010 PARTITIONS	$2,127,195	$2,578,555
C1020 INTERIOR DOORS	$471,022	$570,966
C1030 FITTINGS	$790,101	$957,749
C20 - STAIRS		
C2010 STAIR CONSTRUCTION	$553,500	$553,500
C2020 STAIR FINISHES	$131,900	$131,900
C30 - INTERIOR FINISHES		
C3010 WALL FINISHES	$790,101	$957,749
C3020 FLOOR FINISHES	$820,490	$994,586
C3030 CEILING FINISHES	$790,101	$957,749
D. SERVICES		
D10 - CONVEYING		
D1010 ELEVATORS & LIFTS	$170,000	$170,000
D20 - PLUMBING		
D2010 PLUMBING	$1,526,988	$1,825,530
D30 - HVAC		
D3010 HVAC	$7,113,434	$8,637,948
D40 - FIRE PROTECTION		

D4010 SPRINKLERS	$536,216	$639,384
D50 - ELECTRICAL		
D5010 ELECTRICAL SERVICE & DISTRIBUTION	$943,547	$1,085,403
D5020 LIGHTING & BRANCH WIRING	$993,704	$1,204,554
D5030 COMMUNICATION & SECURITY	$1,169,957	$1,418,205
D5090 OTHER ELECTRICAL SYSTEMS	$914,694	$1,108,779
E. EQUIPMENT & FURNISHINGS		
E10 - EQUIPMENT		
E1010 COMMERCIAL EQUIPMENT	$598,400	$598,400
E1090 OTHER EQUIPMENT	$241,150	$241,150
E20 - FURNISHINGS		
E 2010 FIXED FURNISHINGS	$659,430	$799,352
E2020 MOVABLE FURNISHINGS	$0	$0
F. SPECIAL CONSTRUCTION & DEMOLITION		
F10 - SPECIAL CONSTRUCTION		
F1010 SPECIAL STRUCTURES	$0	$0
F1020 INTEGRATED CONSTRUCTION	$0	$0
F1030 SPECIAL CONSTRUCTION SYSTEMS	$0	$0
F1040 SPECIAL FACILITIES	$0	$0
F1050 SPECIAL CONTROLS & INSTRUMENTATION	$0	$0
F20 - SELECTIVE BUILDING DEMOLITION		
F2010 BUILDING ELEMENTS DEMOLITION	$0	$0
F2020 HAZARDOUS COMPONENTS ABATEMENT	$0	$0

TOTAL BUILDING COST	**33,441,035**	**39,980,055**
Essex Elementary School - NEW CONSTRUCTION	NEW OPT A 2.1 TOTAL	NEW OPT A 2.2 TOTAL
G. BUILDING SITEWORK		
G10 - SITE PREPARATION		
G1010 SITE CLEARING	$389,892	$389,892
G1020 SITE DEMOLITION & RELOCATIONS	$456,146	$456,146
G1030 SITE EARTHWORK	$778,493	$778,493
G1040 HAZARDOUS WASTE REMEDIATION	$0	$0
G20 - SITE IMPROVEMENTS		
G2010 ROADWAYS	$1,393,000	$1,393,000
G2020 PARKING LOTS	$0	$0
G2030 PEDESTRIAN PAVING	$663,529	$663,529
G2040 SITE DEVELOPMENT	$1,960,700	$2,410,700
G2050 LANDSCAPING	$969,726	$969,724
G30 - SITE MECHANICAL UTILITIES		
G3010 WATER SUPPLY	$239,000	$239,000
G3020 SANITARY SEWER	$182,400	$182,400
G3030 STORM SEWER	$1,335,263	$1,389,427
G3040 HEATING DISTRIBUTION	$0	$0
G3050 COOLING DISTRIBUTION	$0	$0
G3060 FUEL DISTRIBUTION	$0	$0
G3090 OTHER SITE MECHANICAL UTILITIES	$0	$0
G40 - SITE ELECTRICAL UTILITIES		
G4010 ELECTRICAL DISTRIBUTION	$574,000	$574,000
G4020 SITE LIGHTING	$280,000	$280,000
G4030 SITE COMMUNICATIONS & SECURITY	$0	$0
G4090 OTHER SITE ELECTRICAL UTILITIES	$0	$0
G90 - OTHER SITE CONSTRUCTION		
G9010 SERVICE AND PEDESTRIAN TUNNELS	$0	$0
G9090 OTHER SITE SYSTEMS	$0	$0
TOTAL SITE COST	**$9,222,149**	**$9,726,311**
TOTAL CONSTRUCTION COST	**$42,663,184**	**$49,706,365**

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
A. SUBSTRUCTURE						
A10 - FOUNDATIONS						
A1010 STANDARD FOUNDATIONS						
Foundation, Earthwork	$18.00	GSF	60,777	$1,093,986	73,673	$1,326,114
				$1,093,986		$1,326,114
A1020 SPECIAL FOUNDATIONS						
Soil Improvement Allowance: Ground Improvement	$20.00	FTP	42,544	$850,878	51,571	$1,031,422
				$850,878		$1,031,422
A1030 SLAB ON GRADE						
5" Slab, Gravel, insul	$17.50	FTP	42,544	$744,518	51,571	$902,494
				$744,518		$902,494
TOTAL A10 FOUNDATIONS				**$2,689,382**		**$3,260,030**
B. SHELL						
B10 - SUPERSTRUCTURE						
B1010 FLOOR CONSTRUCTION						
Typ. Floor frame (15.3 lbs / SF)	$5,400.00	TONS	139.48	$753,209	169.08	$913,029

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
3 1/2" LW Deck Fill	$12.00	SF	18,233	$218,797	22,102	$265,223
1 1/2" x 20 Ga Comp. deck	$6.50	SF	18,233	$118,515	22,102	$143,662
Fireproofing - beam & column	$3.15	SF	18,233	$57,434	22,102	$69,621
				$1,147,956		$1,391,536
B1020 ROOF CONSTRUCTION						
051200 STRUCTURAL STEEL						
Typ. flat roof frame (13.1 lbs / SF)	$5,400.00	TONS	279	$1,504,778	338	$1,824,070
Galv. RTU dunnage - allow	$6,500.00	TONS	4	$26,000	4	$26,000
Roof Screen Frame	$6,200.00	TONS	6	$37,200	6	$37,200
1 1/2" x 20 Ga roof deck	$6.20	SF	36,544	$226,572	45,571	$282,541
2" x 20 Ga Acoustical Roof Deck	$13.00	SF	6,000	$78,000	6,000	$78,000
Fireproofing - beam & column	$3.15	SF	36,544	$115,113	45,571	$143,549
Intumescent Paint - gym	$25.00	LS	6,000	$150,000	6,000	$150,000
				$2,137,663		$2,541,360
TOTAL B10 SUPERSTRUCTURE				**$3,285,619**		**$3,932,895**
B20 - EXTERIOR ENCLOSURE						
B2010 EXTERIOR WALLS						
Exterior Wall Assembly	$52.00	GSF	60,777	$3,160,404	73,673	$3,830,996
				$3,160,404		$3,830,996
B2020 EXTERIOR WINDOWS						

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
Window Systems	$19.00	GSF	60,777	$1,154,763	73,673	$1,399,787
				---		---
				$1,154,763		$1,399,787
B2030 EXTERIOR DOORS						
080001 METAL WINDOWS*						
7' Alum. Doors (Incl. Hardware):						
Main Entry - dbl	$20,000.00	EA	6	$120,000	6	$120,000
Stair Entries - dbl	$20,000.00	EA	2	$40,000	2	$40,000
Misc . Alum Egree - sgl	$10,000.00	EA	2	$20,000	2	$20,000
Auto opener - allow	$11,000.00	PR	2	$22,000	2	$22,000
081113 HOLLOW METALWORK						
Insulated HM Doors and Frame:						
Receiving - dbl	$3,500.00	EA	1	$3,500	1	$3,500
Elec/mech rm - dbl	$3,500.00	EA	2	$7,000	2	$7,000
Gym - dbl	$7,500.00	EA	2	$15,000	2	$15,000
090007 PAINTING*						
Paint HM Door & frame - sgl	$200.00	EA	2	$400	2	$400
Paint HM Door & frame - dbl	$300.00	EA	5	$1,500	5	$1,500
				---		---
				$229,400		$229,400
TOTAL B20 - EXTERIOR ENCLOSURE				**$4,544,567**		**$5,460,183**
B30 - ROOFING						
B3010 ROOF COVERINGS						
Roofing and Flashing	$35.00	SF	42,544	$1,489,037	51,571	$1,804,989

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
				$1,489,037		$1,804,989
B3020 ROOF OPENINGS						
077200 ROOF ACCESSORIES						
Roof hatch	$8,000.00	EA	1	$8,000	1	$8,000
New Skylight	$165.00	SF	500	$82,500	500	$82,500
*Mechanical equip screen is included with B1020 & B2010						
				$90,500		$90,500
TOTAL B30 ROOFING				**$1,579,537**		**$1,895,489**
C. INTERIORS						
C10 - INTERIOR CONSTRUCTION						
C1010 PARTITIONS						
Interior Partitions	$35.00	GSF	60,777	$2,127,195	73,673	$2,578,555
				$2,127,195		$2,578,555
C1020 INTERIOR DOORS						
081113 HOLLOW METALWORK 081416 WOOD AND PLASTIC DOORS 087100 DOOR HARDWARE						
Interior Door frame and Hardware	$7.75	GSF	60,777	$471,022	73,673	$570,966
				$471,022		$570,966

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
C1030 FITTINGS						
Fittings and Specialties	$13.00	GSF	60,777	$790,101	73,673	$957,749
				$790,101		$957,749
TOTAL C10 - INTERIOR CONSTRUCTION				**$3,388,318**		**$4,107,270**
C20 - STAIRS						
C2010 STAIR CONSTRUCTION						
Learning Stair	$200,000.00	LS	1	$200,000	1	$200,000
Egress Stair	$65,000.00	FLTS	4	$260,000	4	$260,000
Stage Stair	$5,500.00	FLTS	2	$11,000	2	$11,000
Floor opening Railing	$550.00	LF	150	$82,500	150	$82,500
				$553,500		$553,500
C2020 STAIR FINISHES						
Stage Stair	$1,500.00	EA	2	$3,000	2	$3,000
Learning stair	$100,000.00	EA	1	$100,000	1	$100,000
Rubber tread and riser finish	$2,850.00	EA	4	$11,400	4	$11,400
Paint Stair Structure	$3,500.00	EA	5	$17,500	5	$17,500
				$131,900		$131,900
TOTAL C20 - STAIRS				**$685,400**		**$685,400**
C30 - INTERIOR FINISHES						

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
C3010 WALL FINISHES						
Wall Finish	$13.00	GSF	60,777	$790,101	73,673	$957,749
				$790,101		$957,749
C3020 FLOOR FINISHES						
Floor Finish	$13.50	GSF	60,777	$820,490	73,673	$994,586
				$820,490		$994,586
C3030 CEILING FINISHES						
Ceiling Finish	$13.00	GSF	60,777	$790,101	73,673	$957,749
				$790,101		$957,749
TOTAL C30 - INTERIOR FINISHES				**$2,400,692**		**$2,910,084**
D. SERVICES						
D10 - CONVEYING						
D1010 ELEVATORS & LIFTS						
Passenger - Hydraulic	$80,000.00	STOP	2	$160,000	2	$160,000
Elev Metals	$10,000.00	LS	1	$10,000	1	$10,000
				$170,000		$170,000

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
TOTAL D10 - CONVEYING				**$170,000**		**$170,000**
D20 - PLUMBING						
D2010 PLUMBING FIXTURES						
High Efficiency Gas WH	$75,000.00	LS	1	$75,000	1	$75,000
Natural Gas	$20,000.00	LS	1	$20,000	1	$20,000
Roof Drainage	$4.50	GSF	42,544	$191,448	51,571	$232,070
Fixtures & Rough-in	$17.50	GSF	60,777	$1,063,598	73,673	$1,289,278
Kitchen Connections	$25,000.00	LS	1	$25,000	1	$25,000
Test, Permit, BIM, Misc.	$2.50	GSF	60,777	$151,943	73,673	$184,183
				$1,526,988		$1,825,530
TOTAL D20 - PLUMBING			**$25.12**	**$1,526,988**		**$1,825,530**
D30 - HVAC						
D3010 HVAC						
HVAC - AIR TO WATER HP						
Cooling/Heating Generation						
Air to Water HP Module	$3,800.00	TONS	210	$798,000	240	$912,000
HW Pumps	$15,000.00	EA	3	$45,000	3	$45,000
CHW Pumps	$18,000.00	EA	3	$54,000	3	$54,000
VFD	$2,000.00	EA	6	$12,000	6	$12,000
GF-1-2	$5,000.00	EA	2	$10,000	2	$10,000
ET 1-2	$2,800.00	EA	2	$5,600	2	$5,600
AS 1-2	$8,500.00	EA	2	$17,000	2	$17,000
Shot Feeder	$4,500.00	EA	2	$9,000	2	$9,000
Glycol Chemical feed	$60,000.00	LS	1	$60,000	1	$60,000

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
Buffer Tank	$6,500.00	EA	2	$13,000	2	$13,000
Mech Rm piping trim and valve	$125,000.00	LS	1	$125,000	1	$125,000
Air Equipment:						
AHU/DOAS- HW/CHW - Typical	$26.00	CFM	47,000	$1,222,000	57,000	$1,482,000
Sound attenuation	$0.75	CFM	94,000	$70,500	114,000	$85,500
MAU	$70,000.00	LS	1	$70,000	1	$70,000
Galv Ductwork	$19.00	GSF	60,777	$1,154,763	73,673	$1,399,787
Grills registers and dampers	$1.50	GSF	60,777	$91,166	73,673	$110,510
Kitchen Exhaust Ductwork	$25,000.00	LS	1	$25,000	1	$25,000
Duct Insul	$6.50	SF	90,000	$585,000	140,000	$910,000
VAV	$2.00	LS	60,777	$121,554	73,673	$147,346
Exhaust Fan	$3,500.00	EA	5	$17,500	5	$17,500
HVAC PIPING	$18.00	GSF	60,777	$1,093,986	73,673	$1,326,114
Misc. CHW/HW Panels/Devices	$5.00	GSF	60,777	$303,885	73,673	$368,365
Elec/IT Split AC	$20,000.00	EA	4	$80,000	4	$80,000
Temp Control	$10.00	GSF	60,777	$607,770	73,673	$736,730
Seismic and Vibration	$0.35	GSF	60,777	$21,272	73,673	$25,786
Rigging	$75,000.00	LS	1	$75,000	1	$75,000
BIM/ Commission coordination	$2.00	GSF	60,777	$121,554	73,673	$147,346
HVAC Supervision	$3.00	GSF	60,777	$182,331	73,673	$221,019
Misc. HVAC	$2.00	GSF	60,777	$121,554	73,673	$147,346
				$7,113,434		$8,637,948
TOTAL D30 - HVAC			**$117.04**	**$7,113,434**		**$8,637,948**
D40 - FIRE PROTECTION						
D4010 SPRINKLERS						
210001 FIRE SUPPRESSION*						
Sprinkler system - wet	$8.00	GSF	60,777	$486,216	73,673	$589,384
Fire Pump	$50,000.00	LS	1.00	$50,000	1.00	$50,000

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
				$536,216		$639,384
TOTAL D40 - FIRE PROTECTION				**$536,216**		**$639,384**
D50 - ELECTRICAL						
D5010 ELECTRICAL SERVICE & DISTRIBUTION						
260001 ELECTRICAL*						
Service Panel and Feeders	$11.00	GSF	60,777	$668,547	73,673	$810,403
400 KW Emergency Generator	$275,000.00	LS	1	$275,000	1	$275,000
				$943,547		$1,085,403
D5020 LIGHTING & BRANCH WIRING						
260001 ELECTRICAL*						
Lighting	$12.00	GSF	60,777	$729,324	73,673	$884,076
Lighting Control	$2.85	GSF	60,777	$173,214	73,673	$209,968
Branch Wiring	$1.50	GSF	60,777	$91,166	73,673	$110,510
				$993,704		$1,204,554
D5030 COMMUNICATION & SECURITY						
260001 ELECTRICAL*						
Security	$9.00	GSF	60,777	$546,993	73,673	$663,057
Tele/data cabling, racks and switches	$9.00	GSF	60,777	$546,993	73,673	$663,057
Speech Reinforcement	$1.25	GSF	60,777	$75,971	73,673	$92,091

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
				$1,169,957		$1,418,205
D5090 OTHER ELECTRICAL SYSTEMS						
260001 ELECTRICAL*						
Fire Alarm	$5.00	GSF	60,777	$303,885	73,673	$368,365
Devices	$3.45	GSF	60,777	$209,681	73,673	$254,172
Clocks and PA	$1.75	GSF	60,777	$106,360	73,673	$128,928
Gym/Café Sound System	$0.75	GSF	60,777	$45,583	73,673	$55,255
Lighting Protection	$0.50	GSF	60,777	$30,389	73,673	$36,837
Mechanical Wiring	$2.00	GSF	60,777	$121,554	73,673	$147,346
Misc. Electrical	$1.00	GSF	60,777	$60,777	73,673	$73,673
Bi-Direction Antenna	$0.60	GSF	60,777	$36,466	73,673	$44,204
				$914,694		$1,108,779
TOTAL D50 - ELECTRICAL			$66.17	**$4,021,902**		**$4,816,940**
E. EQUIPMENT & FURNISHINGS						
E10 - EQUIPMENT						
E1010 COMMERCIAL EQUIPMENT						
114000 FOOD SERVICE EQUIPMENT						
Kitchen equipment - new	$598,400.00	LS	1	$598,400	1	$598,400
				$598,400		$598,400
E1090 OTHER EQUIPMENT						

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
113100 APPLIANCES						
Staff kitchen refrigerator	$1,000.00	EA	2	$2,000	2	$2,000
Staff kitchen microwave	$500.00	EA	2	$1,000	2	$1,000
Medical office refrigerator w/ice	$1,000.00	EA	2	$2,000	2	$2,000
116600 ATHLETIC & SPORTS EQUIPMENT						
Basketball backstops - electric	$9,500.00	EA	6	$57,000	6	$57,000
Wall padding - 6'	$15.00	SF	750	$11,250	750	$11,250
Roll up curtain	$20.00	SF	1,600	$32,000	1,600	$32,000
Volley ball court equip.	$700.00	EA	2	$1,400	2	$1,400
Scoreboard and shot clock	$24,000.00	EA	1	$24,000	1	$24,000
Bleachers	$35,000.00	LS	1	$35,000	1	$35,000
Misc. Gym Equipment	$20,000.00	LS	1	$20,000	1	$20,000
115213 PROJECTION SCREENS						
Projection screen - various areas	$20,000.00	EA	1	$20,000	1	$20,000
116143 THEATRICAL EQUIPMENT						
Stage Curtains	$32,000.00	LS	1	$32,000	1	$32,000
119000 MISC. EQUIPMENT						
Kiln	$3,500.00	EA	1	$3,500	1	$3,500
				$241,150		$241,150
TOTAL E10 - EQUIPMENT				**$839,550**		**$839,550**
E20 - FURNISHINGS						
E 2010 FIXED FURNISHINGS						
129000 MISC. FURNISHINGS						

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
Window Treatment	$0.85	GSF	60,777	$51,660	73,673	$62,622
123553 CLASSROOM CASEWORK						
Casework	$10.00	GSF	60,777	$607,770	73,673	$736,730
				$659,430		$799,352
TOTAL E20 - FURNISHINGS				**$659,430**		**$799,352**
F20 - SELECTIVE BUILDING DEMOLITION						
F2020 HAZARDOUS COMPONENTS ABATEMENT						
Hazardous Waste Allowance	SEE SUMMARY PAGE					
F2030 SELECTIVE DEMOLITION						
BUILDING DEMOLITION	SEE SUMMARY PAGE					
				$0		$0
TOTAL F20 - SELECTIVE BUILDING DEMOLITION				**$0**		**$0**
G. BUILDING SITEWORK						
G10 - SITE PREPARATION						
G1010 SITE CLEARING						
311000 SITE PREPARATION & CLEARING						
Construction fence	18.00	LF	4,100	$73,800	4,100	$73,800

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
Construction entrance pad	11.00	SF	1	$11	1	$11
Construction gates	1,200.00	EA	1	$1,200	1	$1,200
Clear and Grub	0.15	SF	424,710	$63,707	424,710	$63,707
Strip and dispose 6" top soil	41.00	CY	3,933	$161,233	3,933	$161,233
Protect tree	5,000.00	LS	1	$5,000	1	$5,000
General Site Prep	0.20	SF	424,710	$84,942	424,710	$84,942
				$389,892		$389,892
G1020 SITE DEMOLITION & RELOCATIONS						
Erosion control	10.00	LF	3,690	$36,900	3,690	$36,900
Inlet Protection	110.00	EA	20	$2,200	20	$2,200
Erosion Control Maintance	10,000.00	LS	1	$10,000	1	$10,000
Remove paved area	1.15	SF	106,178	$122,104	106,178	$122,104
Remove Utilities	50,000.00	LS	1	$50,000	1	$50,000
Misc. Site Removal	0.20	SF	424,710	$84,942	424,710	$84,942
Temporary Measures:						
Temporary Parking and Access	50,000.00	LS	1	$50,000	1	$50,000
Snow removal	25,000.00	LS	1	$25,000	1	$25,000
Phasing logistics	75,000.00	LS	1	$75,000	1	$75,000
				$456,146		$456,146
G1030 SITE EARTHWORK						
310000 EARTHWORK						
Site Grading	2.70	SY	47,190	$127,413	47,190	$127,413
Site Cut to fill	32.00	CY	7,865	$251,680	7,865	$251,680
Site Fill - Import	23.00	CY	612	$14,070	612	$14,070
Site Cut - disposal	60.00	CY	5,506	$330,330	5,506	$330,330
Ledge Removal	55.00	CY	1,000	$55,000	1,000	$55,000

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
				$778,493		$778,493
G1040 HAZARDOUS WASTE REMEDIATION						
Soil classifications		NIC				
				$0		$0
TOTAL G10 - SITE PREPARATION				**$1,624,531**		**$1,624,531**
G20 - SITE IMPROVEMENTS						
G2010 ROADWAYS						
321000 PAVING AND CURBING						
Site:						
Bituminous - Road and parking	$5.30	SF	135,000	$715,500	135,000	$715,500
12" Gravel base @ vehicular pave.	$65.00	CY	5,000	$325,000	5,000	$325,000
Granite Curbing - road/parking	$48.00	LF	6,500	$312,000	6,500	$312,000
Parking/traffic signage	$0.10	SF	135,000	$13,500	135,000	$13,500
Parking line panting & markings	$0.20	SF	135,000	$27,000	135,000	$27,000
				$1,393,000		$1,393,000
G2030 PEDESTRIAN PAVING						
321000 PAVING AND CURBING						
Sidewalk :						
4" Concrete Pavement	$12.00	SF	30,000	$360,000	30,000	$360,000
Unit Pavers	$40.00	SF	5,000	$200,000	5,000	$200,000
Bit Walkway	$4.10	SF	10,000	$41,000	10,000	$41,000
8" Gravel base @ ped. pavement	$39.00	CY	1,111	$43,329	1,111	$43,329

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
Tactile warning paver	$1,200.00	EA	16	$19,200	16	$19,200
				$663,529		$663,529
G2040 SITE DEVELOPMENT						
323000 SITE IMPROVEMENTS						
Playgrounds	$450,000.00	LS	2	$900,000	3	$1,350,000
Outdoor learning	$100,000.00	LS	1	$100,000	1	$100,000
Dumpster pad and enclosure	$50,000.00	LS	1	$50,000	1	$50,000
Trash Receptacle	$2,100.00	EA	4	$8,400	4	$8,400
Flag pole	$11,000.00	EA	1	$11,000	1	$11,000
Benches	$25,000.00	EA	1	$25,000	1	$25,000
Decorative bollard	$2,500.00	EA	25	$62,500	25	$62,500
Utility Bollard	$1,100.00	EA	10	$11,000	10	$11,000
Bike Loop	$650.00	EA	12	$7,800	12	$7,800
Site sign	$35,000.00	LS	1	$35,000	1	$35,000
Site Fencing	$250,000.00	LS	1	$250,000	1	$250,000
Misc. site improvements	$500,000.00	LS	1	$500,000	1	$500,000
				$1,960,700		$2,410,700
G2050 LANDSCAPING						
329000 PLANTING						
Planting Allowance	$0.50	SF	424,710	$212,355	424,710	$212,355
Rain Garden	$75,000.00	LS	1	$75,000	1	$75,000
Loam:						
12" Planting Bed - import	$80.00	CY	500	$40,000	500	$40,000
12" Field Drainage layer	$65.00	CY	1,111	$72,222	1,111	$72,222
Field underdrain	$0.75	SF	30,000	$22,500	30,000	$22,500

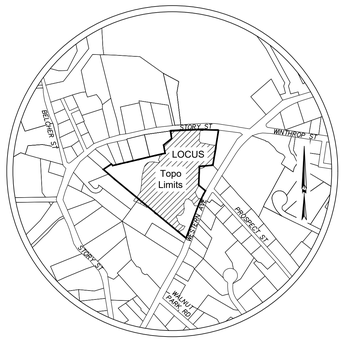
DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
12" Loam Athletic Field - import	$58.00	CY	1,111	$64,444	1,111	$64,444
6" Loam Lawn - import	$80.00	CY	3,976	$318,086	3,976	$318,084
Mulch	$55.00	CY	100	$5,500	100	$5,500
Sod - Athletic Field	$1.10	SF	30,000	$33,000	30,000	$33,000
Hydroseed - lawn	$0.45	SF	214,708	$96,619	214,707	$96,618
Irrigation system - athletic fields	$1.00	SF	30,000	$30,000	30,000	$30,000
				$969,726		$969,724
TOTAL G20 - SITE IMPROVEMENTS				**$4,986,955**		**$5,436,953**
G30 - SITE MECHANICAL UTILITIES						
G3010 WATER SUPPLY						
330000 UTILITIES						
Street Connection	$30,000.00	LOC	1	$30,000	1	$30,000
St pavement cut & patch	$10,000.00	LOC	1	$10,000	1	$10,000
8" Main loop	$110.00	LF	1,200	$132,000	1,200	$132,000
6" Fire Service	$92.00	LF	100	$9,200	100	$9,200
4" Domestic	$78.00	LF	100	$7,800	100	$7,800
8" Gate valve main	$1,850.00	EA	4	$7,400	4	$7,400
6" Gate valve dom	$1,600.00	EA	4	$6,400	4	$6,400
Fire Hydrant	$3,100.00	EA	2	$6,200	2	$6,200
Test, sanitize, thrust block , misc.	$30,000.00	LS	1	$30,000	1	$30,000
				$239,000		$239,000
G3020 SANITARY SEWER						
330000 UTILITIES						
8" PVC San Main	$110.00	LF	800	$88,000	800	$88,000
Grease Trap - 3,000 gal	$40,000.00	EA	1	$40,000	1	$40,000

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
Int Grease interceptor		W / plumbing				
Site manhole	$4,800.00	EA	3	$14,400	3	$14,400
St pavement cut & patch	$10,000.00	LOC	1	$10,000	1	$10,000
Street Connection	$30,000.00	LS	1	$30,000	1	$30,000
				$182,400		$182,400
G3030 STORM SEWER						
330000 UTILITIES						
On site Storage System:						
Building Area	6.00	SFFP	42,544	$255,263	51,571	$309,427
Site Pavement	6.00	SFFP	180,000	$1,080,000	180,000	$1,080,000
				$1,335,263		$1,389,427
TOTAL G30 - SITE MECHANICAL UTILITIES				**$1,756,663**		**$1,810,827**
G40 - SITE ELECTRICAL UTILITIES						
G4010 ELECTRICAL DISTRIBUTION						
330000 UTILITIES						
Primary ductbank	$125.00	LF	750	$93,750	750	$93,750
Secondary Ductbank	$1,600.00	LF	100	$160,000	100	$160,000
Tele comm ductbank	$105.00	LF	850	$89,250	850	$89,250
Generator Ductbank	$975.00	LF	100	$97,500	100	$97,500
EV Station	$20,000.00	EA	4	$80,000	4	$80,000
Future EV Station	$50,000.00	LS	1	$50,000	1	$50,000
Pole dressing	$3,500.00	EA	1	$3,500	1	$3,500
				$574,000		$574,000

DESCRIPTION	UNIT COST	UNIT	OPT A 2.1 QUANTITY	OPT A 2.1 TOTAL	OPT A 2.2 QUANTITY	OPT A 2.2 TOTAL
G4020 SITE LIGHTING						
260001 ELECTRICAL*						
Lighting Fixtures:						
Roadway/Parking Fixtures	$5,000.00	EA	35	$175,000	35	$175,000
Pedestrian Lighting	$4,000.00	EA	20	$80,000	20	$80,000
Misc. Specialty site lighting	$25,000.00	LS	1	$25,000	1	$25,000
				$280,000		$280,000

TOPOGRAPHIC PLAN OF LAND

SECTION 3.1.8.12



LOCUS MAP
not to scale

MASSACHUSETTS STATE PLANE
COORDINATE SYSTEM (NAD83)

LEGEND

⊞	CATCHBASIN
Ⓓ	DRAIN MANHOLE
RL	ROOF LEADER
Ⓢ	SEWER MANHOLE
⊙	VENT
	HYDRANT
GM	GAS METER
E	ELECTRIC BOX
	UTILITY POLE
	GUY WIRE
	SIGN
AC	AIR CONDITIONER
	POST
	DECIDUOUS TREE
	CONIFEROUS TREE
	SHRUB
	STUMP
	FLAGPOLE
	HANDICAP PARKING SPACE
——D——	DRAIN LINE
——S——	SEWER LINE
——W——	WATER LINE
——G——	GAS LINE
——E——	ELECTRIC LINE
——C——	COMMUNICATIONS LINE
——OHW——	OVERHEAD WIRE
----60----	INDEX CONTOUR
----59----	INTERMEDIATE CONTOUR
+58.7	SPOT GRADE
tc=	TOP OF CURB ELEVATION
bc=	BOTTOM OF CURB ELEVATION
tw=	TOP OF WALL ELEVATION
bw=	BOTTOM OF WALL ELEVATION
ds=	DOOR SILL ELEVATION
FFE=	FINISHED FLOOR ELEVATION
(R)	RECORD
VGC	VERTICAL GRANITE CURB
BB	BITUMINOUS BERM
DWL	DASHED WHITE LINE
SWL	SOLID WHITE LINE
SYL	SOLID YELLOW LINE
Bit	BITUMINOUS
LA	LANDSCAPE AREA
CLF	CHAIN LINK FENCE
OH	OVERHANG
HR	HAND RAIL
INV	INVERT
VC	VITRIFIED CLAY
PVC	POLYVINYL CHLORIDE
CI	CAST IRON
CPP	CORRUGATED PLASTIC PIPE
CMP	CORRUGATED METAL PIPE
TP	TOP OF PIPE
TW	TOP OF WALL
NVP	NO VISIBLE PIPE
Abd	ABANDONMENT

40 0 20 40 80

1 inch = 40 ft.

© COPYRIGHT SAMIOTES CONSULTANTS, INC.

samiotes

Samiotes Consultants Inc.
Civil Engineers + Land Surveyors

20 A Street
Framingham, MA 01701

T 508.877.6688
F 508.877.8349

www.samiotes.com

NOTES:

1. THIS PLAN IS REFERENCED HORIZONTALLY TO THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983 AND VERTICALLY TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 BY RTK GPS OBSERVATIONS TAKEN ON NOVEMBER 17, 2025. SEE PLAN FOR PROJECT BENCHMARK LOCATION.
2. THIS PLAN IS THE RESULT OF AN INSTRUMENT SURVEY PERFORMED ON NOVEMBER 10-17, 2025.
3. UNDERGROUND UTILITIES ARE BASED UPON AN ACTUAL FIELD SURVEY AND INFORMATION OF RECORD. IT IS NOT WARRANTED THAT THEY ARE EXACTLY LOCATED, NOR THAT ALL UNDERGROUND CONDUITS OR OTHER STRUCTURES ARE SHOWN ON THIS PLAN. *CONTACT DIGSAFE 811 PRIOR TO ANY EXCAVATION.
4. THE SUBJECT LAND AS SHOWN IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA, OR OTHER FLOOD AREA AS SHOWN ON FEMA NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 25009C0293H, HAVING AN EFFECTIVE DATE OF JULY 8, 2025.
5. THIS PLAN IS NOT INTENDED TO REPRESENT A BOUNDARY SURVEY. PROPERTY LINES SHOWN ARE APPROXIMATE ONLY. EASEMENTS, IF ANY, ARE NOT SHOWN.
6. WETLAND FLAGS WERE FIELD DELINEATED BY RIMMER ENVIRONMENTAL CONSULTING ON OCTOBER 29, 2025.

ESSEX ELEMENTARY SCHOOL
12 STORY STREET, ESSEX, MA

REVISION

TOPOGRAPHIC PLAN OF LAND

JOB # 55044.01	EX-1
DATE: 12/12/2025	
SCALE: 1"=40'	
DRAWN BY: ALS	SHEET 1 OF 3
APPROVED BY: DFF	

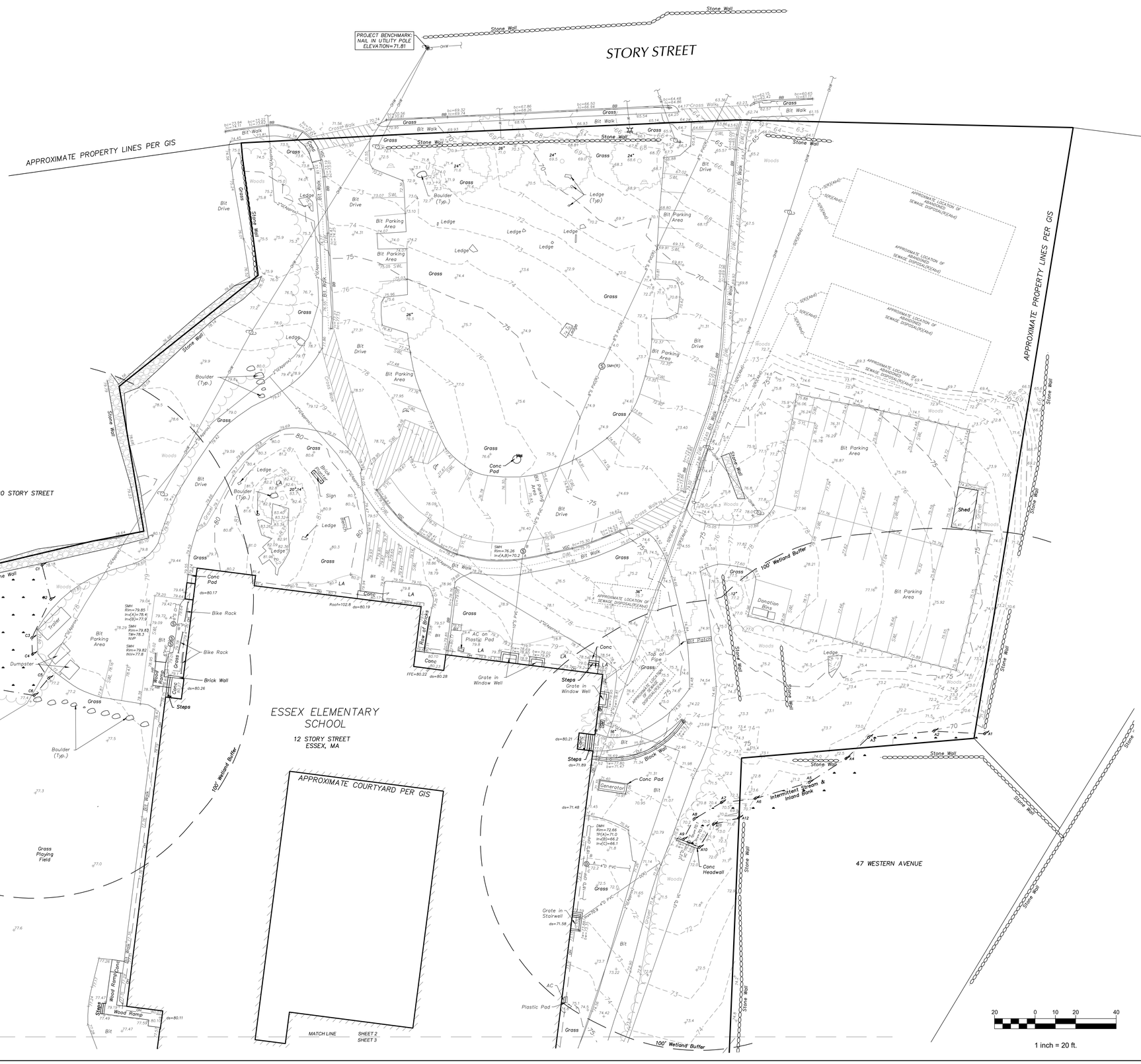
FILE: 55044.00 ESSEX ELEMENTARY ECP.DWG

P:\PROJECTS\2025\55044.00 ESSEX ELEMENTARY SCHOOL - ESSEX MA\SURVEY\DWG\55044.00 ESSEX ELEMENTARY ECP.DWG

MASSACHUSETTS STATE PLANE
COORDINATE SYSTEM (NAD83)

LEGEND

	CATCHBASIN
	DRAIN MANHOLE
	ROOF LEADER
	SEWER MANHOLE
	VENT
	HYDRANT
	GAS METER
	ELECTRIC BOX
	UTILITY POLE
	GUY WIRE
	SIGN
	AIR CONDITIONER
	POST
	DECIDUOUS TREE
	CONIFEROUS TREE
	SHRUB
	STUMP
	FLAGPOLE
	HANDICAP PARKING SPACE
—— D ——	DRAIN LINE
—— S ——	SEWER LINE
—— W ——	WATER LINE
—— G ——	GAS LINE
—— E ——	ELECTRIC LINE
—— C ——	COMMUNICATIONS LINE
—OHW—	OVERHEAD WIRE
— 60 —	INDEX CONTOUR
— 59 —	INTERMEDIATE CONTOUR
+58.7	SPOT GRADE
tc=	TOP OF CURB ELEVATION
bc=	BOTTOM OF CURB ELEVATION
tw=	TOP OF WALL ELEVATION
bw=	BOTTOM OF WALL ELEVATION
ds=	DOOR SILL ELEVATION
FFE=	FINISHED FLOOR ELEVATION
(R)	RECORD
VGC	VERTICAL GRANITE CURB
BB	BITUMINOUS BERM
DWL	DASHED WHITE LINE
SWL	SOLID WHITE LINE
SYL	SOLID YELLOW LINE
Bit	BITUMINOUS
LA	LANDSCAPE AREA
CLF	CHAIN LINK FENCE
OH	OVERHANG
HR	HAND RAIL
INV	INVERT
VC	VITRIFIED CLAY
PVC	POLYVINYL CHLORIDE
CI	CAST IRON
CPP	CORRUGATED PLASTIC PIPE
CMP	CORRUGATED METAL PIPE
TP	TOP OF PIPE
TW	TOP OF WALL
NVP	NO VISIBLE PIPE
Abd	ABANDONMENT



samiotes

Samiotes Consultants Inc.
Civil Engineers • Land Surveyors

20 A Street
Framingham, MA 01701

T 508.877.6688
F 508.877.8349

www.samiotes.com

ESSEX ELEMENTARY SCHOOL
12 STORY STREET, ESSEX, MA

REVISION

TOPOGRAPHIC PLAN OF LAND

JOB # 55044.01	EX-2
DATE: 12/12/2025	
SCALE: 1"=20'	
DRAWN BY: ALS	
APPROVED BY: DFF	SHEET 2 OF 3

FILE: 55044.00 ESSEX ELEMENTARY ECP.DWG

© COPYRIGHT SAMIOTES CONSULTANTS, INC.

P:\PROJECTS\2025\55044.00 ESSEX ELEMENTARY SCHOOL – ESSEX MA\SURVEY\DWG\55044.00 ESSEX ELEMENTARY ECP.DWG



LEGEND

	CATCHBASIN
	DRAIN MANHOLE
	ROOF LEADER
	SEWER MANHOLE
	VENT
	HYDRANT
	GAS METER
	ELECTRIC BOX
	UTILITY POLE
	GUY WIRE
	SIGN
	AIR CONDITIONER
	POST
	DECIDUOUS TREE
	CONIFEROUS TREE
	SHRUB
	STUMP
	FLAGPOLE
	HANDICAP PARKING SPACE
D	DRAIN LINE
S	SEWER LINE
W	WATER LINE
G	GAS LINE
E	ELECTRIC LINE
C	COMMUNICATIONS LINE
OHW	OVERHEAD WIRE
60	INDEX CONTOUR
59	INTERMEDIATE CONTOUR
+58.7	SPOT GRADE
tc=	TOP OF CURB ELEVATION
bc=	BOTTOM OF CURB ELEVATION
tw=	TOP OF WALL ELEVATION
bw=	BOTTOM OF WALL ELEVATION
ds=	DOOR SILL ELEVATION
FFE=	FINISHED FLOOR ELEVATION
(R)	RECORD
VGC	VERTICAL GRANITE CURB
BB	BITUMINOUS BERM
DWL	DASHED WHITE LINE
SWL	SOLID WHITE LINE
SYL	SOLID YELLOW LINE
Bit	BITUMINOUS
LA	LANDSCAPE AREA
CLF	CHAIN LINK FENCE
OH	OVERHANG
HR	HAND RAIL
INV	INVERT
VC	VITRIFIED CLAY
PVC	POLYVINYL CHLORIDE
CI	CAST IRON
CPP	CORRUGATED PLASTIC PIPE
CMP	CORRUGATED METAL PIPE
TP	TOP OF PIPE
TW	TOP OF WALL
NVP	NO VISIBLE PIPE
Abd	ABANDONMENT

20 0 10 20 40

1 inch = 20 ft.

© COPYRIGHT SAMIOTES CONSULTANTS, INC.

P:\PROJECTS\2025\55044.00 ESSEX ELEMENTARY SCHOOL – ESSEX MA\SURVEY\DWG\55044.00 ESSEX ELEMENTARY ECP.DWG

samiotes

Samiotes Consultants Inc.
Civil Engineers • Land Surveyors
20 A Street
Framingham, MA 01701
T 508.877.6688
F 508.877.8349
www.samiotes.com

NOTES:

1. THIS PLAN IS REFERENCED HORIZONTALLY TO THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983 AND VERTICALLY TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.
2. THIS PLAN IS THE RESULT OF COMPILED GIS DATA. TOPOGRAPHY HAS BEEN GENERATED FROM LIDAR DATA COMPILED FROM INFORMATION AT COAST.NOAA.GOV. OTHER SITE FEATURES EXIST AND ARE NOT SHOWN. ANY USER SHOULD DETERMINE THE SUITABILITY FOR ITS INTENDED USE AND ASSUME ALL RISK AND LIABILITY IN CONNECTION THEREWITH.
3. THE LOCATION OF UTILITIES WAS NOT INCLUDED WITHIN THE SCOPE OF THIS SURVEY. UTILITIES ARE NOT SHOWN. *CONTACT DIGSAFE 811 PRIOR TO ANY EXCAVATION.
4. THE SUBJECT LAND AS SHOWN IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA, OR OTHER FLOOD AREA AS SHOWN ON FEMA NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 25009C0293H, HAVING AN EFFECTIVE DATE OF JULY 8, 2025.
5. THIS PLAN IS NOT INTENDED TO REPRESENT A BOUNDARY SURVEY. PROPERTY LINES SHOWN ARE APPROXIMATE ONLY. EASEMENTS, IF ANY, ARE NOT SHOWN.

ESSEX ELEMENTARY SCHOOL
12 STORY STREET, ESSEX, MA

SEAL

REVISION

TOPOGRAPHIC PLAN OF LAND

JOB # 55044.01
DATE: 12/12/2025
SCALE: 1"=20'
DRAWN BY: ALS
APPROVED BY: DFF

EX-3
SHEET 3 OF 3

FILE: 55044.00 ESSEX ELEMENTARY ECP.DWG

TRAFFIC FEASIBILITY STUDY

SECTION 3.1.8.13

REF: NEX-2500216.00

DATE: November 14, 2025

TO: Ms. Fawn Pelligrini, AIA, NCARD, LEED
JCJ Architecture
21 West 3rd Street
Boston, MA 02127

FROM: Ms. Rebecca L. Brown, P.E., Senior Project Manager
Ms. Nicole Rogers, P.E., Senior Project Manager

RE: Preliminary Design Program (PDP) – Traffic Feasibility
Manchester Essex Regional School District
Essex Elementary School – Essex, Massachusetts

INTRODUCTION

Greenman-Pedersen, Inc. (GPI) has prepared this *Feasibility Study* for the Essex Elementary School, currently located at 12 Story Street in Essex, Massachusetts. The Essex Elementary School currently services 215 students in Grades K-5 from the Manchester-Essex Regional School District (MERSD). The MERSD has received funding through the Massachusetts School Building Authority (MSBA) to conduct a Feasibility Study for the siting of a new school. This Feasibility Study, as such, evaluates the potential for three sites to accommodate three distinct enrollment configurations from a traffic and circulation perspective.

The following school sites were included within the initial traffic and circulation screening process:

- **Essex Elementary School Site** – The Essex Elementary School (EES) is currently located at 12 Story Street in Essex, MA and services 215 students in Grades K-5.
- **Manchester Memorial Elementary School Site** – The Manchester Memorial Elementary School (MMES) is currently located at 43 Lincoln Street in Manchester, MA and services 304 students in Grades PreK-5.
- **Apple Street Site** – The Apple Street site is located at 30 Apple Street in Essex, MA. The site is currently undeveloped and does not service any students at this time.

Each of these sites were then qualitatively evaluated, in regard to traffic and circulation, with respect to six attributes to identify the suitability of each site to accommodate the three enrollment options summarized as:

- **Option 1 –** Grades PreK–3 (165 students) sited in Essex, with Grades 4–5 integrated into Manchester Memorial Elementary;
- **Option 2 –** Grades PreK–5 (250 students) sited in Essex; and
- **Option 3 –** Grades PreK–5 (515 students) sited at Manchester Memorial Elementary, consolidating all Essex and Manchester students into one campus.

A total of nine design alternatives were initially identified for evaluation, representing different combinations of site location and enrollment configuration, ranging from code upgrades to new construction. They are as follows:

- A0.1 Essex Elementary School Code Upgrade / Base Repair - Grades PreK–3 (165 students)
- A0.2 Essex Elementary School Code Upgrade / Base Repair - Grades PreK–5 (250 students)
- A1.1 Essex Elementary School Addition / Renovation - Grades PreK–3 (165 students)
- A1.2 Essex Elementary School Addition / Renovation - Grades PreK–5 (250 students)
- A2.1 Essex Elementary School New Construction - Grades PreK–3 (165 students)
- A2.2 Essex Elementary School New Construction - Grades PreK–5 (250 students)
- B1.1 Manchester Memorial Elementary School Addition/Renovation – Grades PreK-5 (515 students)
- C2.1 Apple Street Site New Construction - Grades PreK–3 (165 students)
- C2.2 Apple Street Site New Construction - Grades PreK–5 (250 students)

Each site and enrollment option was evaluated through a qualitative traffic and circulation lens, focusing on the following attributes:

- **Infrastructure** - Evaluates existing access to the site, roadway conditions, and functional classifications to understand how well each site integrates with the surrounding network. Consideration was also given to roadway geometry, traffic control, and overall connectivity to the regional system.
- **Walkability** - Assesses the availability and condition of sidewalks, crossings, and bicycle accommodations to determine the potential for non-motorized travel. Sites located closer to the student population inherently support higher walking and biking rates, reducing congestion and promoting healthy, sustainable travel choices.
- **Safety** - Reviews crash patterns and potential conflict points between motorists, pedestrians, and bicyclists in the surrounding area. This criterion identifies broad safety risks that may influence school access and circulation, recognizing that detailed design measures can address site-specific issues later.
- **Bussing Efficiency** - Considers the ability of each site to accommodate bus circulation, loading and unloading operations, and queuing within the site. The evaluation also accounts for the regional impacts of bus routing, stacking limitations, and potential delays during peak drop-off and pick-up periods.
- **Neighborhood Traffic Impact** - Examines the potential for school-related traffic to exacerbate congestion on adjacent or regional commuter routes. Sites with limited on-site queuing storage may increase conflicts between local and through traffic, leading to safety and operational concerns.
- **Adequate Parking** - Evaluates the site's capacity to provide sufficient parking for staff and visitors under current and projected enrollment scenarios. Consideration is given to internal circulation, and pedestrian safety within lots.

Although evaluated independently, all six of the traffic evaluation pillars are inextricably linked. Congestion affects safety and walkability. Student density affects walkability and drop-off queues. Therefore, the ideal alternative is one that ranks positively for all six criteria.

The following *Feasibility Study* describes existing transportation conditions at each site, projects future trip generation and parking demand for each enrollment alternative, and applies the evaluation criteria to qualitatively "score" each alternative. This approach ensures that site and alternative selection reflects a balanced understanding of safety, accessibility, operational efficiency, and neighborhood context.

SITE A – ESSEX ELEMENTARY SCHOOL

EXISTING CONDITIONS

GPI conducted a site visit on Tuesday, September 23, 2025, to observe the site circulation associated with the weekday morning drop-off, weekday afternoon pick-up, and general queue lengths around the school site. Both morning drop-off and afternoon pick-up observations occurred during partly cloudy conditions with a temperature in the upper 60's. The favorable weather conditions appeared to encourage walking and biking activity in the surrounding area. GPI team members observed operations at and immediately adjacent to the site.

The elementary school operates from 8:25 AM to 2:55 PM. Students may arrive at school no earlier than 8:05 AM, as no supervision is provided prior to that time.

General site layout and circulation for the Essex Elementary School is depicted in **Figure 1**.

EXISTING SITE ACCESS/EGRESS AND LAYOUT

Vehicular access to the Essex Elementary School site is provided via two driveways on Story Street that form a one-way circulation loop north of the school building. The western driveway functions as the entrance-only access point, while the eastern driveway serves as the exit. Both driveways are clearly delineated with directional signage. The internal loop provides direct access to the parent drop-off/pick-up zone, as well as staff parking areas. The loop is designed for counterclockwise circulation and consists of a single travel lane with curbside loading/unloading area adjacent to the main school entrance and head-in parking spaces along the interior for staff parking. The loading/unloading area is currently striped to accommodate eight vehicles. However, with the prevalence of larger SUVs, the area functions more comfortably for six vehicles.

West of the school building, a short spur driveway extends off of the main circulation loop, providing access to a small parking area designated for a few staff members (2 formal spaces). This area also contains storage facilities, dumpsters, and bicycle parking, and terminates in a dead end with no through circulation. During morning observations, students were observed walking into this area, suggesting that it is occasionally used as an informal pedestrian route despite its service-oriented function.

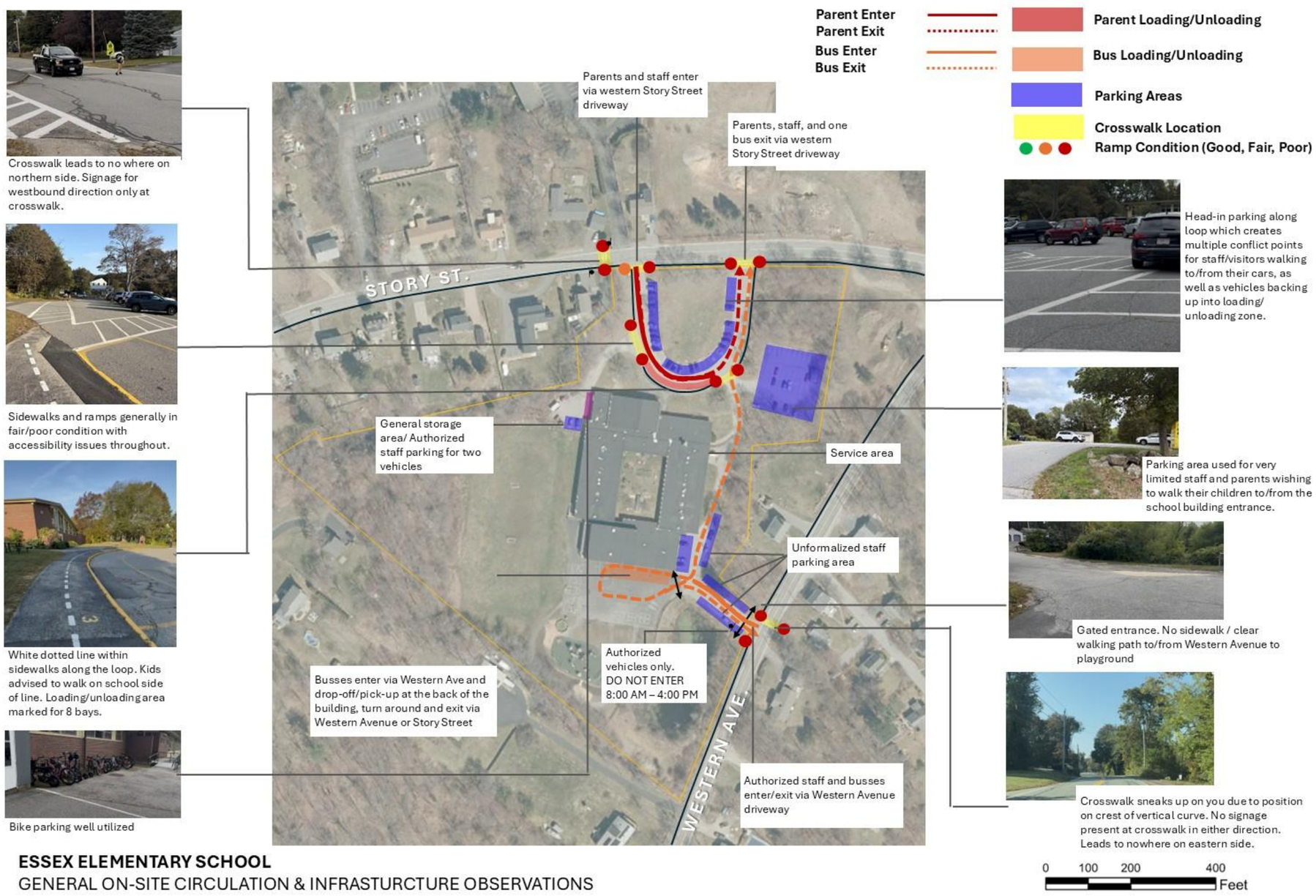
East of the school, a secondary spur extends off of the main circulation loop, providing access to an upper parking lot that accommodates additional staff and parent parking. This secondary spur also provides access to service areas and additional staff parking (7 formal spaces and approx. 6 informal spaces) before connecting to Western Avenue via a secondary full access/egress driveway.

Bus loading and unloading occurs south of the building in the paved play area.

PARKING – LAYOUT, SUPPLY, AND DEMAND

The Essex Elementary School campus provides approximately 83 formal parking spaces distributed across several on-site areas. The primary parking supply is located along the interior of the parent circulation loop, configured as head-in spaces primarily utilized by staff during the school day. Additional parking is available in an upper lot east of the school building, which accommodates both staff and parent parking. A smaller spur off the western side of the loop provides a limited number of staff spaces and also contains school maintenance facilities, storage areas, dumpsters, and bicycle parking.

Figure 1. General On-Site Observations – Essex Elementary School



Formal parking for seven vehicles is also provided along the southeastern side of the school building. During observations, some informal parking activity was noted in this general area, suggesting occasional overflow or convenience-based use by staff.

Overall parking utilization was approximately 60 percent, indicating sufficient capacity for daily operations.

Parking circulation is generally intuitive. However, the current layout, where the circulation loop and active loading/unloading area are positioned between the parking spaces and the school building, requires staff to cross the active drive to reach the building entrance. This configuration introduces numerous pedestrian–vehicle conflict points along the loop, especially during high-traffic periods. Reconfiguration of the parking and circulation pattern to reduce crossing activity and separate loading operations from staff parking would improve overall safety and operational efficiency.

BUSSING

Students enrolled in grades K-5 who reside more than 2 miles from their neighborhood school qualify for district-paid transportation. Two buses and a few vans currently service the Essex Elementary School. These buses generally drop students off around 8:25 AM during the drop-off period and depart the school between 2:50 – 3:00 PM during the PM drop-off period. Buses enter via the secondary entrance on Western Avenue and load/unload students building-side on the paved play area south of the school. They then turn around in that area to exit. In the morning, one bus was observed exiting via Story Street, but in the afternoon, both buses exited via Western Avenue. It was observed that buses have difficulty making a left out of the secondary drive onto Western Avenue due to the existing geometry.

ON-SITE PEDESTRIAN AND BIKE INFRASTRUCTURE

A sidewalk is provided along the outside edge of the internal circulation loop. The sidewalk is generally in poor condition, with uneven surfaces, cracking, and areas of insufficient width that render it noncompliant with accessibility standards. An asphalt berm delineates the sidewalk from the adjacent travel lane. A dashed white line is painted along the center of the sidewalk around the loop, and students have been instructed to walk on the school side of this line to minimize potential conflicts with vehicles.

The two spur driveways that intersect the loop create breaks in the sidewalk, which are bridged by marked crosswalks. However, both crossings are relatively long, particularly the western one, and exhibit faded pavement markings. The geometry of the loop often results in vehicles cutting through these crosswalks during drop-off and pick-up, increasing potential conflict points between pedestrians and vehicles. Curb ramps on-site are generally in poor condition and do not meet ADA accessibility requirements.

Despite these limitations, a notable level of walking and biking activity was observed. The site lacks dedicated bicycle facilities, and students are instructed to walk their bikes or scooters while on school grounds. Nevertheless, several students were observed riding bicycles and scooters on the sidewalk and even within the loop itself, creating safety concerns due to the close proximity of moving vehicles.

MORNING DROP-OFF OBSERVATIONS

Parent drop-off activity begins around 8:05 AM, when staff supervision becomes available. The first vehicle arrivals were recorded at approximately 7:50 AM, with activity picking up around 8:07 AM. As discussed, the active unloading zone comfortably accommodates six large vehicles at a time, though

it is marked for eight spaces. Two staff members assist with unloading students at the curb, helping to maintain flow within the loop. Once out of the vehicle, students are directed either to the rear playground or the cafeteria depending on weather conditions. The maximum queue length reached six vehicles, all contained within the designated unloading area, and the site was fully cleared by 8:23 AM. Buses departed shortly thereafter, around 8:27 AM. Approximately 52 vehicles participated in the morning drop-off, many carrying multiple students. Observed active transportation included roughly 13 walkers, 11 bicyclists, and 3 scooter riders.

However, several operational issues were identified during this period. Many parents did not pull fully forward within the designated unloading area, creating clustering near the main entrance and causing inefficient use of curb space. Vehicles were observed stopping within crosswalks west of the main entrance and dropping students mid-crosswalk, and some students exited from the driver's side of vehicles, creating unsafe conditions. Parents frequently positioned vehicles away from the curb, reducing lane capacity and causing passing conflicts within the loop. The predominance of large SUVs further limited visibility and contributed to inefficiencies. Additionally, several students were seen riding bikes and scooters on sidewalks despite school guidance to walk them once on campus.

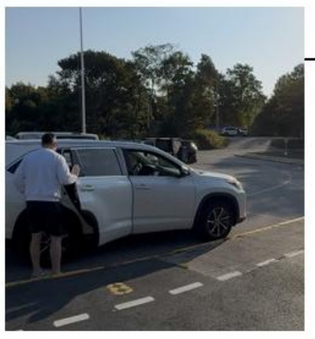
General AM drop-off observations are depicted in **Figure 2**.

Figure 2. AM Drop-Off Observations – Essex Elementary School

ESSEX ELEMENTARY SCHOOL
AM DROP-OFF OBSERVATIONS



Parents dropping off children within the crosswalks. The way the crosswalk is located on the western side, vehicles are bounded to encroach.



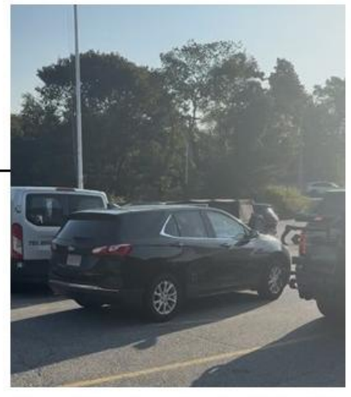
In many instances, parents do not pull up all the way to the front of the drop-off zone.





When parents don't pull all the way up (which is often), others pull in front of them which creates conflicting weaving maneuvers.

Some parents bypass drop-off zone and park in eastern lot and then walk their children to building.



Some vehicles observed not "hugging" curb line and restricting bypass area on left.

AFTERNOON PICK-UP OBSERVATIONS

Afternoon pick-up operations at Essex Elementary begin at approximately 2:50 PM, when walkers and bicyclists are released from the building. Parent vehicle activity begins to increase roughly 15 to 20 minutes prior, with the first arrivals typically observed around 2:30 PM. By 2:35 PM, the designated loading and unloading area within the internal loop is fully occupied, and the queue extends toward the loop entrance. At peak pick-up (approximately 2:50–2:55 PM), the maximum observed number of queued vehicles reached roughly 34. This included 10 vehicles on site (6 in designed loading area and 4 between loading area in Story Street) plus 24 vehicles queued off-site onto Story Street. The maximum queue west of the school was 13 vehicles and east of the school was 11 vehicles.

The queueing patterns along Story Street create several operational and safety challenges.

- Through vehicle drivers approaching the queue often attempt to bypass queued vehicles by encroaching into the opposing travel lane in both directions, as queued vehicles typically hug the outer edge of the curb. The limited roadway width, particularly west of the school where the cross-section narrows to approximately 22 feet curb-to-curb, does not provide sufficient space for these maneuvers to occur safely. This condition increases the risk of sideswipe and head-on conflicts.
- During peak pick-up, vehicles often queue well beyond the entrance driveway, extending past multiple residential properties. As a result, several private driveways are repeatedly blocked, restricting resident access and contributing to driver frustration.
- The crosswalk located just west of the school's entrance driveway, which provides pedestrian access to the school grounds, is frequently obstructed by queued vehicles. Even when not directly blocked, the line of stopped vehicles often obscures sight lines for both pedestrians and approaching drivers. This issue is further compounded by bypassing behavior, as eastbound motorists attempting to pass the queue have limited visibility of pedestrians entering or within the crosswalk until they are already within the travel lane, creating a high-risk conflict point.

Parents employ two primary strategies during afternoon pick-up. They either queue to use the designated loading area within the loop as intended, or park in the upper lot east of the school. Parents who park in the upper lot typically bypass the main queue on Story Street, enter the site, and circulate directly to the lot. They then exit their vehicles, walk to the front entrance to collect their children, and return to their vehicles before departing via Story Street. While this approach reduces congestion off-site, it introduces several issues. As mentioned, bypassing the queue along Story Street is problematic due to the narrow roadway width, particularly west of the school, where the cross-section provides insufficient room for vehicles to safely pass queued traffic. This maneuvering creates potential conflicts between through vehicles and those waiting to turn into the site. On site, vehicles entering and exiting the upper lot also interact with the active circulation loop, resulting in intermittent conflicts with parents exiting the designated loading area. These overlapping movements disrupt the flow of traffic and contribute to overall inefficiencies during pick-up.

Fortunately, these conflicts are largely mitigated by the presence of a staff member who serves as on-site traffic control. This individual actively manages the interaction between vehicles exiting the upper lot and those leaving the loading area, alternating movements between the two streams to maintain safe and orderly operations. A police officer was present at the Western Avenue exit to assist with bus departures, while a crossing guard stationed at the Western Avenue / Story Street / Winthrop Street intersection facilitated pedestrian crossings.

The school employs a structured pick-up system to manage vehicle loading and student release efficiently during afternoon pick-up. Parents display identification placards on their vehicle dashboards to facilitate the student pick-up process. A staff member positioned at the lower end of the loop uses a walkie-talkie to relay parent names to additional staff stationed at the front of the school building.

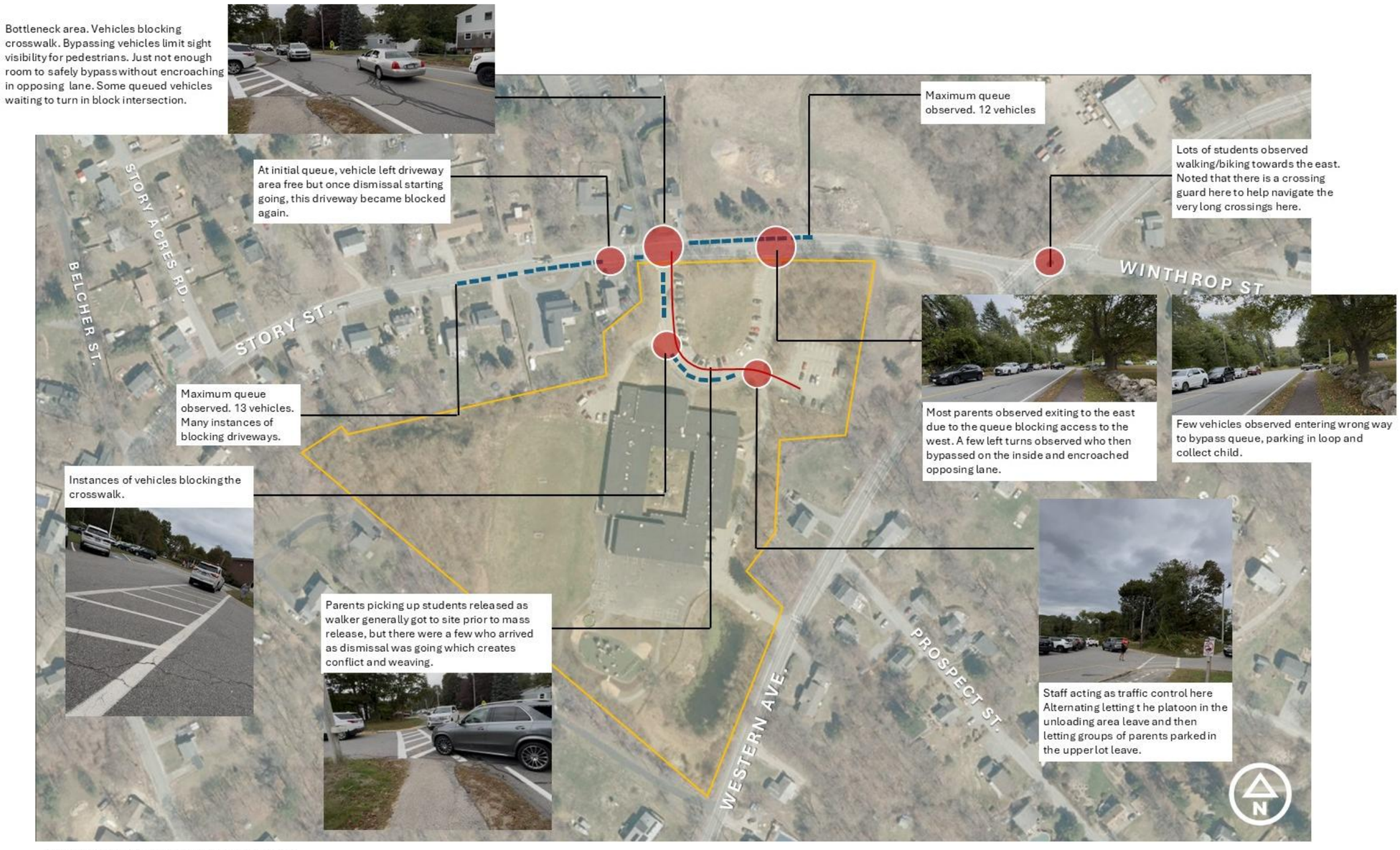
Upon notification, students are organized by assigned numbers corresponding to designated pick-up points along the curb. Once their number is called, students proceed to their parent's vehicle, enter, and depart. While some groups, particularly those involving younger students, required slightly longer loading times, the overall operation was observed to function efficiently and with good coordination among staff.

The on-site circulation pattern itself contributes to several recurring operational issues. As the internal loop serves simultaneously as a travel lane, loading/unloading area, and access route for staff parking, space becomes highly constrained during pick-up.

Most vehicles exiting the site were observed turning right on Story Street to avoid the westbound queue waiting to enter the site. However, a small number of drivers were observed turning left and encroaching across the centerline to bypass queued traffic, further compounding circulation issues. The afternoon pick-up period was clear by 3:04 PM. This indicates neighborhood traffic is impacted for about thirty minutes.

General PM pick-up observations are depicted in **Figure 3**.

Figure 3. PM Pick-Up Observations – Essex Elementary School



ESSEX ELEMENTARY SCHOOL
PM PICK-UP OBSERVATIONS

SURROUNDING ROADWAY NETWORK

Story Street

Story Street, within the vicinity of the school, is oriented generally in an east–west direction and is classified as a local roadway under local jurisdiction. Story Street provides connection between Route 22 to the southwest and Western Avenue/Winthrop Street to the northeast.

Pavement width varies along its length. East of the school, extending to its terminus at the intersection with Western Avenue and Winthrop Street, Story Street measures approximately 30 feet curb-to-curb, consisting of 1-foot shoulders and 14-foot travel lanes in each direction. Bi-directional travel is delineated via a single yellow centerline. A 5-foot sidewalk, generally in fair to poor condition with cracked, uneven surfaces, is provided along the southern side of the roadway, separated from the travel way by a narrow 2-3 foot grass buffer. Asphalt berms are located along both roadway edges. These conditions extend westward to the school, where the roadway starts to narrow considerably. West of the school, the curb-to-curb width reduces to approximately 22 feet, consisting of 0.5-foot shoulders and 10.5-foot travel lanes. The sidewalk continues along the southern side, however, the grass buffer is removed, resulting in limited separation between pedestrians and vehicular traffic. Sidewalks west of the school appears to be in slightly better condition than those east of the school. The wider cross-section to the east of the school creates an environment that feels less constrained and more conducive to higher vehicle speeds, while the narrower cross-section to the west produces a more confined setting. This variation in width contributes to operational challenges during afternoon pick-up periods, when queuing and bypassing behaviors occur. The available roadway width west of the school is insufficient for vehicles to pass queued traffic safely, often requiring drivers to yield to one another.

Other than the school itself, land use along Story Street is primarily residential with several condominium complexes located along the northern side. Traffic volumes and vehicle speeds appeared to be consistent with those typically observed on neighborhood roadways, generally low and moderate in nature. The constrained roadway width along much of the corridor further contributes to these lower operating speeds.

A midblock crosswalk is located along Story Street just west of the entrance-only driveway to the school. The crossing includes a pedestrian curb ramp on the southern side but lacks a corresponding ramp on the northern side, rendering the crosswalk inaccessible for individuals with mobility impairments. Pedestrian warning signage is present at and in advance of the crosswalk for eastbound traffic, however, no comparable signage is provided for westbound drivers, reducing visibility and driver awareness from that direction. In addition, queued vehicles waiting to access the school site in the afternoon pick-up often block the crosswalk or are queued in a position that blocks the view of the crosswalk from bypassing vehicles, creating safety concerns.

An additional midblock crosswalk is located just east of Belcher Street across Story Street (approximately 1,000 feet west of the school). This crossing is situated along a horizontal curve, which limits sight distance particularly for eastbound drivers approaching the crosswalk. The curve and roadside vegetation further restrict visibility of pedestrians waiting to cross from the southern side. Advance pedestrian warning signage is provided for westbound travel, and both advance and at-crosswalk signage are present for eastbound traffic. The sidewalk along the southern side of Story Street terminates at the crosswalk, and the ramps serving the crosswalk appear to be in good condition and ADA compliant.

No bicycle accommodations are present along Story Street.

Along Story Street, static "20 MPH When Children Are Present" school zone signage is provided in both directions approaching the school. Similar to Western Avenue, remnants of older school zone signs remain in place and should be removed to reduce sign clutter and improve overall message clarity within the school zone.

Western Avenue

Western Avenue, within the vicinity of the school, is oriented generally in a north-south direction and is classified as a local roadway under local jurisdiction. Western Avenue provides connections between Martin Street (Route 22) to the southwest and Main Street (Route 133) to the northeast.

Curb-to-curb width along Western Avenue is fairly consistent at around 26 feet, providing one-foot shoulders and 12-foot lanes in each direction. Bi-directional travel is delineated via a double yellow centerline. A five-foot sidewalk, generally in fair to poor condition with cracked, uneven surfaces, is provided along the western side of the roadway and is delineated via a crumbling asphalt berm.

Although classified as a local roadway, Western Avenue appears to function more as a collector and serves as a logical cut-thru route connecting Route 133 to the northeast with Route 22 to the southwest. While land use along Western Avenue is primarily residential in nature, the wider roadway cross-section and greater building setbacks create a context that promotes higher travel speeds. As a result, both traffic volumes and speeds were observed to be higher on Western Avenue than on Story Street. There was also a decent amount of truck traffic observed. These conditions suggest that primary access to the school site should continue to be provided via Story Street, while enhanced pedestrian crossing treatments may be warranted along Western Avenue to improve safety and accessibility.

A midblock crosswalk is located along Western Avenue just north of the secondary school driveway. The crossing includes a pedestrian curb ramp on the western side but lacks a corresponding ramp on the eastern side, rendering the crosswalk inaccessible for individuals with mobility impairments. Pedestrian warning signage is present at and in advance of the crosswalk for northbound traffic, however, no comparable signage is provided for southbound drivers, reducing visibility and driver awareness from that direction which is particularly concerning given the crosswalk lies at the crest of a vertical curve. Therefore, a police officer detail was stationed here to facilitate minimal crossings at this location.

Another midblock crossing is located approximately 900 feet south of the school just north of Walnut Park Road. Similar to the crossing at the school, this location lacks pedestrian curb ramps and pedestrian warning signage, limiting its accessibility and visibility.

There are no bicycle accommodations provided along Western Avenue.

Updated school zone signage is installed along Western Avenue in both directions (approximately 175 feet north of Story Street and approximately 200 feet north of Walnut Park Road). The signage is equipped with flashing beacons and corresponding "20 MPH When Flashing" panels, supplemented by speed feedback displays to enhance driver awareness. However, several outdated school zone signs remain along Western Avenue, contributing to visual clutter and potentially diminishing the effectiveness of the newer devices.

Story Street at Western Avenue / Winthrop Street

East of the school, Story Street terminates at the intersection of Story Street, Western Avenue, and Winthrop Street. At this location, Story Street and Winthrop Street intersect Western Avenue from the west and east, respectively, forming a four-way unsignalized intersection. Both the Story Street and

Winthrop Street approaches operate under stop control, while Western Avenue operates free-flow. The intersection geometry is skewed, with both side streets meeting Western Avenue at shallow angles. This configuration results in excessively wide curb radii in the northwest and southeast corners, encouraging higher-speed turning movements, particularly for vehicles turning right from southbound Western Avenue onto westbound Story Street.

On both the Story Street and Winthrop Street legs, bidirectional travel is divided by a small raised or painted island intended to discourage encroachment from opposing directions. North of the intersection, a sidewalk is provided along the eastern side of Western Avenue, while south of the intersection, the sidewalk shifts to the western side. Sidewalks are also provided along the southern side of Story Street and the northern side of Winthrop Street. As a result, marked crosswalks are present along the northern leg of Western Avenue and the Story Street leg of the intersection.

The curb ramps serving these crosswalks are in poor condition and do not meet ADA accessibility standards. The ramps located in the northwest corner are of particular concern due to the absence of vertical curb delineation; instead, the area is defined solely by white paint. Combined with the wide curb radii, this design creates a hazardous condition where southbound vehicles turning onto Story Street often do so at elevated speeds, posing safety risks for crossing pedestrians.

SAFETY ASSESSMENT

Collision data for the immediate area surrounding Essex Elementary School were obtained from the *MassDOT IMPACT Crash Data Portal* for the latest complete five years (2020-2024). Data indicates a relatively low frequency of incidents, with the few that have occurred generally tied to isolated or non-recurring factors. One crash was reported at the intersection of Western Avenue at Story Street/Winthrop Street involving a single vehicle that struck a deer. Two additional crashes occurred along Western Avenue south of the school, both outside of school hours and classified as single-vehicle incidents caused by driver distraction. Another crash was documented on Story Street southwest of Belcher Street, identified as a single-vehicle roadway departure due to adverse weather conditions.

The most notable incident occurred directly in front of the school on Story Street and involved a same-direction sideswipe at approximately 2:45 PM, coinciding with afternoon pick-up. This crash likely reflects the constrained roadway conditions observed during peak pick-up periods, when limited pavement width cannot safely accommodate queued, through, and bypassing vehicles simultaneously.

SITE OPPORTUNTITIES AND CONSTRAINTS

PROS

- The Essex Elementary site is located in a predominantly residential setting with lower traffic volumes and fewer speeding vehicles.
- The surrounding area is generally conducive to walking, even where sidewalks are substandard, due to the lower intensity of vehicular traffic.
- There is ample space on-site for reconfiguration, and overall parking availability is good.

CONS

- Sidewalks, curb ramps, and crosswalks in the vicinity are in poor condition, and off-site pedestrian connections require substantial improvement.

- The intersection of Western Avenue at Story Street/Winthrop Street is of particular concern, featuring wide curb radii and long crosswalks that encourage high-speed turning movements. Combined with substandard ramps and a lack of delineation, these conditions create an unsafe environment for pedestrians.
- School zone signage and pavement markings are outdated and lack consistency.
- Pick-up queues routinely block residential driveways and result in bypassing maneuvers by through traffic.
- School buses experience difficulty executing left turns onto Western Avenue due to turning radius and sight line constraints.
- Parking along the internal loop results in frequent pedestrian–vehicle and vehicle–vehicle conflicts, particularly during loading and unloading.

CRITICAL NEEDS

Priority improvements for the Essex Elementary site include:

- Upgrading sidewalks, ramps, and crosswalks both on-site and along approach routes to improve accessibility and safety.
- Revising the bus entrance/exit configuration to accommodate safer turning movements.
- Enhancing crosswalks on Story Street and Western Avenue with Rectangular Rapid Flashing Beacons (RRFBs) and ADA-compliant ramp connections.
- Updating school zone signage and advance warning signs to reinforce driver awareness.
- Increasing on-site queue storage to reduce driveway blockages and mitigate conflicts with through traffic during pick-up periods.
- Implementing intersection improvements at Western Avenue and Story Street/Winthrop Street to tighten curb radii, shorten crossing distances, and enhance accessibility.
- Reconfiguring on-site parking to minimize conflicts between pedestrians and vehicles.
- Considering traffic control at the Story Street entrance to facilitate orderly vehicle movement and provide safe pedestrian crossings.

SITE B – MANCHESTER MEMORIAL ELEMENTARY SCHOOL

EXISTING CONDITIONS

GPI conducted a site visit on Thursday, September 25, 2025, to observe the site circulation associated with the weekday morning drop-off, weekday afternoon pick-up, and general queue lengths around the school site. Both morning drop-off and afternoon pick-up observations occurred during heavy rain conditions with a temperature in the lower 60's. Given the rainy conditions, it is likely that more parent vehicle traffic accessed the site compared to a day with more favorable weather conditions, resulting in fewer pedestrians and cyclists and longer queues being observed. GPI team members observed operations at and immediately adjacent to the site.

The elementary school operates from 8:25 AM to 2:55 PM. Students may arrive at school no earlier than 8:05 AM, as no supervision is provided prior to that.

General site layout and circulation for the Manchester Memorial Elementary School is depicted in **Figure 4**.

EXISTING SITE ACCESS/EGRESS AND LAYOUT

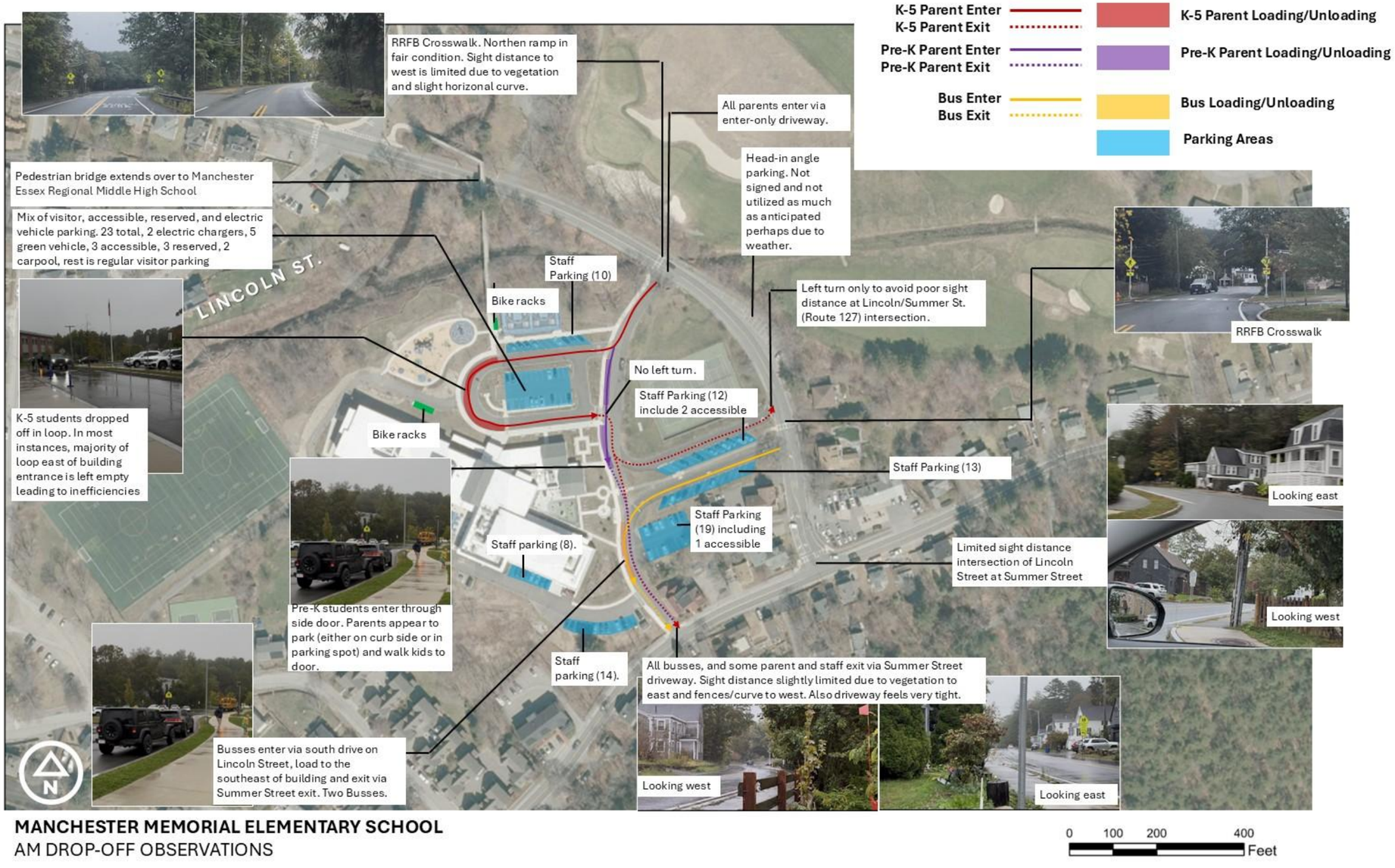
Vehicular access to the Manchester Memorial Elementary School site is provided via two entrance-only driveways on Lincoln Street, the north of which acts as the main entrance by which all parents (if dropping off and picking up via the loop) and some staff enter. The southern entrance-only driveway on Lincoln Street is utilized by buses, staff, and some parents (if wishing to park and then walk to collect their children). A dedicated left turn lane is provided along the Lincoln Street northbound approach to facilitate this movement.

Two egress points are provided, one on Lincoln Street (just north of the southern entrance only driveway) and another that exits onto Summer Street (Route 127) to the south of the school. The Lincoln Street exit is restricted to left turns to route vehicles away from the intersection of Lincoln Street at Summer Street (Route 127) which exhibits poor sight lines.

Traffic circulation, once on site, differs by grade. K-5 parents enter via the primary driveway and circulate counter-clockwise around the pick-up/drop-off loop near the main entrance. Students exit/enter vehicles primarily around the western end of the loop. Parents then turn right at the end of the loop and either exit via Lincoln Street or Summer Street. Pre-K parents typically enter via the primary driveway and bypass the drop-off/pick-up loop and park curbside near the Pre-k building entrance. Following pick-up or drop-off, Pre-K parents will exit via Lincoln Street or Summer Street. Some parents were also observed entering the primary driveway, bypassing the loop and utilizing available parking along the exiting driveway to Lincoln Street. Parents would then park and walk to collect their children and then exit via Lincoln Street. Other parents were observed entering the site via the secondary entrance on Lincoln Street and utilizing available parking in that drive aisle. Parents would then park, collect their children and then exit via the Summer Street exit. It should be noted that the majority of parents utilized the pick-up/drop-off loop.

South of the building, a short spur drive aisle extends off the main internal road, providing access to parking designated for staff. This area also contains storage facilities, dumpsters, and terminates in a dead end with no through circulation other than a sidewalk that provides access to the Brooks Street play fields.

Figure 4. General On-Site Observations – Manchester Memorial Elementary School



Buses enter via the secondary entrance via Lincoln Street. Loading and unloading occurs to the southeast of the building, curbside along the main internal road. Buses exit via the Summer Street (Route 127) drive.

PARKING – LAYOUT, SUPPLY, AND DEMAND

The Manchester Memorial Elementary School campus provides approximately 99 formal parking spaces distributed across several on-site areas. In the middle of the pick-up/drop-off loop, there is parking available for visitors and electric vehicles (23 spaces). There are several accessible spaces as well. Parking throughout the rest of the site is intended for staff use, but some parents will park in these spots if they are available during drop-off/pick-up to retrieve their children from the school building.

Parking elsewhere on site is typically designated for staff. Off the north side of the pick-up/drop-off loop, there are head-in angled parking spaces (10 spaces). Head-in angled parking is also located along the southern side of the exit drive aisle to Lincoln Street (12 spaces) and the entrance drive aisle via the secondary Lincoln Street access point (13 spaces). A smaller parking lot is available just south of the secondary Lincoln Street access drive aisle (19 spaces). Additional head-in parking is located to the south side of the roadway spur that travels on the south side of the building (22 spaces).

Parking circulation is generally intuitive through the current layout. Crosswalks are generally present at key locations to facilitate safe crossings to/from parking areas. The only potential issue area is the head-in angled parking situated to the north of the pick-up/drop-off loop which is typically blocked by queued vehicles.

BUSSING

Students enrolled in grades K-5 who reside more than 2 miles from their neighborhood school qualify for district-paid transportation. Two buses and a few vans currently service the Manchester Memorial Elementary School. These buses generally drop students off between 8:05 – 8:15 AM during the drop-off period and depart the school between 2:50 – 3:00 PM during the PM pick-up period.

Buses access the campus via the southern Lincoln Street driveway, load and unload along the southeast side of the building, and exit via Summer Street (Route 127). During observations, it was noted that when buses were actively loading or unloading, internal blockages occurred that temporarily blocked parent vehicles attempting to exit via the Summer Street driveway. This congestion caused queues to extend back through the internal circulation area, limiting the ability of vehicles to exit via Lincoln Street as well. While these conditions typically dissipated quickly once bus operations concluded, they nonetheless contributed to short-term inefficiencies within the site.

Although bus loading and unloading operations are physically separated from parent loading and unloading activities, the bus area is situated along the departure route used by parent vehicles. As a result, parent circulation is indirectly affected by bus activity. For both safety and operational efficiency, it may be beneficial to designate a completely separate bus loading/unloading area that does not intersect the parent vehicle departure path. Such a configuration would improve circulation flow, reduce potential conflicts, and enhance overall site safety during peak drop-off and pick-up periods.

ON-SITE PEDESTRIAN AND BIKE INFRASTRUCTURE

Sidewalks, curb ramps, and crosswalks throughout the Manchester Memorial Elementary School site are generally in good condition and compliant with ADA accessibility standards. Internal pedestrian connections are well defined, and the site benefits from more modern design standards compared to Essex Elementary. Crosswalks are provided at key locations to safely facilitate pedestrian movement between parking areas and building entrances. An approximately 8-foot-wide sidewalk extends around the entire internal loop and continues along the western side of the main internal roadway, providing continuous and accessible circulation. Additional sidewalk spurs branch off from the main walkway to connect directly to school entrances, play areas, and other key destinations on-site. A sidewalk is also provided between the parking aisles east of the school, offering safe access across the lot and building entrances.

In addition, a pedestrian bridge spans over Lincoln Street, providing a grade-separated connection between the elementary school and the adjacent Manchester Memorial Middle/High School campus. This bridge allows safe pedestrian crossings of Lincoln Street, which carries higher traffic volumes during school peak periods.

Bicycle racks are provided along the eastern side of the building and near the northern side of the campus, adjacent to the pedestrian bridge and playground area, offering convenient and visible locations for students arriving by bike.

Despite the presence of these high-quality facilities, only limited walking and biking activity was observed at the time of the site visit, likely due to the heavy rain conditions during the observation period.

MORNING DROP-OFF OBSERVATIONS

Morning drop-off operations at Manchester Memorial Elementary School begin around 7:55 AM, when the first parent vehicles were observed accessing the site. This timing follows the dissipation of peak traffic associated with the nearby Manchester Memorial Middle/High School, located to the west along Lincoln Street. At approximately 7:39 AM, queues generated by the middle and high school extended southerly beyond the pedestrian bridge located just north of the elementary school's primary entrance, indicating that Lincoln Street was already operating under constrained conditions prior to the start of elementary school drop-off activity.

K–5 Parent Drop-Off

The primary parent drop-off activity occurs within the pick-up/drop-off loop adjacent to the school's main entrance, which operates in a one-way, counterclockwise pattern. Students are permitted to enter the building beginning at 8:05 AM, marking the onset of the main drop-off period. It should be noted that the pick-up/drop-off loop in total is about 500 feet, indicating that 20 vehicles could queue in this area. However, parents were not observed pulling all the way to the front of the loop. Most parents utilize the western edge of the loop adjacent to the main entrance for curbside unloading, while the southeastern side remains underutilized. This shortens the loop queue storage to about 365 feet (14 vehicles). Blue cones were observed east of the doorway, likely positioned to block the fire lane, which may contribute to the uneven distribution of vehicles along the curb.

By approximately 8:10 AM, the loop reached capacity, with vehicles queued back to the main internal road and one vehicle observed blocking the crosswalk at the northeastern end of the loop. As drop-off activity intensified, some parents bypassed the loop and parked temporarily in nearby spaces to escort students into the building, creating intermittent pedestrian–vehicle conflicts. By 8:13 AM,

queues had extended onto Lincoln Street in both directions, with maximum spillback observed at approximately 13 vehicles to the northwest and 16 vehicles to the southeast.

Off-site queuing along Lincoln Street during the morning drop-off presents several safety concerns.

- The horizontal curve located on Lincoln Street northwest of the school entrance significantly limits sight distance for drivers approaching queued vehicles along Lincoln Street. Motorists traveling south-eastbound toward the school have a restricted view of stopped or slowing traffic near the entrance until they are relatively close to it. This condition increases the potential for rear-end collisions, which may be more severe given the higher vehicle speeds observed along this corridor. In addition, impatient drivers were observed attempting to bypass the queue in both directions by entering the opposing travel lane, resulting in encroachment into oncoming traffic. These maneuvers substantially elevate the risk of sideswipe and head-on crashes. The safety concern is further exacerbated by speeding behavior observed in both directions, particularly among north-westbound drivers who tend to accelerate rapidly after passing queued traffic.

- Queued vehicles were frequently observed physically blocking the marked crosswalks near the school entrance or obstructing pedestrian visibility for those attempting to cross. This issue is compounded by bypassing vehicles, whose position within the opposing travel lane further limits their ability to detect pedestrians entering the crosswalk. The combination of blocked sight lines, obstructed crossings, and elevated vehicle speeds creates a high-risk environment for pedestrians, particularly during the busiest drop-off periods when both vehicular and pedestrian activity are at their peak.

- As north-westbound queues on Lincoln Street increased during the morning drop-off period, many vehicles exiting the site via the Lincoln Street driveway were observed making prohibited right turns toward the intersection of Lincoln Street and Summer Street. This maneuver appears to be a driver response to congestion, as motorists sought to bypass the northbound queue and avoid re-entering slow-moving traffic. However, the intersection of Lincoln Street at Summer Street exhibits limited sight distance due to its horizontal curvature and roadside vegetation, making these prohibited right turns particularly hazardous. The combination of noncompliance with posted restrictions, constrained visibility, and elevated vehicle speeds along Lincoln Street introduces additional safety and operational concerns for both exiting school traffic and general roadway users.

Pre-K Parent Drop-Off

Pre-K drop-off operations occur separately from the main K–5 loop. Parents park along the curb near the side entrance on the east side of the building, exit their vehicles, and walk their children to the door. This area is compact and quickly becomes congested, with limited space for circulation once multiple vehicles are present. Parents were observed walking around vehicles to open doors or crossing the internal drive to access the entrance. As a result, the Pre-K area presents several pedestrian and vehicle conflict points during peak activity, despite being physically separated from the K–5 loading zone.

Bus & Van Operations

Two school buses serve the Manchester Memorial Elementary School during morning drop-off. Buses enter the site via the southern Lincoln Street driveway, load and unload along the southeast side of the building, and exit via the Summer Street driveway. While bus operations are generally efficient, their presence temporarily constrains circulation for parent vehicles attempting to exit the site via

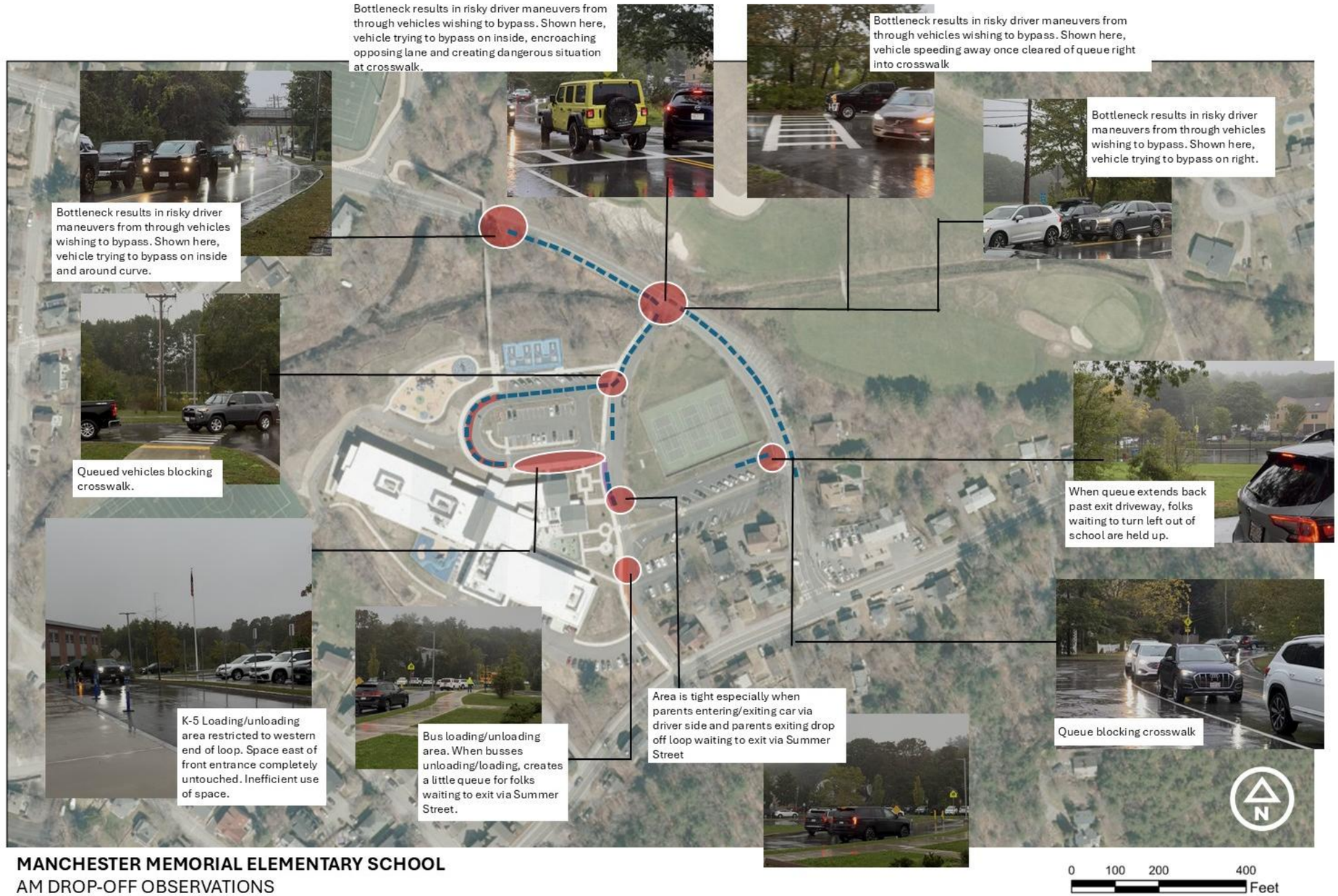
Summer Street. During loading and unloading, queues of parent vehicles were observed forming behind the buses, which in turn limited the ability of vehicles to exit via Lincoln Street. These conditions typically dissipate once buses depart but contribute to short-term inefficiencies during the 8:05 – 8:15 AM window.

Overall AM Conditions

By the time the first bell rang at 8:25 AM, several vehicles remained queued on-site, resulting in late arrivals for some students. Overall, morning operations at Manchester Memorial Elementary School are characterized by poorly utilized on-site queue capacity, external congestion influenced by adjacent school traffic, and overlapping movements between buses, Pre-K, and parent vehicles.

General AM drop-off observations are depicted in **Figure 5.**

Figure 5. AM Drop-Off Observations – Manchester Memorial Elementary School



MANCHESTER MEMORIAL ELEMENTARY SCHOOL
AM DROP-OFF OBSERVATIONS

AFTERNOON PICK-UP OBSERVATIONS

Afternoon pick-up at Manchester Memorial Elementary School begins around 2:50 PM. The start of elementary dismissal closely coincides with the afternoon release from the nearby Manchester Memorial Middle/High School, located just west along Lincoln Street. By approximately 2:15 PM, traffic associated with the Manchester Memorial Middle/High School had already backed up beyond the elementary school entrance, constraining access to the site. Conditions began to improve by about 2:25 PM, allowing elementary school parents to begin arriving around 2:28 PM.

K–5 Parent Drop-Off

The primary parent pick-up activity occurs within the pick-up/drop-off loop adjacent to the school's main entrance, which operates in a one-way, counterclockwise pattern. By 2:45 PM, the parent loop had reached full capacity, and by 2:49 PM, queues extended onto Lincoln Street, primarily to the northwest of the school. The longest observed queue occurred around 2:53 PM, when approximately 23 vehicles were stacked northwest of the school, extending nearly to the intersection of Lincoln Street at Vine Street.

Within the loop, the K–5 loading area occupied slightly more curb space than during the morning drop-off period. Younger students required additional time to load, and staff managed pick-up using a "platoon" system, essentially releasing small groups of students to the curb as parents arrived. Some parents exited their vehicles to assist their children, which temporarily slowed operations and contributed to dwell time at the curb. Despite these challenges, the coordinated staff system, including a staff member circulating the queue with a clipboard to record parent names for efficient student release, kept operations relatively organized.

- The off-site queuing observed during the afternoon period results in similar safety issues to those documented during the morning operations along Lincoln Street.
- Commuting vehicles were frequently observed bypassing queued traffic by entering the opposing travel lane, increasing the risk of sideswipe and head-on collisions, particularly given the higher operating speeds observed along this corridor.
- The queue forms along a horizontal curve west of the school entrance, meaning that approaching drivers from the northwest often cannot see the back of the queue until they are relatively close, heightening the potential for rear-end crashes.
- In addition, queued vehicles were observed physically blocking the crosswalks near the school entrance or obstructing sight lines for pedestrians attempting to cross. These visibility issues are further compounded by bypassing vehicles, whose position in the opposing lane limits their ability to detect pedestrians until they are already within the crossing area.
- Since the queue was primarily situated northwest of the school (i.e. no queue for left-turning vehicles to have to it in), most vehicles abided by the left-only restriction at the Lincoln street exit, but right-turning vehicles were still observed.

Pre-K Parent Pick-Up

Pre-K pick-up operations occur concurrently but in a separate area near the side entrance on the southeast side of the building. Many Pre-K parents park and walk to the door to collect their children. During pick-up, weaving movements were observed where Pre-K and K–5 parents exited simultaneously, creating conflict points within the internal circulation network. These overlapping maneuvers occasionally caused localized congestion and momentary standstills near the merge point with the main loop.

Bus and Van Operations

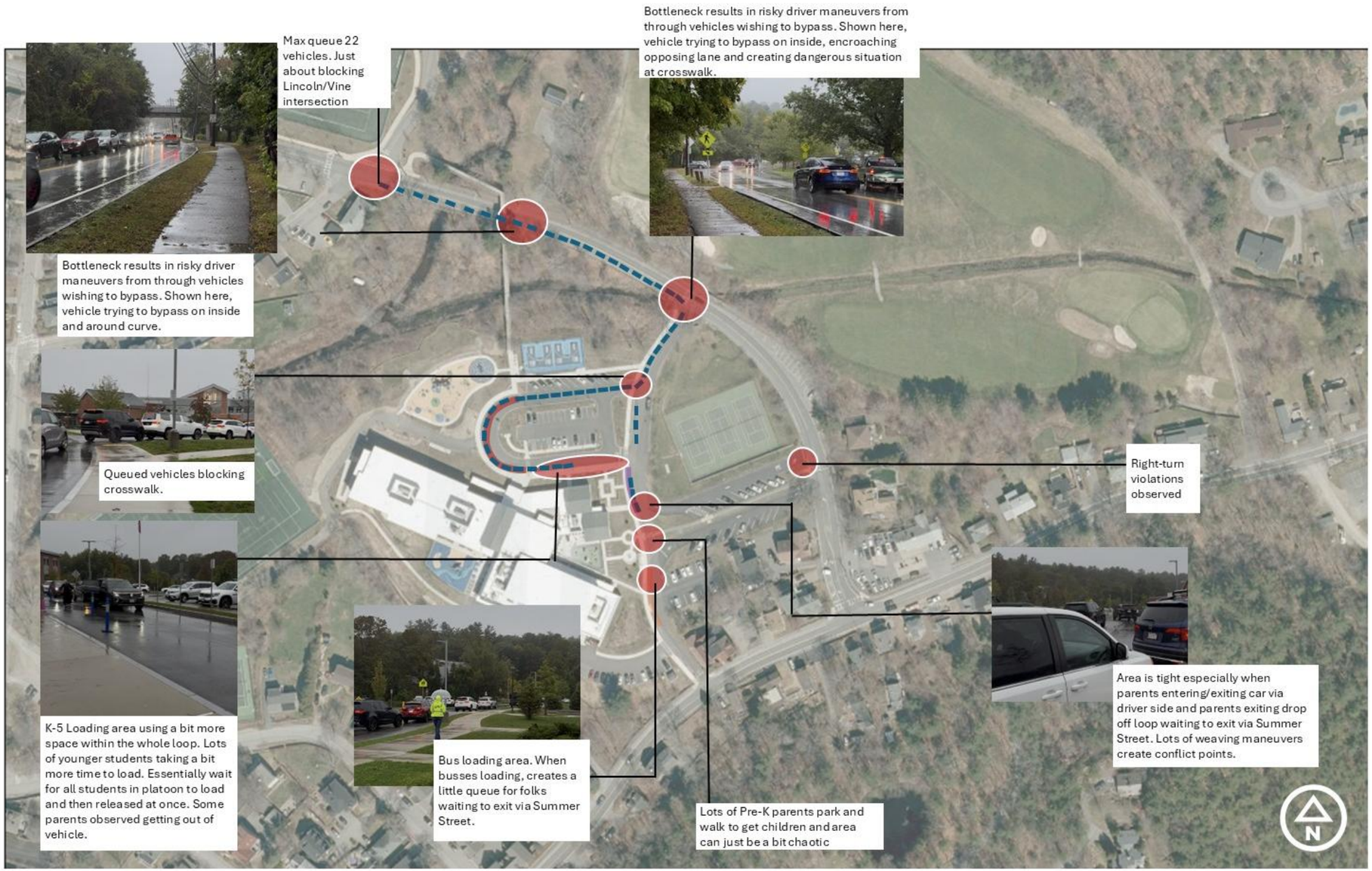
Buses and vans continue to load along the southeast side of the building, accessed via the southern Lincoln Street driveway and exiting via Summer Street. During the afternoon period, these operations temporarily blocked internal circulation for vehicles waiting to exit, creating short-term backups that dissipated once the buses departed. While bus and parent loading areas are physically separated, the bus activity still occurs along the primary departure route used by parent vehicles, resulting in short-term inefficiencies and increased potential for interaction between the two traffic streams.

Overall PM Conditions

By 3:03 PM, the afternoon queue was contained on-site and by 3:07 PM, the afternoon queue had completely dissipated. Compared to the AM, the PM appeared to operate better as off-site queues were primarily in the northwest direction only and better use of the pick-up/drop-off loop allowed more on-site storage.

General PM pick-up observations are depicted in **Figure 6.**

Figure 6. PM Pick-Up Observations – Manchester Memorial Elementary School



SURROUNDING ROADWAY NETWORK

Lincoln Street

Lincoln Street, within the vicinity of the school, is oriented generally in a southeast–northwest direction and is classified as a major collector under local jurisdiction. Lincoln Street provides connection between School Street to the northwest and Summer Street (Route 127) to the southeast.

Pavement width varies along its length. Southeast of the school, extending to its terminus at the intersection with Summer Street (Route 127), Lincoln Street measures approximately 34 feet curb-to-curb, consisting of 1-foot shoulders, 11-foot through travel lanes and a 10-foot turn lane. At the school, there is a northbound dedicated left-turn lane to facilitate turns into the secondary site driveway. Bi-directional travel is delineated via a double yellow centerline.

A 5-foot sidewalk, generally in good condition, is provided along the northeastern side of the roadway, separated from the travel way by a narrow 2- to 3-foot grass buffer. Granite curbs are located along both roadway edges. These conditions extend northwestward to the school's Lincon Street exit driveway, where the roadway starts to narrow considerably (dropping the turn lane). Northwest of the Lincon Street exit driveway, the curb-to-curb width reduces to approximately 26 feet, consisting of 2-foot shoulders and 11-foot travel lanes. The sidewalk and grass buffer continues along the northeastern side. No sidewalk is provided along the school side of Lincoln Street within the vicinity of the school, requiring school related pedestrians to cross Lincoln Street to access sidewalk facilities.

There are two midblock crossings along Lincoln Street within the vicinity of the school. One is located just north of the primary school entrance. The crossing has pedestrian curb ramps on both sides but detectable warning panels are available on the southwestern side only. The crosswalk has a solar powered Rectangular Rapid Flashing Beacon (signs provided for each direction) system that is activated via a pedestrian push-button. Sight distance for the crosswalk approaching from the northwest is limited due to the horizontal curve and vegetation. There is no advanced pedestrian warning signage.

The other midblock crossing is located just north of the secondary entrance of the school. Curb ramps are provided, and both have detectable warning panels present. The crosswalk has a solar powered Rectangular Rapid Flashing Beacon (signs provided for each direction) system that is activated via a pedestrian push-button. Sight distance for the crosswalk approaching from the northwest is slightly limited due to the horizontal curve and vegetation. There is no advanced pedestrian warning signage.

While no dedicated bicycle accommodations are present along Lincoln Street, there is "Share the Road" signage located right in front of the school.

Just north of the Lincoln Street/Summer Street intersection, there is a static 20 MPH School zone sign assembly indicating a 20 MPH zone "When Children are Present MON-FRI". A 20 MPH sign is provided for the south-eastbound direction west of the middle/high school. "SLOW SCHOOL ZONE" pavement markings are stenciled on the pavement in both directions approaching the crosswalk at the primary entrance of the elementary school.

Land use along Lincoln Street consists primarily of the Manchester Memorial Elementary School and the adjacent Manchester Memorial Middle/High School, located less than 1,000 feet north of the elementary campus. Beyond these institutional uses, the surrounding area is predominantly residential in character, consisting of single-family homes with driveways that directly access Lincoln Street.

Lincoln Street functions as a key connector through Manchester and is frequently used as a cut-through route linking Route 127 (Summer Street) to Route 128 via School Street. As a result, the

corridor carries higher traffic volumes and experiences a greater proportion of commuter traffic compared to the local streets surrounding the Essex Elementary School site. During off-peak periods, speeding is prevalent along Lincoln Street, particularly near the horizontal curve west of the elementary school entrance. The combination of higher vehicle speeds and overall traffic intensity makes the corridor less suitable for accommodating additional access or circulation demands associated with an expanded school site.

Summer Street (Route 127)

Summer Street (Route 127), within the vicinity of the school, is oriented generally in an east-west direction and is classified as a minor arterial under MassDOT jurisdiction. Summer Street (Route 127) provides connections between Beverly to the southwest and Gloucester to the northeast.

Curb-to-curb width along Summer Street is fairly consistent within the vicinity of the site at around 28 feet, providing 2-foot shoulders and 12-foot lanes in each direction. Bi-directional travel is delineated via a double yellow centerline. A five-foot sidewalk, generally in good condition, is provided along the northern side of the roadway. West of Lincoln Street, sidewalk is delineated via a granite curb only, while east of Lincoln Street, there is a 2- to 3-foot grass buffer separating vehicle and pedestrian travel.

There are no crosswalks servicing the school along Summer Street.

While no dedicated bicycle accommodations are present along Summer Street, there is “Share the Road” signage present.

Both just east and west of Lincoln Street, there is school zone ahead signage provided along Summer Street alerting drivers to the school’s location.

Land use along Summer Street within the vicinity of the site is predominantly residential, but there are several businesses, such as a gas station in the northeast corner of the intersection of Lincoln Street/Summer Street (Route 127) and a physical therapy business just west of the elementary school’s Summer Street exit.

Summer Street (Route 127) functions as a regional commuter route providing access between downtown Manchester, Route 128, and neighboring communities along the North Shore. The corridor carries moderate traffic volumes and generally maintains steady travel speeds throughout the day. Given its role as a key regional connector, it is important to minimize potential disruptions to commuter traffic flow when considering site access modifications or operational changes related to the school. Any future design interventions along Route 127 should balance the need for safe and efficient school access while maintaining consistent regional mobility along this corridor, and would require coordination with MassDOT, given the agency’s jurisdictional ownership of the roadway.

Lincoln Street at Summer Street (Route 127)

Southeast of the school, Lincoln Street terminates at the intersection of Summer Street (Route 127). Lincoln Street intersects Summer Street from the north to form an unsignalized, three-way intersection. Lincoln Street is stop sign controlled while Summer Street is free-flowing. A single general-purpose travel lane is provided for each Summer Street approach. The Lincoln Street approach provides a dedicated left-turn lane and a dedicated right-turn lane.

Sidewalk is available along the northern side of Summer Street and the northeastern side of Lincoln Street. A crosswalk is provided along the Lincoln Street approach. Curb ramps are provided but only the eastern one has a detectable warning panel.

The built environment at this intersection, specifically the presence of a residence, vegetation, and fencing in the northeast corner, as well as significant vegetation to the east, significantly restricts sight distance for drivers on Lincoln Street. Due to these limited sight lines and associated safety concerns, vehicles exiting the school via the Lincoln Street driveway are restricted to left turns only to prevent additional right-turn movements toward this constrained intersection. These obstructions make it very difficult for Summer Street motorists to see exiting Lincoln Street vehicles.

Lincoln Street at MMES Primary Entrance

The Manchester Memorial Elementary School (MMES) Primary Entrance intersects Lincoln Street from the southwest, forming an unsignalized three-way intersection. Both Lincoln Street approaches provide a single general-purpose travel lane, while the MMES entrance operates one-way away from the intersection and therefore has no inbound approach. As previously noted, a sidewalk is available along the northern side of the primary entrance drive and the northeastern side of Lincoln Street, with a marked crosswalk with an RRFB provided just north of the intersection.

The intersection is located along a horizontal curve and experiences notable queuing during peak school drop-off and pick-up periods as parents wait to turn into the school entrance. During off-peak hours, operations are generally unimpeded. However, peak-period queuing can lead to driver frustration and instances of speeding once vehicles clear the queue, creating potential safety concerns. Additionally, during the morning peak, vehicles traveling in both directions have been observed attempting to bypass queued traffic, despite the roadway not being wide enough to safely accommodate four vehicles side by side.

Lincoln Street at MMES Secondary Entrance

The Manchester Memorial Elementary School (MMES) Secondary Entrance intersects Lincoln Street from the west, forming an unsignalized three-way intersection. The south-eastbound Lincoln Street approach provides a single general-purpose travel lane while the north-westbound approach provides a through travel lane and a dedicated left-turn lane. The MMES entrance operates one-way away from the intersection and therefore has no inbound approach. Lane assignment signage along the Lincoln Street north-westbound approach is provided. As previously noted, a sidewalk is available along the northern side of the secondary entrance drive and the northeastern side of Lincoln Street, with a marked crosswalk with an RRFB provided just north of the intersection.

The intersection sits along a horizontal curve with vegetation on the inside of the curve that slightly limits sight distance, making it difficult for northwest-bound left-turning vehicles to see approaching southeast-bound vehicles, and vice versa.

Lincoln Street at MMES Exit Drive

The Manchester Memorial Elementary School (MMES) Exit intersects Lincoln Street from the west, forming an unsignalized three-way intersection. Both Lincoln Street approaches provide a single general-purpose travel lane and are free-flowing, while the MMES exit consists of a dedicated left-turn lane only under stop control. As previously noted, a sidewalk is available along the southern side of the exit drive and the northeastern side of Lincoln Street, with a marked crosswalk with an RRFB provided just south of the intersection.

The intersection sits along a horizontal curve with vegetation on the inside of the curve that slightly limits sight distance, making it difficult for exiting vehicles to see approaching southeast-bound vehicles, and vice versa. Despite signage restricting right turns and a curb deflection designed to guide drivers to turn left, right-turn movements are frequently observed when queues from the primary entrance extend back to this intersection.

Summer Street (Route 127) at MMES Exit Drive

The Manchester Memorial Elementary School (MMES) Exit intersects Summer Street (Route 127) from the north, forming an unsignalized three-way intersection. Both Summer Street approaches provide a single general-purpose travel lane and are free-flowing, while the MMES exit consists of a shared left-/right-turn lane under stop control. Sidewalk is provided along the western side of the exit drive and the northern side of Summer Street. A crosswalk is provided along the exit drive approach.

The exit drive is relatively constrained, with a building located immediately to the east and fencing to the west, resulting in limited sight distance. Drivers must pull forward into Summer Street to adequately view oncoming traffic. While speed data are not currently available, anecdotal observations suggest that Summer Street experiences higher traffic volumes at moderate travel speeds, which may contribute to driver hesitation and operational inefficiencies at the school exit.

SAFETY ASSESSMENT

Collision data for the immediate area surrounding the Manchester Memorial Elementary School were obtained from the *MassDOT IMPACT Crash Data Portal* for the latest complete five years (2020-2024). A review of available crash data indicates that three reported crashes occurred at the intersection of Lincoln Street and Summer Street (Route 127) during the most recent analysis period. Of these, one resulted in a non-fatal injury and two involved property damage only. One of the property-damage-only crashes occurred around 3:30 PM, and the injury crash occurred at approximately 1:00 PM, both within typical school operating hours, suggesting a possible connection to school-related traffic activity. Two of the crashes were angle-type collisions, while the third was a single-vehicle crash.

An additional non-fatal injury crash was reported at the Summer Street intersection with the school exit driveway around 8:25 AM, which also likely correlates with school drop-off traffic. This incident was classified as an angle-type collision involving a vehicle exiting the school driveway and a through vehicle traveling along Summer Street. Collectively, these crashes highlight the limited sight distance and operational challenges at the Lincoln Street and Summer Street intersection and reinforce the rationale for restricting right-turn movements from the school's Lincoln Street driveway.

Although the overall crash frequency at this location is relatively low, nearly half of the reported incidents involved injuries, and several occurred during peak school operating hours, indicating a probable relationship to school-related traffic conditions. Therefore, care should be taken to minimize any potential increase in crash risk associated with future changes to traffic patterns, including those related to increased school enrollment or expanded site activity.

SITE OPPORTUNTITIES AND CONSTRAINTS

PROS

- Manchester Memorial benefits from newer infrastructure, including well-maintained sidewalks, ramps, and crosswalks that enhance accessibility and pedestrian safety.

- The site features a generally organized internal circulation pattern and is located in close proximity to the middle and high schools, which may be convenient for families with students across multiple grade levels.

- The school ground provides space for potential reconfiguration or future operational improvements.

CONS

- The school's proximity to the middle and high schools also presents operational challenges, as afternoon traffic from those campuses frequently backs up past the elementary school entrance, contributing to congestion and delay.
- Lincoln Street experiences higher commuter volumes and frequent speeding, particularly around the horizontal curve near the site entrance, creating potential safety concerns.
- Internal queuing conflicts between K-5, Pre-K, and bus loading operations contribute to congestion and reduce overall circulation efficiency and safety.

CRITICAL NEEDS

Priority improvements for the Manchester Memorial Elementary site include:

- Enhancing loading and unloading efficiency and reducing conflicts at key points within the circulation loop.
- Increasing on-site queuing capacity to help mitigate backups extending onto Lincoln Street.
- Implementing "Do Not Block Intersection" pavement markings to maintain clear access at critical points.
- Enforcing the existing no-right-turn restriction at the Lincoln Street exit due to limited sight distance at the Lincoln Street / Summer Street intersection.
- Trimming vegetation near school entrances/exit to improve sight lines.
- Relocating the bus load/unloading area to reduce internal blockages and exploring staggered release times or separate loops for Pre-K and K-5 students to minimize conflicts.
- Expanding on-site parking to better accommodate Pre-K parent activity and reduce circulation pressure within the loop.

SITE C – APPLE STREET SITE

EXISTING CONDITIONS

No school currently exists along Apple Street; therefore, site observations were not conducted. Instead, a desktop review of roadway conditions was performed.

SURROUNDING ROADWAY NETWORK

Apple Street is functionally classified as a local road under local jurisdiction. It connects Western Avenue (Route 22) to the northwest with Southern Avenue to the southeast, which ultimately provides access to the Route 128 on-ramps. Although classified as a local roadway, Apple Street is frequently used as a cut-through route. The roadway is relatively narrow (23' pavement width) and bordered by roadside obstructions such as trees, utility poles, fences, and stone walls. It also features both horizontal and vertical curvature, resulting in areas of limited visibility.

There are no pedestrian or bicycle accommodations along the corridor. Land use is primarily residential on the northern side, with conservation woodland to the south. Given these constraints, siting a school along Apple Street would require extensive off-site improvements, including roadway widening, sidewalks, and intersection enhancements, to safely and efficiently accommodate school traffic, pedestrian activity, and access needs.

SAFETY ASSESSMENT

Collision data along Apple Street were obtained from the *MassDOT IMPACT Crash Data Portal* for the latest complete five years (2020-2024). A review of available crash data indicates that eleven reported crashes occurred along the Apple Street corridor during the most recent analysis period. All crashes resulted in property damage only. Of the crashes reported within the broader study area, four involved speed-related driver contributing factors. Crash types were predominantly single-vehicle collisions (nine), with two sideswipe (opposite direction) crashes also reported. The prevalence of single-vehicle and sideswipe collisions, coupled with multiple speed-related contributing factors, suggests that excessive travel speeds and constrained roadway geometry may be influencing driver behavior and contributing to crash risk.

SITE OPPORTUNTITIES AND CONSTRAINTS

PROS

- The Apple Street site presents a unique opportunity to design and construct a new school campus from the ground up, allowing for a purpose-built layout that meets modern standards for access, circulation, parking, and safety.
- The blank-slate nature of the site enables flexibility in designing efficient vehicular, bus, and pedestrian circulation patterns that minimize internal conflicts and meet current ADA, Complete Streets, and Safe Routes to School guidelines.
- With appropriate site planning, the school could be designed to incorporate new pedestrian and bicycle infrastructure, addressing gaps that currently exist in the surrounding area.

CONS

- Apple Street currently functions as a cut-through route between Western Avenue (Route 22) and Southern Avenue, resulting in higher-than-typical local traffic volumes and speeding behavior.
- The roadway is narrow, with limited shoulders and numerous roadside obstructions (including trees, utility poles, fences, and stone walls), creating safety and visibility concerns for both vehicles and potential pedestrians.
- Horizontal and vertical curvature along the corridor further limits sight distance in several locations.
- There is no existing pedestrian or bicycle infrastructure along Apple Street, and no school currently exists at this location, meaning substantial off-site improvements would be required to provide safe multimodal access.
- Past crash history indicates multiple incidents related to speeding, reinforcing safety concerns for introducing school-related traffic without significant roadway improvements.

CRITICAL NEEDS

Priority considerations for the Apple Street site include:

- Costly, comprehensive roadway reconstruction to address alignment, width, and roadside safety concerns.

- Installation of continuous sidewalks, crosswalks, and bicycle accommodations to provide safe non-motorized access to the site.
- Traffic calming measures such as speed feedback signage, chicanes, or raised crossings to reduce vehicle speeds and improve safety for all users.
- Intersection improvements at both Western Avenue and Southern Avenue to manage increased school-related traffic volumes and ensure safe access and egress.
- Coordination with local and state agencies to ensure that off-site roadway improvements are incorporated into any site development plan.

Based on this review, siting a school along Apple Street would require extensive off-site improvements, including roadway widening, sidewalks, and intersection enhancements, to safely and efficiently accommodate school traffic, pedestrian activity, and access needs, and therefore, is not recommended from a traffic perspective.

ENROLLMENT IMPLICATIONS

Enrollment levels directly influence vehicular trip generation, on-site queuing during student drop-off and pick-up periods, and overall parking demand. To evaluate how future enrollment could affect operations, several enrollment options have been identified and analyzed in relation to site capacity and circulation efficiency.

At present, Essex Elementary (Site A) accommodates 215 students and 43 employees, 37 of whom are full-time staff, representing a 0.86 full-time to total employee ratio. Manchester Memorial Elementary (Site B) currently accommodates 305 students and 68 employees, 57 of whom are full-time staff, representing a 0.84 full-time to total employee ratio. Full-time employees are assumed to be present during both the AM drop-off and PM pick-up periods, contributing to trip generation during these peak hours. Part-time employees, by contrast, are expected to arrive and depart intermittently throughout the day, influencing parking turnover but not substantially contributing to queuing demand.

Three enrollment options were identified to assess how varying school sizes could impact circulation, queuing, and parking demand:

- Option 1: 165 students (Essex)
- Option 2: 250 students (Essex)
- Option 3: 515 students (Manchester)

While future staffing levels are not yet known, estimates were developed based on existing student-to-staff ratios at the current schools. Using these ratios:

- A 165-student school is projected to have approximately 33 staff members, 28 of whom are full-time.
- A 250-student school is projected to have approximately 50 staff members, 43 of whom are full-time.
- A 515-student school is projected to have approximately 115 staff members, 97 of whom are full-time.

These projections provide a consistent baseline for evaluating future trip generation, AM and PM peak-hour queuing, and parking demand. The resulting data will inform whether modifications to site access, parking supply, or circulation design are necessary to accommodate future enrollment growth.

TRIP GENERATION

In order to determine queue storage needs, one must first understand the number of vehicles expected to access the site as a result of the enrollment options. During the feasibility phase of the analysis, project-generated vehicle trips are estimated based on trip rates contained in the Institute of Transportation Engineers (ITE) Trip Generation Manual.

Trip generation rates contained in the Institute of Transportation Engineers (ITE) publication Trip Generation, 11th Edition were used to estimate the number of trips that would be generated by an elementary school of each enrollment option during the weekday AM drop-off, weekday afternoon pick-up, and weekday PM peak hour. Land Use Code (LUC) 520 – Elementary School was utilized to develop trip estimates for the different enrollment options.

- 165 students K-3
- 250 students K-5
- 515 students K-5

Essex Elementary Site

Based on ITE data, the current 215-student K-5 school generates approximately 159 vehicle trips (86 entering and 73 exiting) during the weekday AM peak hour, 95 vehicle trips (44 entering and 51 exiting) during the weekday afternoon pick-up peak hour, and 34 vehicle trips (16 entering and 18 exiting) during the weekday PM commuter peak hour

Based on ITE data, a 165-student K-3 school would generate approximately 122 vehicle trips (66 entering and 56 exiting) during the weekday AM peak hour, 73 vehicle trips (33 entering and 39 exiting) during the weekday afternoon dismissal peak hour, and 26 vehicle trips (12 entering and 14 exiting) during the weekday PM commuter peak hour. A 165-student enrollment represents a decrease in vehicle trips accessing the site. Therefore, it can be expected that queue lengths will be shorter in this enrollment option.

Based on ITE data, a 250-student K-5 school would generate approximately 185 vehicle trips (100 entering and 85 exiting) during the weekday AM peak hour, 110 vehicle trips (51 entering and 59 exiting) during the weekday afternoon pick-up peak hour, and 40 vehicle trips (18 entering and 22 exiting) during the weekday PM commuter peak hour. A 250-student enrollment represents an increase in vehicle trips accessing the site. Therefore, it can be expected that queue lengths will be longer in this enrollment option.

ITE Trip Generation rates for each enrollment option are depicted in Table 1. Table 1 also shows the net increase of trips for each enrollment option as some traffic already exists at the Essex Elementary School. As shown, a 165-student enrollment represents a net decrease and a 250-student enrollment represents a modest increase in trip generation as compared to existing conditions.

TABLE 1
Trip Generation Rates Related to Essex Elementary Enrollment Options

Time Period / Direction	Existing EES (215 Students) [a]	EES Enrollment Option (165 Students) [b]	Net Increase in Trips [c]	EES Enrollment Option (250 Students) [d]	Net Increase in Trips [e]
Weekday Daily	488	375	-113	568	80
Weekday AM:					
Enter	86	66	-20	100	14
Exit	73	56	-17	85	12
Total	159	122	-37	185	26
Weekday Dismissal (Pick-Up):					
Enter	44	33	-11	51	7
Exit	51	39	-12	59	8
Total	95	73	-22	110	15
Weekday PM:					
Enter	16	12	-4	18	2
Exit	18	14	-4	22	4
Total	34	26	-8	40	6

[a] Based on ITE Trip Generation rates for LUC 520 (Elementary School) based 215 students.

[b] Based on ITE Trip Generation rates for LUC 520 (Elementary School) based 165 students.

[c] Represents increase number of trips compared to existing conditions for 165 student enrollment.

[d] Based on ITE Trip Generation rates for LUC 520 (Elementary School) based 250 students.

[e] Represents increase number of trips compared to existing conditions for 250 student enrollment.

Manchester Memorial Site

Based on ITE data, and as depicted in Table 2, the current 305-student K-5 school generates approximately 226 vehicle trips (122 entering and 104 exiting) during the weekday AM peak hour, 134 vehicle trips (62 entering and 72 exiting) during the weekday afternoon pick-up peak hour, and 49 vehicle trips (22 entering and 26 exiting) during the weekday PM commuter peak hour

Based on ITE data, a 515-student K-5 school would generate approximately 381 vehicle trips (206 entering and 175 exiting) during the weekday AM peak hour, 227 vehicle trips (104 entering and 122 exiting) during the weekday afternoon dismissal peak hour, and 64 vehicle trips (29 entering and 35 exiting) during the weekday PM commuter peak hour. A 515 student enrollment represents an increase in vehicle trips accessing the site. Therefore, it can be expected that queue lengths will be longer in this enrollment option.

TABLE 2
Trip Generation Rates Related to Manchester Memorial Elementary Enrollment Options

Time Period / Direction	Existing MMES (305 Students) [a]	MMES Enrollment Option (515 Students) [b]	Net Increase in Trips [c]
Weekday Daily	692	1169	477
Weekday AM:			
Enter	122	206	84
Exit	104	175	71
Total	226	381	155
Weekday Dismissal (Pick-Up)_:			
Enter	62	104	43
Exit	72	122	50
Total	134	227	92
Weekday PM:			
Enter	22	38	15
Exit	26	44	18
Total	49	82	33

[a] Based on ITE Trip Generation rates for LUC 520 (Elementary School) based 305 students.

[b] Based on ITE Trip Generation rates for LUC 520 (Elementary School) based 515 students.

[c] Represents increase number of trips compared to existing conditions for 515 student enrollment.

ANTICIPATED QUEUING

Trip generation rates were applied to estimate potential queuing during the PM pick-up period, which typically represents the worst-case operational condition, as most parents arrive prior to pick-up and remain on site until students are released. This pre-dismissal arrival pattern often results in queues extending onto surrounding roadways, where vehicles block driveways or occupy travel lanes, creating disruptions to local commuting traffic and introducing potential safety concerns for both motorists and pedestrians.

For the purpose of this feasibility study, PM entering trips were assumed to primarily consist of parents arriving to pick up their children. Basic queuing theory calculations were used to estimate the total queue storage area required to accommodate the anticipated number of parent pick-up vehicles for

each enrollment option. These calculations assumed that the majority of parents would arrive prior to dismissal, which was consistent with field observations conducted at both the Essex and Manchester sites.

The pick-up queue storage requirement consists of two components: (1) a storage area for parents waiting in line prior to student release and (2) a loading/unloading zone where active student pick-up occurs. For efficient and safe operations, the *Safe Routes to School Guide for Student Drop-Off and Pick-Up* recommends that three to four vehicles be loaded or unloaded at any given time. However, both study sites are currently utilizing a six-vehicle loading/unloading zone, which was reflected in the queuing analysis.

Assuming a single queue with six active loading spaces ("servers"), an arrival rate of 0.8 to 2.6 vehicles per minute over a ten-minute post-dismissal window (depending on enrollment scenario), and a service rate of two minutes per vehicle fleet, maximum queues (in vehicles) were estimated for each enrollment option. Typically, approximately 22 feet per vehicle is used to calculate the necessary length to plan for queue storage. Table 3 depicts maximum queues in terms of vehicles and feet for each enrollment option.

TABLE 3
Estimated Maximum Queue Lengths per Enrollment Option

Site	Enrollment	Maximum Queue (Vehicles)	Maximum Queue (feet)
Essex	215 (Current)	33	726
Essex	165	25	550
Essex	250	38	836
Manchester	305 (Current)	47	1034
Manchester	515	78	1716

The layout of each potential school site was reviewed to assess its ability to provide a sufficient queue storage area for each of the enrollment options based on the calculations described above. More discussion is included in the Site / Enrollment Alternatives Evaluation section of the report.

PARKING DEMAND

Each enrollment scenario also generates varying parking demands, which is an important factor in evaluating the suitability of each site. Ensuring that each alternative provides sufficient parking to meet projected needs is essential to maintaining safe and efficient operations during both school hours and special events.

ITE Parking Data

GPI utilized parking demand generation rates contained in the ITE publication Parking Generation, 6th Edition[1] to estimate the potential parking demand generated by each enrollment option based on LUC 520 (Elementary School). Parking demand was estimated based on both number of students and number of staff members. As noted previously, while future staffing levels are not yet known, estimates were developed using current student-to-staff ratios at the existing schools:

- A 165-student school is projected to have approximately 33 staff members, 28 of whom are full-time.

[1] *Parking Generation Manual, 6th Edition*; Institute of Transportation Engineers; October 2023.

- A 250-student school is projected to have approximately 50 staff members, 43 of whom are full-time.
- A 515-student school is projected to have approximately 115 staff members, 97 of whom are full-time.

For conservative purposes, parking generation rates based on the total number of staff members were utilized as they are higher than observed conditions.

TABLE 4
Parking Demand Rates Related to Essex Elementary Enrollment Options

Enrollment Condition	Existing (215 Student Enrollment)		Projected (165 Student Enrollment)		Projected (250 Student Enrollment)	
	Based on 215 K-5 Students [a]	Based on 43 Staff [b]	Based on 165 K-3 Students [a]	Based on 33 Staff [c]	Based on 250 K-5 Students [a]	Based on 50 Staff [d]
Parking Demand Rate (per student/staff)	0.14	1.18	0.14	1.18	0.14	1.18
Parking Demand	30	51	23	39	35	59

[a] Based on ITE Parking Demand Generation rates for LUC 520 (Elementary School) based on number of students.
[b] Based on ITE Parking Demand Generation rates for LUC 520 (Elementary School) based on number of staff. Staff numbers obtained from school website information.
[c] Based on ITE Parking Demand Generation rates for LUC 520 (Elementary School) based on number of staff. The projected number of staff was estimated by applying the existing student-to-staff ratio to the projected student enrollment.
[d] Based on ITE Parking Demand Generation rates for LUC 520 (Elementary School) based on number of staff. Staff numbers obtained from school website information. The projected number of staff was estimated by applying the existing student-to-staff ratio to the projected student enrollment.

TABLE 5
Parking Demand Rates Related to Manchester Memorial Elementary Enrollment Options

Enrollment Condition	Existing (305 Student Enrollment)		Projected (515 Student Enrollment)	
	Based on 305 K-5 Students [a]	Based on 68 Staff [b]	Based on 515 K-3 Students [a]	Based on 115 Staff [c]
Parking Demand Rate (per student/staff)	0.14	1.18	0.14	1.18
Parking Demand	43	81	72	115

[a] Based on ITE Parking Demand Generation rates for LUC 520 (Elementary School) based on number of students.
[b] Based on ITE Parking Demand Generation rates for LUC 520 (Elementary School) based on number of staff. Staff numbers obtained from school website information.
[c] Based on ITE Parking Demand Generation rates for LUC 520 (Elementary School) based on number of staff. The projected number of staff was estimated by applying the existing student-to-staff ratio to the projected student enrollment.

As shown in Tables 4 and 5, the parking demand rates based on number of staff members resulted in higher parking demand estimates than based on number of students; therefore, the parking demand

rates based on staff were utilized to provide the most conservative (worse case) estimate of the potential parking demand generated by each of the enrollment options.

Based on ITE information, the greatest parking demand for the Essex site alternatives is 59 spaces, which the site already provides, as shown in Table 4. The greatest parking demand for the Manchester site is 115 spaces, which is greater than the existing spaces on site by 16, as shown in Table 5. It should be noted that during the site observations existing parking was approximately 50% and 61% utilized at the Essex and Manchester Memorial Elementary schools, respectively.

The detailed parking demand calculation worksheets are included in the Attachments.

It should be noted that the ITE parking demand data and methodology only includes vehicles that are in designated spaces, not queued vehicles that are associated with student pick-up or drop-off. This is because pick-up/drop-off vehicles are transient and do not occupy parking spaces for an extended duration. Parking demand, by contrast, reflects sustained use, such as staff or long-term visitor parking, and should be evaluated independently of short-term circulation activity.

SITE / ENROLLMENT ALTERNATIVES EVALUATION

Each site/enrollment alternative was evaluated using six key criteria related to infrastructure, accessibility, safety, and operational efficiency. To facilitate consistent comparison across alternatives, each criterion was assigned a qualitative rating based on how each proposed design is expected to perform relative to existing conditions.

Ratings range from Highly Advantageous to Highly Disadvantageous, as defined below:

- **Highly Advantageous:** The proposed design represents a substantial improvement over existing conditions, addressing key deficiencies and significantly enhancing operational safety, access, and efficiency.
- **Advantageous:** The proposed design provides a moderate improvement over existing conditions, offering measurable benefits with only minor residual issues.
- **Neutral:** The proposed design would perform similarly to existing conditions, maintaining current levels of access, safety, and efficiency with no major improvements or degradations.
- **Disadvantageous:** The proposed design would worsen existing conditions in some areas, introducing new operational or safety concerns that would require mitigation.
- **Highly Disadvantageous:** The proposed design would significantly worsen existing conditions, creating substantial operational, safety, or access challenges that may not be easily resolved through design refinement.

The rationale for assigning each rating under the six evaluation categories is summarized in the following sections.

INFRASTRUCTURE

Assesses roadway conditions, access points, traffic control, and integration with the surrounding network. In general, schools located on local or low-speed roadways are considered more favorable than those located on regional commuting routes, as they experience lower traffic volumes and fewer conflicts with through traffic.

- **Highly Advantageous:** The proposed design substantially improves access, roadway geometry, and circulation efficiency compared to existing conditions.
- **Advantageous:** The proposed design improves access and circulation but requires minor off-site enhancements.
- **Neutral:** The proposed design maintains existing access and circulation patterns without major improvement or degradation.
- **Disadvantageous:** The proposed design introduces new access challenges or operational inefficiencies that degrade overall performance.
- **Highly Disadvantageous:** The proposed design creates severe access limitations or conflicts that significantly reduce operational functionality.

WALKABILITY

Evaluates pedestrian and bicycle accommodations, crossings, and connectivity to surrounding neighborhoods. Schools that allow a greater portion of the student population to walk or bike to school are considered more favorable than those that require cross-town travel, as consolidation or relocation may reduce the number of students within walking distance and increase reliance on vehicle trips.

- **Highly Advantageous:** The proposed design introduces new or significantly improved pedestrian and bicycle infrastructure, greatly enhancing safety and accessibility.

- **Advantageous:** The proposed design moderately improves pedestrian facilities, such as upgraded sidewalks or safer crossings.
- **Neutral:** The proposed design maintains existing pedestrian facilities with no substantial improvements or degradation.
- **Disadvantageous:** The proposed design reduces pedestrian safety or accessibility by introducing new conflicts or barriers.
- **Highly Disadvantageous:** The proposed design eliminates or severely impairs pedestrian and bicycle access compared to existing conditions.

SAFETY

Examines anticipated changes in crash potential, conflict points, and overall operational safety for all users. Schools located in areas with less frequent and less severe crash histories are considered more favorable than those along corridors with higher crash frequencies or more severe collision patterns, as baseline roadway safety directly influences school access and overall operational risk.

- **Highly Advantageous:** The proposed design significantly enhances safety by reducing conflict points and improving visibility, crossings, or traffic control.
- **Advantageous:** The proposed design moderately improves safety through improved organization or targeted upgrades.
- **Neutral:** The proposed design performs comparably to existing conditions with no major safety benefit or detriment.
- **Disadvantageous:** The proposed design introduces additional conflicts or risks relative to existing conditions.
- **Highly Disadvantageous:** The proposed design substantially increases safety risks or creates unmitigated high-conflict conditions.

BUSSING EFFICIENCY

Assesses bus routing, loading/unloading areas, and interactions with parent traffic. Schools located within neighborhood contexts are generally preferred over those requiring cross-town travel, as they reduce the number of students dependent on bus service. Sites that require district-wide consolidation increase the number of bus trips, extend student travel times, require larger on-site bus loops, and place additional strain on bus availability and driver resources, which are often limited and costly.

- **Highly Advantageous:** The proposed design provides a dedicated, efficient, and conflict-free bus circulation system with ample storage and maneuverability.
- **Advantageous:** The proposed design improves bus operations or separation but retains some minor conflicts or space constraints.
- **Neutral:** The proposed design maintains existing bus operations with no significant changes.
- **Disadvantageous:** The proposed design reduces bus efficiency or increases conflicts with parent traffic.
- **Highly Disadvantageous:** The proposed design lacks defined bus facilities or creates severe operational and safety conflicts.

NEIGHBORHOOD TRAFFIC IMPACT

Evaluates the extent to which school-related traffic affects adjacent roadways and neighborhood congestion, and the extent to which pick-up/drop-off queues spill onto adjacent roadways.

- **Highly Advantageous:** The proposed design substantially reduces off-site queuing and neighborhood congestion compared to existing conditions.

- **Advantageous:** The proposed design moderately improves traffic flow or reduces localized impacts.
- **Neutral:** The proposed design performs similarly to existing conditions with no major change in neighborhood impacts.
- **Disadvantageous:** The proposed design increases queuing or congestion along adjacent streets.
- **Highly Disadvantageous:** The proposed design causes significant off-site queuing or congestion that impairs neighborhood traffic flow and safety.

ADEQUATE PARKING

Assesses whether the site can accommodate projected parking demand and support safe circulation within parking areas.

- **Highly Advantageous:** The proposed design provides ample, well-organized parking that exceeds projected demand and minimizes conflicts.
- **Advantageous:** The proposed design meets projected demand with modest improvements in organization or accessibility.
- **Neutral:** The proposed design provides parking capacity similar to existing conditions with minimal change in efficiency.
- **Disadvantageous:** The proposed design provides insufficient parking or increases internal circulation conflicts.
- **Highly Disadvantageous:** The proposed design results in significant parking shortages or unsafe configurations that degrade operations.

This framework allows each alternative to be evaluated consistently relative to existing conditions at both the Essex and Manchester sites. As previously noted, the Apple Street alternatives were removed from consideration due to the extensive off-site and on-site improvements that would be required to feasibly site a school in that location. Therefore, the following sections represent an evaluation of the following alternatives:

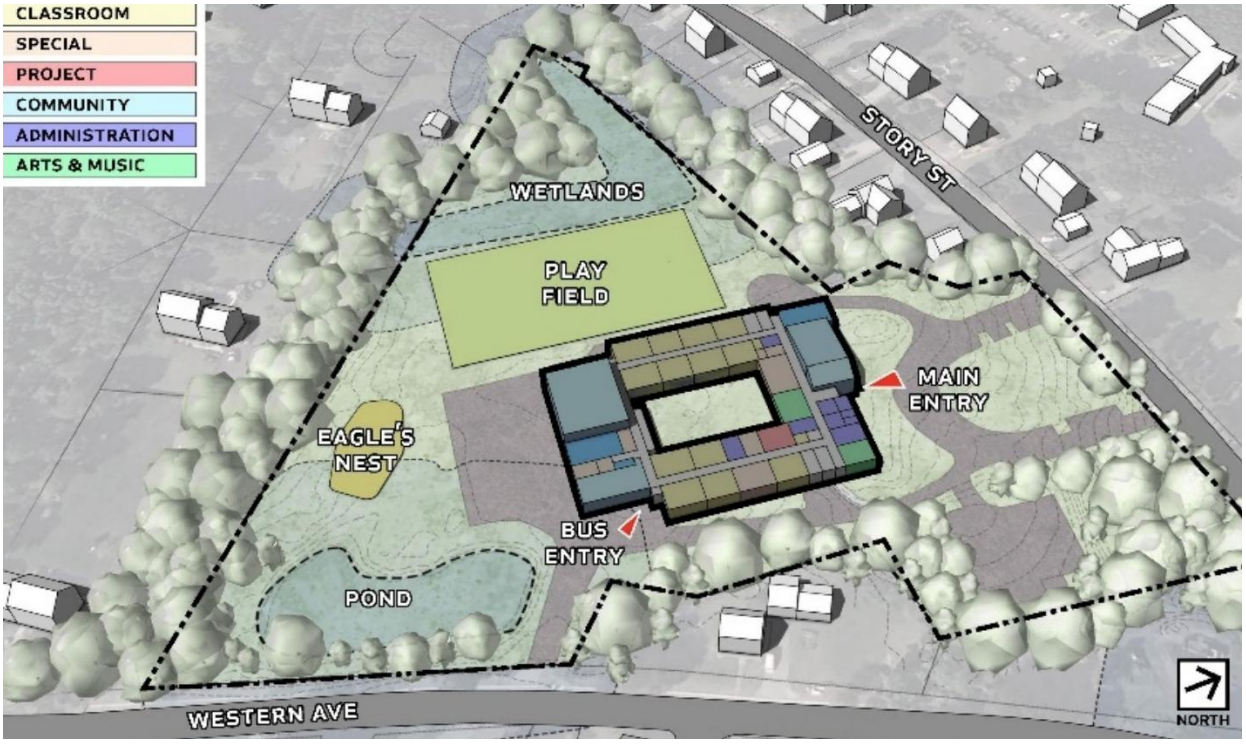
- A0.1 Essex Elementary School Code Upgrade / Base Repair - Grades PreK–3 (165 students)
- A0.2 Essex Elementary School Code Upgrade / Base Repair - Grades PreK–5 (250 students)
- A1.1 Essex Elementary School Addition / Renovation - Grades PreK–3 (165 students)
- A1.2 Essex Elementary School Addition / Renovation - Grades PreK–5 (250 students)
- A2.1 Essex Elementary School New Construction - Grades PreK–3 (165 students)
- A2.2 Essex Elementary School New Construction - Grades PreK–5 (250 students)
- B1.1 Manchester Memorial Elementary School Addition/Renovation – Grades PreK-5 (515 students)

ALTERNATIVE A0.1

OVERVIEW

Option A0.1 represents a code upgrade/base repair to the existing Essex Elementary School building and maintains the existing site layout and circulation pattern. As such, the traffic constraints and operational challenges observed today would generally persist. However, under this option, enrollment would be reduced from 215 students to 165 students, resulting in fewer staff and parent trips during the peak drop-off and pick-up periods. The decrease in total vehicles accessing the site would, in turn, reduce parking demand and shorten on-site and off-site queues compared to existing conditions. While this option would not address existing circulation inefficiencies, the reduction in overall activity would likely yield modest improvements in traffic operations.

Figure 7. A0.1 Essex Elementary School Code Upgrade / Base Repair (165 students)



EVALUATION

Overall, Option A0.1 performs comparably to existing conditions. While reduced enrollment modestly improves queuing and parking demand, the lack of geometric or operational changes limits meaningful improvement across evaluation criteria.

Criterion	Rating	Rationale
Infrastructure	Neutral	Same as existing conditions. The site is located on a local roadway with low speeds and volumes. Sight distance is generally good, though minor vegetation clearing is needed to the east of the school.
Walkability	Neutral	No changes to existing sidewalk network or pedestrian facilities. Upgrades would be needed to at least meet ADA standards.
Safety	Neutral	Maintains existing circulation and access patterns; no improvements to address current on-site safety issues. Crash history within surrounding area is minimal.
Bussing Efficiency	Neutral	Same operational constraints as existing conditions. The Western Avenue driveway would require upgrades to improve turning movements. Same number of buses expected.
Neighborhood Traffic Impact	Neutral	While enrollment reduction lowers trip generation, PM queues would likely still extend onto Lincoln Street, resulting in temporary congestion.
Adequate Parking	Neutral	Parking demand decreases with lower enrollment, and the site has ample parking to satisfy demand, but the layout remains inefficient, with conflicts between parked and circulating vehicles.

ALTERNATIVE A0.2

OVERVIEW

Option A0.2 also represents a code upgrade/base repair to the existing Essex Elementary School building and maintains the existing site layout and circulation pattern. As such, the same access, egress, and internal circulation limitations present today would remain. Under this option, however, enrollment would increase from 215 students to 250 students, resulting in a corresponding rise in staff and parent-generated trips during the peak drop-off and pick-up periods. The additional vehicle activity would increase parking demand and the potential for longer queues both on and off site. Without geometric or operational modifications to the site, these conditions could exacerbate existing congestion and delay during the AM drop-off and PM pick-up periods.

Figure 8. A0.2 Essex Elementary School Code Upgrade / Base Repair (250 students)



EVALUATION

Option A0.2 generally performs similarly to existing conditions; however, increased enrollment would elevate trip generation, resulting in additional off-site queuing since the design does not provide any new on-site queue storage or circulation improvements.

Criterion	Rating	Rationale
Infrastructure	Neutral	Same as existing conditions. The site is located on a local roadway with low speeds and volumes. Sight distance is generally good, though minor vegetation clearing is needed to the east of the school.
Walkability	Neutral	No changes to existing sidewalk network or pedestrian facilities. Upgrades would be needed to at least meet ADA standards.
Safety	Neutral	Maintains existing circulation and access patterns; no improvements to address current on-site safety issues. Crash history within surrounding area is minimal.
Bussing Efficiency	Neutral	Same operational constraints as existing conditions. The Western Avenue driveway would require upgrades to improve turning movements. Same number of buses expected.
Neighborhood Traffic Impact	Disadvantageous	Increased enrollment and trip generation would increase off-site queues given that no additional on-site storage is provided. This leads to greater neighborhood impact than existing conditions.
Adequate Parking	Neutral	Parking demand would increase modestly with the greater enrollment but can be accommodated within the existing on-site supply. However, the current parking layout remains inefficient and contributes to internal conflicts.

ALTERNATIVE A1.1

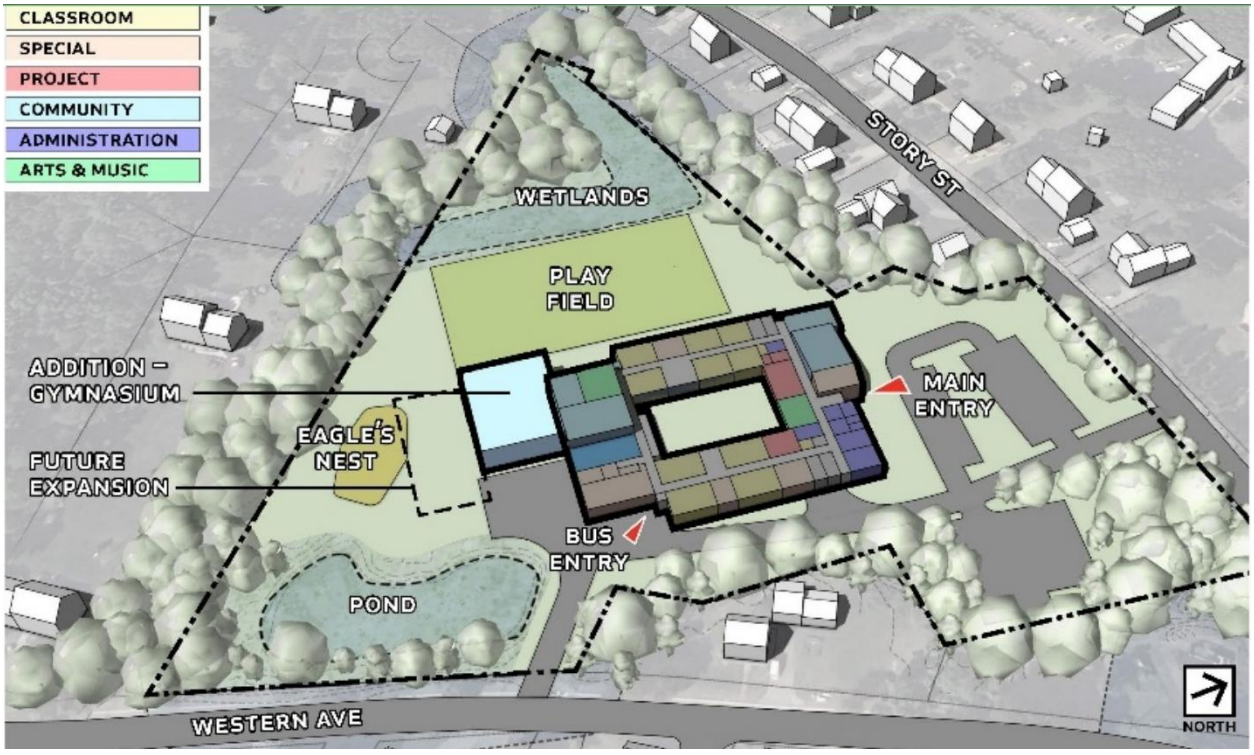
OVERVIEW

Option A1.1 represents an addition/renovation option with an addition located off of the southwest of the existing Essex Elementary School building. Under Option A1.1, primary access and egress would remain on Story Street; however, the existing entry-only and exit-only driveways would be consolidated into a single full-access driveway located where the current exit-only drive exists. A new internal counter-clockwise circulation loop with head-in parking bays is proposed to improve organization and provide additional on-site queue storage. While this layout increases queuing capacity, pedestrians would likely be required to cross active queuing areas, introducing potential safety and operational conflicts during peak periods.

The proposed design reduces the size of the bus turnaround area that is currently used today, which may result in constrained maneuvering space. Another option would be for buses to enter via Story Street and exit via Western Avenue. While this reduces pressure on the constrained on-site turnaround area, it would force buses to mix with parent traffic during the AM drop-off and PM pick-up peaks, making them susceptible to the same queues at the loop. To avoid delay, buses would likely need to arrive earlier than parent vehicles, which could shift route timings and require adjustments to bus schedules.

With additional on-site queue storage and a reduced enrollment of 165 students, this option has the potential to minimize neighborhood spillback and improve traffic operations compared to existing conditions. Parking is better organized and is expected to adequately satisfy demand, as the current site accommodates sufficient parking even at a higher enrollment level.

Figure 9. A1.1 Essex Elementary School Addition / Renovation - Grades PreK–3 (165 students)



EVALUATION

Option A1.1 provides moderate improvement over existing conditions through better circulation, new on-site pedestrian facilities such as sidewalks and crosswalks, and reduced neighborhood impacts due to reduced enrollment and additional on-site queuing storage. However, the reduced bus turnaround area limits maneuverability and may require alternate routing which could introduce conflicts with parent traffic. Potential pedestrian–vehicle conflicts within the loop and added gridlock risk at the single access/egress driveway would require a traffic control officer during peak periods to maintain safe and efficient operations.

Criterion	Rating	Rationale
Infrastructure	Neutral	Consolidates access into a single driveway on Story Street, improving distance from nearby residences but introducing a single conflict point for all site traffic. Will require vegetation clearing to improve sight lines and a traffic control officer to assist during peak periods.
Walkability	Advantageous	Provides opportunity for new on-site pedestrian facilities, including improved sidewalks and crossings. However, pedestrians will still need to cross active drive aisles, which could create localized conflicts.
Safety	Advantageous	Improves on-site safety through better circulation organization and queue management. Site is in an area with low crash history, though some parking-related conflicts may persist.
Bussing Efficiency	Disadvantageous	Reduces the size of the existing bus turnaround, limiting maneuverability. Alternate configuration (enter via Story Street exit via Western Avenue) introduces operational conflicts with parent traffic.
Neighborhood Traffic Impact	Advantageous	Increased on-site queue storage and reduced enrollment are expected to minimize off-site spillback and reduce neighborhood congestion. Relocating the driveway farther from residences also lessens local impacts.
Adequate Parking	Neutral	Parking demand decreases with lower enrollment, and the site has ample parking to satisfy demand, though layout may still result in conflicts between parked and circulating vehicles.

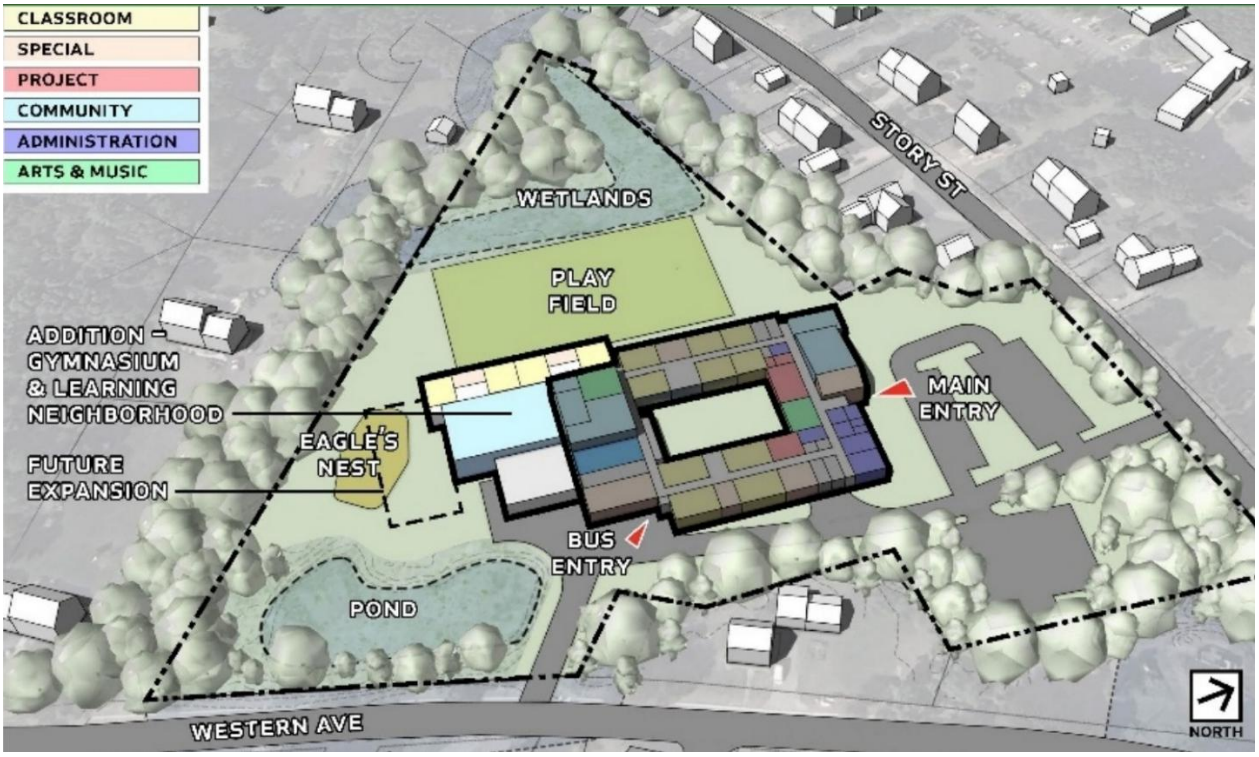
ALTERNATIVE A1.2

OVERVIEW

Option A1.2 also represents an addition/renovation option with a larger addition located off of the southwest/south of the existing Essex Elementary School building. Similar to Option A1.1, primary access and egress would remain on Story Street; however, the existing entry-only and exit-only driveways would be consolidated into a single full-access driveway located where the current exit-only drive exists. A new internal counter-clockwise circulation loop with head-in parking bays is proposed to improve organization and provide additional on-site queue storage. While this layout increases queuing capacity, pedestrians would likely be required to cross active queuing areas, introducing potential safety and operational conflicts during peak periods. The bus turnaround area is further minimized under this alternative, resulting in tighter circulation for buses and larger vehicles, which could pose operational challenges during peak periods. Similar to Option A1.2 an option would be for buses to enter via Story Street and exit via Western Avenue. While this reduces pressure on the constrained on-site turnaround area, it would force buses to mix with parent traffic during the AM drop-off and PM pick-up peaks, making them susceptible to the same queues at the loop. To avoid delay, buses would likely need to arrive earlier than parent vehicles, which could shift route timings and require adjustments to bus schedules.

Although on-site queuing capacity is increased, pedestrians would continue to traverse active queuing areas, presenting potential conflicts during drop-off and pick-up. With a higher enrollment of 250 students, this option would generate more parent and staff trips compared to Option A1.1, which may offset some of the queuing benefits. Parking remains well-organized and is expected to meet projected demand, but continued monitoring of circulation efficiency and pedestrian safety would be recommended if this option advances.

Figure 10. A1.2 Essex Elementary School Addition / Renovation - Grades PreK–5 (250 students)



EVALUATION

Option A1.2 provides moderate improvement over existing conditions through better circulation, and new on-site pedestrian facilities such as sidewalks and crosswalks. Although additional on-site storage is provided, the benefits may be offset by increased enrollment and elevated trip generation, which could result in longer queues and higher congestion levels both on and off site. However, the bus turnaround area is further reduced limiting maneuverability which may require alternate routing which could introduce parent traffic conflicts. Potential pedestrian–vehicle conflicts within the loop and added gridlock risk at the single access/egress driveway would require a traffic control officer during peak periods to maintain safe and efficient operations.

Criterion	Rating	Rationale
Infrastructure	Neutral	Consolidates access into a single driveway on Story Street, improving distance from nearby residences but introducing a single conflict point for all site traffic. Will require vegetation clearing to improve sight lines and a traffic control officer to assist during peak periods.
Walkability	Advantageous	Provides opportunity for upgraded on-site pedestrian facilities, including improved sidewalks and crossings. However, pedestrians will still need to cross active parking drive aisles, which could create localized conflicts.
Safety	Advantageous	Improves on-site safety through better circulation organization and queue management. Site is in an area with low crash history, though some parking-related conflicts may persist.
Bussing Efficiency	Disadvantageous	Further reduces the size of the existing bus turnaround, limiting maneuverability. Alternate configuration (enter via Story Street exit via Western Avenue) introduces operational conflicts with parent traffic.
Neighborhood Traffic Impact	Neutral	Increased on-site queue storage offsets some added trip generation from higher enrollment. Off-site queuing expected to improve slightly compared to existing conditions, aided by relocating the driveway farther from residences.
Adequate Parking	Neutral	Parking demand increases modestly with higher enrollment, but the site has ample parking to satisfy demand. Layout may still cause conflicts between parked and circulating vehicles.

ALTERNATIVE A2.1

OVERVIEW

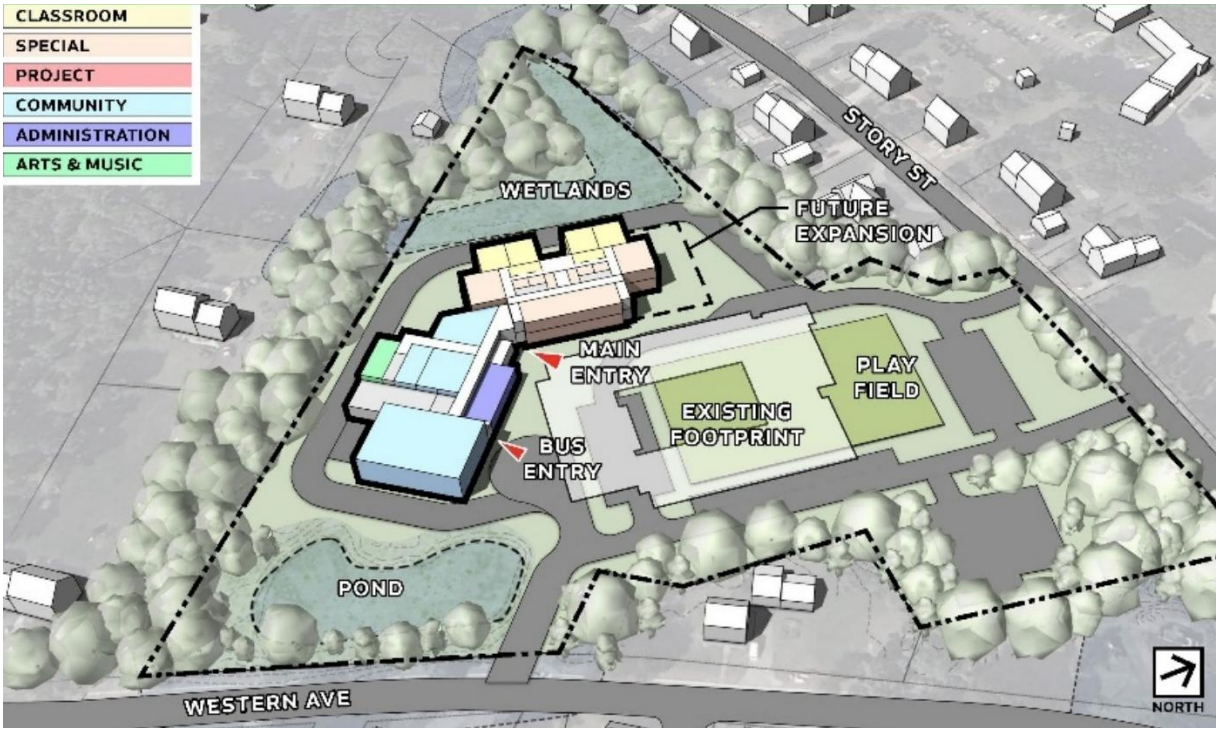
Option A2.1 represents a new construction scenario with a 165 student K-3 enrollment option, with a new school building sited to the southwest of the existing structure. Site access would be provided via an entrance-only driveway located toward the western portion of the Story Street frontage. Parents dropping off or picking up students would circulate counterclockwise around a large internal loop, loading and unloading near the main entrance before exiting via an exit-only driveway located toward the eastern portion of the Story Street frontage.

Head-in parking areas would be distributed throughout the site, including a lot along the Story Street frontage, an area directly in front of the building designated for accessible, administrative, and visitor parking, and additional parking along the eastern side of the circulation loop. The existing parking lot to the east of the site would also remain. Play fields would be located within the interior of the circulation loop, creating a central, secure open space for recreation. However, the circulation loop separates the building from the play areas, requiring pedestrians to cross active drive aisles to access these spaces.

Buses would access the site via Western Avenue, utilizing a dedicated bus loop that operates independently from parent traffic. A perimeter drive would surround the site, providing continuous service and emergency access.

This option provides significant operational benefits, including greater flexibility to accommodate extended on-site queuing that minimizes neighborhood impacts, ample and better-organized parking, fully separated parent and bus access and egress, and the opportunity to incorporate modern pedestrian and bicycle facilities throughout the site.

Figure 11. A2.1 Essex Elementary School New Construction - Grades PreK–3 (165 students)



EVALUATION

Option A2.1 represents a significant improvement over existing conditions by providing fully separated parent and bus circulation, a substantial increase in on-site queue storage, and modern on-site pedestrian facilities including sidewalks and crosswalks. Although pedestrians must cross active drive aisles to access the play fields, overall circulation and safety are greatly enhanced. The new layout minimizes neighborhood impacts, improves emergency access through a perimeter drive, and provides ample, well-organized parking to meet demand.

Criterion	Rating	Rationale
Infrastructure	Highly Advantageous	Provides separate access and egress for buses and parents, located on a low-speed, low-volume roadway. The new layout significantly increases on-site storage and reduces conflict points.
Walkability	Advantageous	Allows for modern on-site pedestrian facilities and defined crossings. Pedestrians walking to/from school will not be required to cross vehicle flows on-site; however, pedestrians must cross active drive aisles to reach play areas, creating potential conflicts.
Safety	Highly Advantageous	Greatly enhances on-site safety through improved circulation organization and queue management. The site's low crash history and new perimeter drive improve emergency access, though pedestrian crossings to play areas require attention.
Bussing Efficiency	Highly Advantageous	Dedicated bus loop on Western Avenue fully separates bus and parent operations. Driveway improvements will facilitate safe turning movements.
Neighborhood Traffic Impact	Highly Advantageous	Substantial on-site queue capacity and reduced enrollment minimize off-site spillback and congestion on surrounding streets.
Adequate Parking	Highly Advantageous	The site provides ample, well-organized parking that satisfies demand while minimizing conflicts between parked and circulating vehicles.

ALTERNATIVE A2.2

OVERVIEW

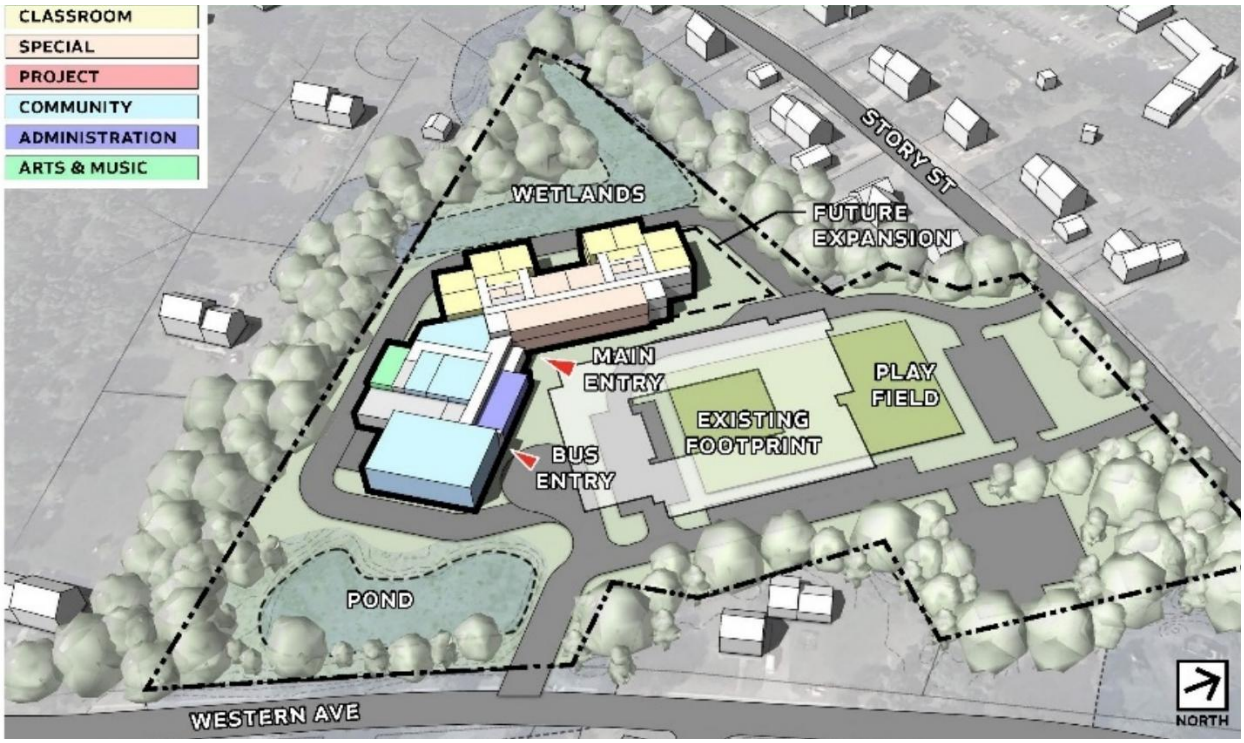
Option A2.2 represents new construction designed to accommodate a 250 K–5 student enrollment. The layout and circulation configuration are identical to Option A2.1, with a new school building located to the southwest of the existing structure. Access to the site would be provided via an entrance-only driveway toward the western portion of the Story Street frontage, with parents circulating counterclockwise around a large internal loop to drop off and pick up students near the main entrance before exiting via an exit-only driveway located toward the eastern portion of the frontage.

Head-in parking areas would remain distributed throughout the site, including along Story Street, in front of the building for accessible and visitor spaces, and along the eastern side of the loop. The existing parking lot to the east of the site would remain in use, and play fields would continue to be located within the interior of the circulation loop. However, the circulation loop separates the building from the play areas, requiring pedestrians to cross active drive aisles to access these spaces.

Buses would continue to enter and exit via Western Avenue using a dedicated bus loop that remains fully separated from parent circulation. A perimeter drive would provide service and emergency access around the site.

With an increased enrollment of 250 students, this option would result in higher trip generation, longer queues, and greater parking demand compared to Option A2.1. However, the overall site design provides sufficient flexibility and on-site storage to accommodate this increase without substantial operational degradation. Maintaining separate parent and bus circulation would continue to support safe and efficient traffic flow, though queue management and pedestrian crossing controls should be carefully considered during design development.

Figure 12. A2.2 Essex Elementary School New Construction - Grades PreK–5 (250 students)



EVALUATION

Option A2.2 maintains the strong operational and safety benefits of Option A2.1, including fully separated bus and parent circulation, extensive on-site queue storage, and modern pedestrian facilities such as sidewalks and crosswalks. Although additional on-site storage is provided, the higher enrollment and increased trip generation may reduce some of these benefits in comparison to the lower-enrollment option; however, overall performance still represents a substantial improvement over existing conditions. Pedestrians must continue to cross active drive aisles to access play fields, but overall site organization, safety, and traffic flow remain significantly enhanced.

Criterion	Rating	Rationale
Infrastructure	Highly Advantageous	Creates full separation of bus and parent traffic with improved access and on-site circulation. Located on a low-speed, low-volume roadway with generous queuing and parking capacity.
Walkability	Advantageous	Allows for modern on-site pedestrian facilities and defined crossings. Pedestrians walking to/from school will not be required to cross vehicle flows on-site; however, pedestrians must cross active drive aisles to reach play areas, creating potential conflicts.
Safety	Highly Advantageous	Greatly enhances on-site safety through improved circulation organization and queue management. The site's low crash history and new perimeter drive improve emergency access, though pedestrian crossings to play areas require attention.
Bussing Efficiency	Highly Advantageous	Dedicated bus loop on Western Avenue fully separates bus and parent operations. Driveway improvements will facilitate safe turning movements.
Neighborhood Traffic Impact	Advantageous	Increased on-site queue storage offsets additional trips associated with higher enrollment, minimizing off-site spillback and neighborhood congestion.
Adequate Parking	Highly Advantageous	Parking supply and layout accommodate increased demand, with sufficient organization to reduce conflicts between parked and circulating vehicles.

ALTERNATIVE B1.1

OVERVIEW

Option B1.1 represents an addition and renovation scenario at the existing Manchester Memorial Elementary School designed to accommodate an enrollment of 515 K–5 students. This option assumes that all current Essex Elementary students would attend school in Manchester. The concept introduces a sizeable addition to the northeast of the existing building and a cafeteria expansion to the south.

Primary site access would remain via the existing entrance-only driveway located near the middle of the parcel frontage on Lincoln Street. Parents would enter via this driveway and circulate around the existing loop to the current loading and unloading area. From there, vehicles could exit either to Summer Street or Lincoln Street via a new entrance/exit driveway positioned toward the eastern edge of the parcel on Lincoln Street.

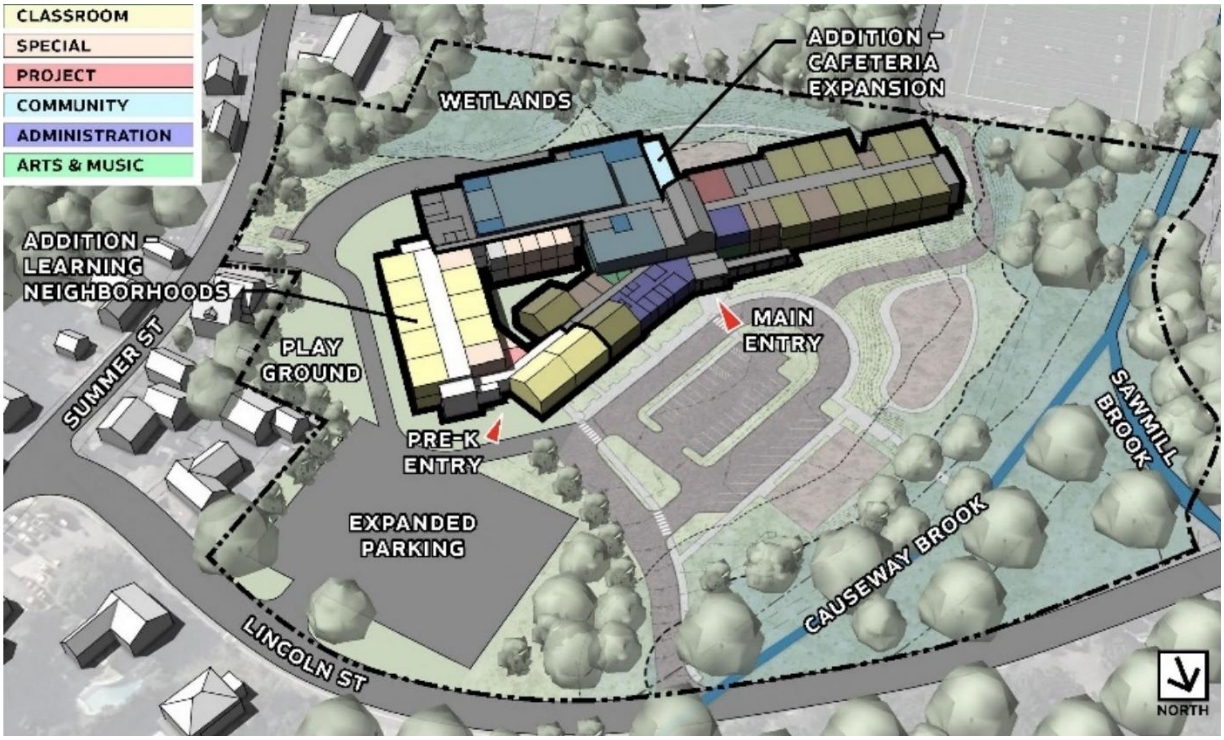
It should be noted that this option does not indicate any increase in on-site queuing storage, meaning that parent vehicles would continue to rely on the existing loop configuration for pick-up and drop-off operations. Existing parking around and within the loop would remain, while parking elsewhere on the site would be consolidated into a large, expanded parking area in the northeast corner of the property. This design would remove the secondary entrance and exit on Lincoln Street, replacing it with a single full-access/egress driveway.

Despite the reconfiguration, the proposed layout is expected to experience similar operational challenges as today, particularly related to conflicts between K–5 and Pre-K traffic, unless all Pre-K parents are required to park in the large parking lot and walk students to the door and thus enter/exit via the secondary driveway.

The design also does not identify a defined location for bus operations, which will become increasingly critical given that additional buses would likely be required to accommodate the expanded student population resulting from the Essex consolidation.

Overall, while the plan improves parking organization, it does not expand on-site queue storage to match the substantial enrollment increase. As a result, off-site queuing and congestion on Lincoln Street and Summer Street are expected to worsen under this condition. To maintain safe and efficient operations, this alternative would require careful consideration of bus staging, parent circulation separation, and extended on-site queuing capacity during later design phases.

Figure 13. B1.1 Manchester Memorial Elementary School Addition/Renovation – Grades PreK-5 (515 students)



EVALUATION

Option B1.1 performs less favorably compared to existing conditions due to the substantial enrollment increase and lack of expanded on-site queue storage or dedicated bus facilities. These limitations are expected to exacerbate off-site queuing and congestion along Lincoln Street, particularly during peak drop-off and pick-up periods. The design improves parking organization with a large consolidated lot but introduces challenges for bus operations and parent circulation, as additional buses will likely be needed to accommodate the combined student population. Relocating Essex students to Manchester would also significantly reduce the number of children able to walk or bike to school, increasing reliance on bussing and parent drop-off. Without further design refinements to expand on-site storage, separate traffic flows, and mitigate travel demand, this option may result in degraded operational efficiency and safety.

Criterion	Rating	Rationale
Infrastructure	Disadvantageous	No increase in on-site queue storage. The site connects to a high-volume roadway with observed speeding and limited sight distance. Additional traffic exiting onto Lincoln Street would increase congestion unless right turns are restricted to avoid the Lincoln/Summer Street intersection.
Walkability	Disadvantageous	Although sidewalks and crosswalks are modern and well maintained, consolidating Essex students at this site would significantly reduce walkability for many students and generate additional vehicle trips.
Safety	Disadvantageous	Maintains similar conditions to today within an area with a higher crash history. Increased off-site queuing could heighten safety risks as frustrated drivers attempt unsafe maneuvers to bypass congestion.
Bussing Efficiency	Highly Disadvantageous	No dedicated bus area identified. Additional bus storage and loading/unloading zones are needed to accommodate Essex students who would now be transported to Manchester.
Neighborhood Traffic Impact	Highly Disadvantageous	The site is located along a regional commuter route and already experiences significant off-site queuing. With higher enrollment and no new on-site storage, traffic and safety issues are expected to worsen substantially.
Adequate Parking	Advantageous	The expanded consolidated parking area provides ample capacity to meet projected demand and improves organization compared to existing conditions.

SITE / ENROLLMENT RECOMMENDATION – TRAFFIC PERSPECTIVE

Evaluations across all six criteria were compared for each alternative to determine which site and enrollment option are best suited from a traffic and circulation perspective, considering factors such as access, safety, queuing capacity, pedestrian connectivity, and overall operational efficiency. This comparison is shown in Table 6.

From a traffic and access perspective, the new construction alternatives at the Essex Elementary site (Options A2.1 and A2.2) are the most favorable. These options provide fully separated bus and parent circulation, expanded on-site queue storage, improved pedestrian connectivity, and overall safer, more efficient operations compared to both existing conditions and other alternatives. The Essex site itself is also inherently better suited for school operations, as it is located on a low-speed, residential roadway with lower traffic volumes and fewer conflicts with regional commuter traffic.

In contrast, the Manchester Memorial site (Option B1.1) is already constrained by significant off-site queuing and congestion along Lincoln and Summer Streets. The projected enrollment increase and additional traffic associated with consolidation would exacerbate these issues unless substantial new on-site queue storage and circulation improvements are introduced. Without major design interventions, the Manchester site would continue to experience operational inefficiencies, safety concerns, and increased bussing demand, making it less suitable from a transportation standpoint.

In conclusion, from a traffic perspective, the new construction alternatives at the Essex site would provide measurable operational and safety benefits regardless of the enrollment option considered, as both lower and higher enrollment scenarios are supported by the expanded on-site storage, improved circulation, and separated bus and parent access these designs provide.

TABLE 6
Site/Enrollment Alternatives Evaluation Comparison

Alternative	Infrastructure	Walkability	Safety	Bussing Efficiency	Neighborhood Traffic Impact	Adequate Parking
A0.1 Essex Elementary School Code Upgrade / Base Repair - Grades PreK–3 (165 students)	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
A0.2 Essex Elementary School Code Upgrade / Base Repair - Grades PreK–5 (250 students)	Neutral	Neutral	Neutral	Neutral	Disadvantageous	Neutral
A1.1 Essex Elementary School Addition / Renovation - Grades PreK–3 (165 students)	Neutral	Advantageous	Advantageous	Disadvantageous	Neutral	Neutral
A1.2 Essex Elementary School Addition / Renovation - Grades PreK–5 (250 students)	Neutral	Advantageous	Advantageous	Disadvantageous	Neutral	Neutral
A2.1 Essex Elementary School New Construction - Grades PreK–3 (165 students)	Highly Advantageous	Advantageous	Highly Advantageous	Highly Advantageous	Highly Advantageous	Highly Advantageous
A2.2 Essex Elementary School New Construction - Grades PreK–5 (250 students)	Highly Advantageous	Advantageous	Highly Advantageous	Highly Advantageous	Advantageous	Highly Advantageous
B1.1 Manchester Memorial Elementary School Addition/Renovation – Grades PreK-5 (515 students)	Disadvantageous	Disadvantageous	Disadvantageous	Highly Disadvantageous	Highly Disadvantageous	Advantageous

PHASE 1 ESA

SECTION 3.1.8.14

ASTM PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Essex Elementary School
12 Story Street
Essex, MA 01929

October 2025

Prepared For:

Manchester Essex Regional School District
36 Lincoln Street
Manchester-by-the-Sea, MA 01944

Under Contract To:

JCJ Architecture
120 Huyshope Avenue, Suite 400
Hartford, CT 06106

Mabbett & Associates, Inc. **www.mabbett.com**
105 Central Street, Suite 4100
Stoneham, MA 02180-1260
T. 781-275-6050
F. 781-954-5155
Massachusetts | Virginia | Rhode Island | New York

© 2025, Mabbett & Associates, Inc.

ACKNOWLEDGEMENT

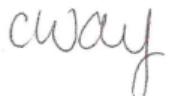
Mabbett & Associates, Inc. (Mabbett®) prepared this ASTM International *Standard Practice for Phase I Environmental Site Assessments E1527-21* Phase I Environmental Site Assessment (Phase I ESA) of the approximately 9.75-acre subject property identified as Essex Elementary School at 12 Story Street in Essex, Essex County, Massachusetts. Mabbett prepared this report under subcontract to JCJ Architecture (JCJ) for the Essex Elementary School Architectural Feasibility Study.

This Phase I ESA has been prepared for use by JCJ and the Manchester Essex Regional School District. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; Mabbett does not accept any responsibility for the consequences of such use(s). Furthermore, reliance by any party not identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to Mabbett.

Mabbett prepared this Phase I ESA report using reasonable efforts to identify Recognized Environmental Conditions (RECs) associated with hazardous substances or petroleum products in, on, or at the subject property. Findings contained within this report are based on information collected from observations made on the day of the subject property reconnaissance and from reasonably ascertainable information obtained from selected public agencies and other referenced sources.

Mabbett declares that, to the best of our professional knowledge and belief, the Mabbett staff who performed this Phase I ESA meet the definition of *Environmental Professional* as defined in §312.10 of 40 Code of Federal Regulations (CFR) 312, and these Mabbett staff have the specific qualifications based on education, training, and experience to assess a *property* of its nature, history, and setting. Mabbett has developed and performed all of the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

This Phase I ESA Report has been prepared by:



Mabbett & Associates, Inc.
Cassidy Way, QEP, CHMM
Project Environmental Scientist/Project Manager

This Phase I ESA Report has been internally reviewed and approved for submittal by:



Mabbett & Associates, Inc.
Michael L. Bloom, PG, CPG
Practice Lead, Site Assessment & Restoration, Northeast

CEW/MLB

TABLE OF CONTENTS

SECTION **PAGE**

EXECUTIVE SUMMARY **ES-1**

1.0 INTRODUCTION **1**

1.1 Purpose 1

1.2 Detailed Scope of Services 2

1.3 Significant Assumptions 2

1.4 Limitations and Exceptions 2

1.5 Special Terms and Conditions (User Reliance) 3

2.0 SUBJECT PROPERTY DESCRIPTION **4**

2.1 Location and Legal Description 4

2.2 Current Use and Improvements at the Subject Property 4

2.3 Surrounding Area General Characteristics 4

2.4 Physical Setting 4

2.4.1 Topography 4

2.4.2 Geology 4

2.4.3 Wetlands and Surface Water 4

2.4.4 Groundwater 5

2.4.5 Flood Zone 5

2.4.6 Soils 5

3.0 SITE RECONNAISSANCE **6**

3.1 Methodology 6

3.2 Observations of Subject Property Improvements 6

3.2.1 Buildings 6

3.2.2 Stormwater 6

3.2.3 Roads/Parking 6

3.2.4 Heating and Cooling Sources 6

3.2.5 Sanitary Sewerage 7

3.2.6 Water Supply 7

3.3 Underground Storage Tanks 7

3.4 Aboveground Storage Tanks 7

3.5 Hazardous Substance Use, Storage, and Disposal 7

3.6 Non-Hazardous Solid Wastes and Disposal 7

3.7 Electrical Equipment and Polychlorinated Biphenyls (PCBs) 8

3.8 Stained Surfaces and Distressed Vegetation 8
3.9 Underground Structures 8
3.10 Per- and Poly-fluoroalkyl Substances (PFAS) 8
4.0 USER PROVIDED INFORMATION 9
4.1 Owner, Property Manager, and Occupant Information 9
4.2 Title Records 9
4.3 Environmental Permits and/or Violations 9
4.4 Specialized Knowledge or Experience of the Owner 9
4.5 Significant Valuation Reduction for Environmental Issues 9
4.6 Reason for Performing Phase I ESA 9
4.7 Other Owner-Provided Documents 9
5.0 RECORDS AND DATABASE REVIEW 10
5.1 Standard Environmental Records 10
5.1.1 Findings for the Subject Property 11
5.1.2 Findings for Adjoining and Surrounding Properties 11
5.1.3 Aerial Photographs 12
5.1.4 Historical USGS Topographic Maps 13
5.1.5 Historical City Directories 13
5.1.6 Sanborn Fire Insurance Maps 14
5.1.7 Municipal Records 14
5.1.8 Other Historical Sources 14
6.0 SUBSURFACE VAPOR MIGRATION 15
7.0 INTERVIEWS 16
8.0 OTHER ENVIRONMENTAL CONDITIONS 17
8.1 Lead Based Paint 17
8.2 Asbestos Containing Materials 17
9.0 CONCLUSIONS AND RECOMMENDATIONS 18
10.0 REFERENCES 20

TABLES

Table 5-1 10
Table 5-2 12
Table 7-1 16

FIGURES

Figure 1-1 Subject Property Locus Map
Figure 1-2 Subject Property Plan

APPENDICES

Appendix A Supporting Documents
- Property Record Card
- USFWS Wetlands Map
- FIRMette Panel
- MassDEP Phase I Site Assessment Map
- NRCS Web Soil Survey Map
- Town of Essex Records

Appendix B Photograph Log
Appendix C Environmental Site Assessment User Questionnaire
Appendix D Database Search Report: EDR Radius Map™ Report with GeoCheck®
Appendix E Additional EDR Reports:
- Historical USGS Topography Maps
- Historical Aerial Photographs
- Historical City Directories
- Certified Sanborn Map Report

LIST OF ACRONYMS

ACM	Asbestos Containing Material
AHERA	Asbestos Hazard Emergency Response Act
AOC	Area of Concern
AST	Aboveground Storage Tank
ASTM	ASTM International
BER	Business Environmental Risk
CFR	Code of Federal Regulations
COCs	Chemicals of Concern
DoD	Department of Defense
ECHO	Enforcement and Compliance History Online
EDR	Environmental Data Resources, LLC
ESA	Environmental Site Assessment
EWG	Environmental Working Group
FEMA	Federal Emergency Management Agency
FINDS	Facility Index System/Facility Registry System
LBP	Lead-Based Paint
LUST	Leaking Underground Storage Tank
MassDEP	Massachusetts Department of Environmental Protection
NR	Not Required
NWI	National Wetlands Inventory
PCBs	Polychlorinated Biphenyl
PFAS	Per- and Polyfluoroalkyl Substances
QEP	Qualified Environmental Professional
RCRA	Resource Conservation and Recovery Act
RECs	Recognized Environmental Conditions
SDS	Safety Data Sheets
SEMS ARCHIVE	Superfund Enterprise Management System Archive
SHWS	State Hazardous Waste Site
TP	Target Property
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tank
VEC	Vapor Encroachment Condition
VSQG	Very Small Quantity Generator

EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment (ESA) Report presents the results of non-intrusive environmental due diligence activities performed by Mabbett & Associates, Inc. (Mabbett) on behalf of JCJ Architecture (JCJ) to support the Manchester Essex Regional School District's decision making regarding capital investments at Essex Elementary School. The subject property for this Phase I ESA is Essex Elementary School addressed 12 Story Street, which encompasses approximately 9.75 acres of land in Essex, Massachusetts.

Subject Property Description

Essex Elementary School was originally constructed in 1958, with a gymnasium addition around 1975. The subject property is currently developed with an approximately 53,036 square foot elementary school that has a centrally located courtyard, sub-grade boiler room, classrooms, a kitchen, and cafeteria.

Subject Property History

The subject property was undeveloped land in 1888. By 1893, one structure was present on the northern boundary of the subject property by Story Street. Between 1915 and 1919, a roadway bisected the northern portion of the site and had as many as 4 structures built on it. This roadway was gone by 1938. The subject property appeared to have been historically used as agricultural land. The buildings on the subject property were razed sometime between 1952 and the construction of the new elementary school in 1958. The manmade pond in the southern corner of the subject property had also been built at this time. A gymnasium was added to the subject property around 1975.

Surrounding Areas

The area surrounding the subject property consisted of residential use lands.

Conclusions

The Phase I ESA included a reconnaissance at the subject property by Mabbett on September 24, 2025. Mabbett obtained information about environmental conditions that could potentially be considered a Recognized Environmental Condition (REC); reviewed historical maps of the subject property and vicinity; interviewed senior custodian Jason Billadeau, who was familiar with current and recent environmental history at the subject property; reviewed environmental database listings for the subject property and vicinity; performed a review of available files from the Massachusetts Department of Environmental Protection (MassDEP); and reviewed documents provided by Essex Elementary School. This information was used to develop an opinion with regard to the presence or absence of RECs at the subject property.

The Phase I ESA findings are summarized in the following list:

- **RECs**

  During the site reconnaissance, a red colored petroleum staining was observed on the concrete floor of the boiler room, which was located sub-grade in the northeastern portion of the Essex Elementary School. Additionally, a slight petroleum sheen was observed within a pit filled with groundwater in the boiler room. According to Manchester Essex Schools Maintenance Supervisor, after periods of heavy precipitation, groundwater can seep through the concrete floor and enter the boiler room. Parts of the boiler room floor were observed to be visibly wet during the site reconnaissance. The oily sheen may have originated from a heating oil underground storage tank (UST) or aboveground storage tank (AST) previously associated with the boiler room; however, Mabbett was unable to confirm its size, contents,

or historical location at the subject property. The indications observed of an oil release within the boiler room and the potential for that release to have impacted groundwater represents a REC.

- **Historical Recognized Environmental Conditions (HRECs)**

  No HRECs were identified on or affecting the subject property.

- **Controlled Recognized Environmental Conditions (CRECs)**

  No CRECs were identified on or affecting the subject property.

- **Data Gaps**

  According to a municipal record, the Conservation Commission was requested to determine the applicability of the Wetlands Protection Act for the removal of underground heating oil storage tanks at 12 Story Street in March 2002. Mabbett was unable to obtain documentation confirming the removal of a UST at the subject property nor environmental conditions associated with the removal of an UST. No records were available for review pertaining to its size, location, or contents. A vent pipe, but no fill pipe, was observed exiting the northeastern wall of the Essex Elementary School near the current generator. Suspected UST piping was observed entering through the wall of the boiler room; however, the source and purpose of this piping could not be confirmed. The lack of information and documentation pertaining to this UST record represents a data gap.

- **Business Environmental Risks (BERs)**

  Regulated Building Materials: According to the 2023 Asbestos Hazard Emergency Response Act (AHERA) Inspection Report, documented asbestos containing material (ACM) are present throughout the elementary school. Considering the age of the existing school building, lead-based paint (LBP) was presumably used during original construction and subsequent upkeep through 1978, and such coatings are anticipated to be present on a significant portion of interior and exterior surfaces. The documented presence of ACM and presumed presence of LBP represents a business environmental risk (BER) due to the added cost of abatement during future demolition or renovation of the building.

  Fill Soils: The U.S Department of Agriculture (USDA) Web Soil Survey identified the soils located beneath the elementary school and southeast of the elementary school as Urban land (i.e., urban fill). The potential for the quality of fill materials to result in elevated environmental premiums for off-site management during future redevelopment activities is considered a BER.

1.0 INTRODUCTION

This Phase I Environmental Site Assessment (ESA) report presents the results of non-intrusive environmental due diligence activities performed according to the ASTM International *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E1527-21) at the subject property, identified as the Essex Elementary School encompassing approximately 9.75 acres at 12 Story Street in Essex, Essex County, Massachusetts. A Subject Property Locus Map is provided as Figure 1-1. A Subject Property Plan is provided as Figure 1-2.

1.1 Purpose

The purpose of performing a Phase I ESA is to render an opinion, to the extent practical, as to whether current or historical evidence indicates the presence of Recognized Environmental Conditions (RECs) at the subject property. The Phase I ESA findings are intended to help KBA with decision making regarding potential environmental liabilities at the subject property. The Phase I ESA was completed following the guidelines of ASTM International Standard Practice E1527-21 (ASTM E1527-21), the United States Environmental Protection Agency's (USEPA) All Appropriate Inquiries (AAI) Rule, and industry standard practice. The following paragraphs describe the different types of RECs defined by ASTM E1527-21.

ASTM E1527-21 defines a REC as:

- the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment;
- the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or
- the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

The term REC is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment, and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

ASTM E1527-21 defines a Historical REC as:

> *"A previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (i.e., activity and use limitations or other property use limitations)."*

ASTM E1527-21 defines a Controlled REC as:

> *"A REC affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (i.e., activity and use limitations or other property use limitations)."*

ASTM E1527-21 defines a Business Environmental Risk (BER) as:

> *"A risk that can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to those environmental issues required to be investigated in this practice. Consideration of business environmental risk issues may involve addressing one or more non-scope considerations."*

Although the subject property is not considered "commercial real estate," the identification of BERs is considered relevant to this assessment because non-scope environmental concerns at the subject property could have cost implications on potential future development efforts by the Manchester Essex Regional School District.

1.2 Detailed Scope of Services

This Phase I ESA was completed with a level of care and skill ordinarily practiced by the environmental consulting professional currently providing similar services under comparable circumstances in accordance with the provisions of ASTM E1527-21. Any significant additions, deletions, or exceptions to ASTM E1527-21 are noted below, or in the corresponding sections of this report. The scope of this assessment included an evaluation of the following:

- Physical setting characteristics of the subject property through a review of referenced sources such as topographic maps and geologic, soils and hydrologic reports;
- Use of the subject property, adjoining properties, and surrounding area through a review of referenced historical sources such as land title records, fire insurance maps, city directories, aerial photographs, prior reports, and interviews;
- Observations regarding current usage and conditions include: the use, treatment, storage, disposal or generation of hazardous substances, petroleum products, hazardous wastes, nonhazardous solid wastes, and wastewater;
- Use of adjoining and surrounding area properties and the likely impact of known or suspected releases of hazardous substances or petroleum products from those properties in, on, or at the property;
- Information in referenced environmental agency databases and local environmental records, within the specified approximate minimum search distance from the subject property;
- Potential for subsurface vapor migration in, on, or at the subject property; and
- Potential PFAS at the subject property.

1.3 Significant Assumptions

No significant assumptions were made during the preparation of this Phase I ESA.

1.4 Limitations and Exceptions

Mabbett prepared this Phase I ESA report using reasonable efforts to identify RECs associated with hazardous substances or petroleum products in, on, or at the subject property. Findings contained within this report are based on information collected from observations made on the day of the site reconnaissance and from reasonably ascertainable information obtained from selected public agencies and other referenced sources.

No exceptions to ASTM E1527-21 were noted during this assessment.

The ASTM E1527-21 recognizes inherent limitations for Phase I ESAs, including, but not limited to:

- Uncertainty Not Eliminated: A Phase I ESA cannot wholly eliminate uncertainty regarding the potential for RECs associated with a property since no actual environmental samples are collected for analysis.
- Not Exhaustive: A Phase I ESA is not an exhaustive assessment of the environmental conditions on a property.
- Past Uses of the Property: A Phase I ESA does not require review of standard historical sources at less than five-year intervals. Therefore, past uses of the property may not be discovered.

Other limitations are as follows:

- The observations described in this report were made under the conditions stated herein. Observations were based solely upon the non-intrusive services described herein.

Users of this report may refer to ASTM E1527-21 for further information regarding these and other limitations.

Mabbett makes no representation or warranty that the past or current operations at the subject property are, or have been, in compliance with all applicable federal, state, and local laws, regulations, and codes. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Regardless of the findings stated in this report, Mabbett is not responsible for consequences or conditions arising from facts not fully disclosed to Mabbett during the assessment.

Per ASTM E1527-21, Section 6, User Responsibilities, the User of this assessment has specific obligations for performing tasks during this assessment that will help identify the possibility of RECs associated with the subject property. Failure by the User to fully comply with the requirements may impact their ability to use this report to help qualify for Landowner Liability Protections under the Comprehensive Environmental Response, Compensation, and Liability Act. Mabbett makes no representations or warranties regarding a User's qualification for liability protection under any federal, state, or local laws or regulations.

In accordance with ASTM E1527-21, this report is presumed to be valid for a 6-month period. If the report is older than 6 months, the following information must be updated for the report to be valid: (1) regulatory review, (2) subject property reconnaissance, (3) interviews, (4) specialized knowledge, and (5) environmental liens. Reports older than one year may not meet ASTM E1527-21 requirements and, therefore, the report must be updated to reflect current conditions and property-specific information. Other limitations and exceptions that are specific to the scope of this report may be found in the corresponding sections.

1.5 Special Terms and Conditions (User Reliance)

This report is for the use and benefit of and may be relied upon by the JCJ, the Manchester Essex Regional School District, or third parties authorized in writing by JCJ. Any third party agrees by accepting this report that any use or reliance on this report shall be limited by the exceptions and limitations in this report, and with the acknowledgment that actual subject property conditions may change with time, and that hidden conditions may exist at the property that were not discovered within the authorized scope of the assessment. Any use by or distribution of this report to third parties, without the express written consent of the JCJ, is at the sole risk and expense of such third party.

Mabbett makes no other representation to any third party except that it has used the degree of care and skill ordinarily exercised by environmental consultants in the preparation of the report and in the assembling of data and information related thereto. No other warranties are made to any third party, either express or implied.

2.0 SUBJECT PROPERTY DESCRIPTION

The subject property description was researched and developed by Mabbett representative Cassidy Way, QEP, CHMM, who meets ASTM's *Environmental Professional* qualification as defined in ASTM E1527-21 and who performed a site reconnaissance of the subject property on September 24, 2025. A Subject Property Locus map is provided as Figure 1-1. A detailed Subject Property Map depicting current subject property features is provided as Figure 1-2.

2.1 Location and Legal Description

12 Story Street (the subject property) was identified by the Town of Essex Assessor as Parcel 129-5 and encompassed approximately 9.75 acres owned by the Town of Essex Elementary School. The subject property was described as having an improved educational site use.

2.2 Current Use and Improvements at the Subject Property

The subject property was developed with the Essex Elementary School that was originally constructed in 1958. The school was developed with an approximately 53,036 square-foot school building with a primarily brick exterior.

Exterior portions of the subject property included a playground, athletic fields, parking areas, and landscaped areas.

The subject property was accessible from Story Street to the north and Western Avenue to the southeast. Access to the subject property was controlled via thick forested trees and shrubs but was not restricted by fencing.

2.3 Surrounding Area General Characteristics

The subject property was located in a residential area. The Site vicinity was used for residential purposes.

2.4 Physical Setting

2.4.1 Topography

Based on the U.S. Geological Survey (USGS) 7.5-Minute Series Marblehead North Topographic Quadrangle map, dated 2024, the elevation of the ground surface at the subject property is approximately 50 to 80 feet (ft) above mean sea level. The subject property was sloped downwards toward the northeast. This information was confirmed during Mabbett's site reconnaissance on September 24, 2025.

2.4.2 Geology

According to the USGS Bedrock Geologic Map of Massachusetts, bedrock underlying the general area of the subject property was characterized Cape Ann Complex, specifically as Beverly Syenite consisting of quartz-poor facies (SOcb) and Alkalic granite to quartz syenite containing ferro-horneblende (SOcgr). Bedrock outcrops were observed at the subject property during Mabbett's site reconnaissance on September 24, 2025. The outcrops were located in the school courtyard and in the school's crawlspace area.

2.4.3 Wetlands and Surface Water

According to the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Map Viewer, accessed on September 19, 2025, freshwater forested/shrub wetlands were present on the easternmost portion of the subject property. Additionally, a freshwater pond was located on the southern portion of the subject property. The wetlands map is included in Appendix A.

Freshwater emergent wetlands, forested/shrub wetlands, and riverine were mapped to the north of the subject property. Estuarine and marine wetland was mapped east/southeast of the subject property.

This information was confirmed during Mabbett's site reconnaissance on September 24, 2025.

2.4.4 Groundwater

Based on the elevation contour maps, regional topography, and the location of nearby water bodies, groundwater underlying the subject property is inferred to likely flow to the east towards Alewife Brook and the Essex Bay.

Actual groundwater flow direction underlying the subject property may vary due to the topography, presence of underground utilities such as sewers, storm drains, and heterogeneous subsurface soil conditions. Measuring the actual depth to groundwater and flow direction is beyond the scope of an ASTM E1527-21 Phase I ESA.

2.4.5 Flood Zone

The subject property was located on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map FIRMette panels 25009C0293H dated July 8, 2025. According to FEMA, the subject property was located within an area of minimal flood hazard (Zone X). A copy of the FIRMette is provided in Appendix A.

2.4.6 Soils

The soil at the subject property underlying the buildings were classified by the USDA Natural Resources Conservation Service as Ridgebury fine sandy loam (70B), Scituate fine sandy loam that is very stony (316B), Canton fine sandy loam (420B), and Urban land (602). The urban land was mapped beneath the school building. A copy of the USDA soil map is provided in Appendix A.

Subject property soils that were not covered with hardscape were vegetated with grass, shrubs, and trees. No significant soil erosion or stained soil was noted during the site reconnaissance.

3.0 SITE RECONNAISSANCE

A site reconnaissance was performed to obtain information about environmental conditions at the subject property and at adjacent properties that could impact the subject property.

3.1 Methodology

On September 24, 2025, Mabbett representative Cassidy Way, QEP, CHMM, who meets the ASTM's *Environmental Professional* qualification, met in-person with Dustin Lombardi, Associate I Sr. Architect at JCJ, and Steve Hunt, Maintenance Supervisor for the Manchester Essex Schools. Mr. Hunt escorted Mabbett during the site reconnaissance. Information provided by Mr. Hunt is incorporated throughout this report.

Mabbett walked the subject property with the purpose of assessing potential RECs, BERs, and *de minimis* conditions. The site reconnaissance efforts consisted of making visual observations of conditions on the ground surface, building exteriors, and building interiors at the subject property, with a focus on identifying sumps, drains, improperly stored chemicals, and signs of chemical spills that may serve as a conduit between the building and the environment or a potential environmental hazard. The methodology involved walking through the main areas of interest within the building, including but not limited to, kitchens, custodial closets, classrooms, chemical storage areas, and boiler room. The focus of the site reconnaissance was on areas where hazardous substances or petroleum products are or may have been stored, used, treated, discharged, or disposed; maintenance and repair areas; boiler rooms; and a representative sample of occupant spaces. Mabbett toured the exterior grounds, observing all sides of the building. Mabbett also observed the adjoining properties from public thoroughfares. No intrusive activities were performed during the site reconnaissance.

The following sections present a summary of observations made during the site reconnaissance. Representative photographs are provided in Appendix B.

3.2 Observations of Subject Property Improvements

3.2.1 Buildings

The subject property was developed with one primarily brick building that was square shaped with an interior courtyard. The remaining property consisted of a grass athletic field, paved courts, a playground, a pond, a forested area, and paved parking areas.

Observed building materials included vinyl floor tiles, concrete block walls, ceiling tiles, and carpet. Utility rooms, including a boiler room, were present in the basement/subfloor level of the subject property.

3.2.2 Stormwater

Stormwater was managed onsite through catch basins and/or infiltration. Mr. Hunt believed that the sump in the boiler room and any floor drains at the subject property drained to the municipal sewer system.

The only pooling observed during the site visit was on the roof of the school due to recent rainfall.

3.2.3 Roads/Parking

The subject property was accessible from Story Street to the north and Western Avenue to the east. Paved parking areas were present on the north and east sides of the site building.

3.2.4 Heating and Cooling Sources

The subject property was heated via natural gas and steam. The subject property is cooled via chiller units.

3.2.5 Sanitary Sewerage

The subject property was connected to the Town of Essex municipal sewerage system.

The subject property was previously serviced by a septic tank that was located along the northeastern exterior of the school building and a leach field in the northeastern portion of the subject property. A permit to abandon the septic system was submitted in August 2005. The septic tank and pump chamber were removed in September 2005. No evidence of the historical septic system was observed during the site reconnaissance.

3.2.6 Water Supply

Essex Elementary School obtained its potable water from Town of Essex, who obtains its water three groundwater wells in Essex. The water is treated at the Essex Water Treatment Plant, which was constructed in 1982.

No potable water wells were observed on the subject property during the site reconnaissance. According MassDEP well database, several domestic and monitoring wells were identified on Western Avenue to the south of the subject property.

3.3 Underground Storage Tanks

According to a Conservation Commission record, the Conservation Commission was requested to determine the applicability of the Wetlands Protection Act for the removal of underground heating oil storage tanks at 12 Story Street in March 2002. No other information was reviewed pertaining to this tank.

Suspected fill and vent pipe locations were observed from within the boiler room and a suspected vent pipe was observed on the exterior wall of the subject property; however, their connection to a historical UST could not be confirmed. No fill pipe were observed along the exterior of the subject. Mabbett suspects the UST in question may have been an AST in the boiler room, which is below grade, thus its classification as a UST.

The lack of available information regarding the location and status of the UST and the subsurface conditions in the vicinity of the UST is considered a significant data gap.

3.4 Aboveground Storage Tanks

No evidence of ASTs was observed nor historically recorded for the subject property. A backup generator was observed along the eastern exterior of the subject property that had a diesel reservoir. No evidence of past or present releases was observed at this generator.

3.5 Hazardous Substance Use, Storage, and Disposal

The subject property did not maintain a designated hazardous waste storage area to temporarily store waste. Chemicals observed included paints, cleaners, and boiler chemicals. No improperly used, stored, or disposed of hazardous substances were observed during the site reconnaissance.

3.6 Non-Hazardous Solid Wastes and Disposal

Non-hazardous solid waste generated during routine Essex Elementary School operations was contained in dumpsters on the western exterior subject property. The dumpsters were designated for recyclable and non-recyclable waste. According to Mr. Hunt, these receptacles are emptied weekly or as needed. No improper handling of non-hazardous solid waste was observed during Mabbett's site reconnaissance.

3.7 Electrical Equipment and Polychlorinated Biphenyls (PCBs)

The Essex Elementary School representative was unsure if PCB-containing oils were ever used at the subject property. Electrical transformers and hydraulic reservoirs observed at the subject property visually appeared to be in good condition with no signs of leakage.

3.8 Stained Surfaces and Distressed Vegetation

Mabbett observed stained surfaces on the boiler room floor. The staining had a red, oily appearance. Additionally, a slight sheen was observed in a pit in the boiler room filled with groundwater. No obvious odor was observed. According to Mr. Hunt, in periods of heavy precipitation, groundwater would seep through the concrete floor and enter into the boiler room. Parts of the floor were observed as wet during the site reconnaissance. The apparent oil release in the boiler room represents a REC.

3.9 Underground Structures

Mabbett observed two internal grease traps located beneath kitchen sinks and one external grease trap. According to Mr. Hunt, these grease traps are cleaned out annually.

3.10 Per- and Poly-fluoroalkyl Substances (PFAS)

Mabbett conducted an assessment of potential sources of PFAS at or near the subject property. PFAS environmental contamination may come from a number of sources; including, but not limited to firefighting foam, waterproofing materials, wetting agents, and other industrial and consumer products. Department of Defense (DoD) facilities have also been associated with high levels of PFAS in groundwater due to training and firefighting activities, as well as other facility activities that are part of the DoD's mission. As a result, PFAS are nearly ubiquitous and have been found in rainwater and encountered in many environments and media including groundwater, soils, surface water, sediment, and human and animal tissues.

Mabbett searched USEPA, and other sources for identified PFAS sites within and in vicinity of the subject property (USEPA, 2025; EWG, 2025; Northeastern, 2025). The closest known PFAS sites was the Essex Water Department (EWG). According to the Essex Water Quality Report, no PFAS were detected during quarterly 2024 sampling.

Mabbett found no reference to the use of PFAS-containing materials, historical fires, or firefighting responses at the subject property or adjacent properties. Mabbett found no specific potential sources of PFAS at the subject property or adjacent properties, or indications of past property uses associated with PFAS use from the historical data as summarized in Section 5.1.4 through 5.1.6 of this report.

The available information reviewed by Mabbett did not identify historical releases of PFAS at the subject property; however, the presence of PFAS in soils and groundwater due to the use of town water for past irrigation purposes cannot be ruled out due to previous PFAS detections in municipal water.

4.0 USER PROVIDED INFORMATION

The following section summarizes the Phase I ESA User Questionnaire completed by the Manchester Essex Schools Maintenance Supervisor, Steve Hunt. The completed User Questionnaire is provided in Appendix C.

4.1 Owner, Property Manager, and Occupant Information

The subject property is owned and managed by the Town of Essex and occupied by the Essex Elementary School.

4.2 Title Records

The Essex Elementary School representative was not aware of any deed restrictions, environmental land use restrictions, environmental liens, or activity and use limitations on file for the subject property.

4.3 Environmental Permits and/or Violations

The Essex Elementary School representative was not aware of any state- or municipal-issued violations for the subject property.

As discussed in Section 3.3, the Essex Elementary School representative indicated that they were not knowledgeable of the former location of the historical UST.

4.4 Specialized Knowledge or Experience of the Owner

The Essex Elementary School representative did not have any specialized knowledge of the subject property.

4.5 Significant Valuation Reduction for Environmental Issues

The Essex Elementary School representative was not aware of significant valuation reduction due to environmental issues at the subject property, which is owned by the Town of Essex.

4.6 Reason for Performing Phase I ESA

This Phase I ESA is being completed in support of Manchester Essex Regional School District feasibility studies for the potential reuse of the subject property during either renovations or the construction of a new high school.

4.7 Other Owner-Provided Documents

Steve Hunt provided Mabbett with copies of the Safety Data Sheets (SDSs) of products used at the subject property. Products used included Multi-Clean cleaning products, Alkaline liquid cleaning product, liquid acrylic floor finish, sanitizer, descaling agent, rinse aid, dish machine detergent, and liquid bactericide and sanitizer.

Mabbett was also provided with a copy of the *Asbestos Hazard Emergency Response Act (AHERA) 3 Year Reinspection Report* dated January 2023 and prepared by Atlas Technical Consultants LLC. This document identified locations of known asbestos at the subject property, including floor tile and tile mastic, joint compound and associated gypsum wall board, pipe insulation, purple sink sealant, black sink sealant, grey sink sealant, interior door frame caulking, and other mastics.

No other owner-provided documents were available for Mabbett review.

5.0 RECORDS AND DATABASE REVIEW

Mabbett obtained and reviewed available environmental records for the subject property and adjoining properties. The records were reviewed to identify properties where chemical releases were reported to have occurred and to assess whether those releases create a REC at the subject property.

5.1 Standard Environmental Records

Mabbett contracted Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut, to conduct a search for available federal and state environmental records in compliance with ASTM E152721. EDR provided Mabbett with the database search results in an EDR Radius Report on September 16, 2025. EDR searched federal and state databases for records of properties with a history of a chemical release or chemical storage and located within the minimum search distance from the subject property as required by ASTM E1527-21. Records identified within these search distances from the subject property are summarized in Table 5-2. The databases for which no records were identified are presented in the full EDR report in Appendix D. The EDR report identified 3 "orphan" listings.

TABLE 5-1
Summary of Environmental Records Identified in the EDR Radius Report

Database	Records for the Subject Property	Search Distance (miles from the subject property)	Number of records within the search distance					Total Records Identified
			<1/8 mile	1/8 – 1/4 mile	1/4 – 1/2 mile	1/2 – 1 mile	>1 miles	
SEMS ARCHIVE	**0**	0.50	0	0	1	NR	NR	**1**
RCRA VSQG	**0**	0.25	0	1	NR	NR	NR	**1**
ERNS	**1**	TP	NR	NR	NR	NR	NR	**1**
MA SHWS	**0**	1.0	2	1	7	10	NR	**20**
MA SWF/LF	**0**	0.50	0	0	1	NR	NR	**1**
MA LUST	**0**	0.50	0	0	3	NR	NR	**3**
MA INST CONTROL	**0**	0.50	0	0	5	NR	NR	**5**
MA BROWNFIELDS	**0**	0.50	0	0	1	NR	NR	**1**
US BROWNFIELDS	**0**	0.50	0	0	1	NR	NR	**1**
ODI	**0**	0.50	0	0	1	NR	NR	**1**
FINDS	**1**	TP	NR	NR	NR	NR	NR	**1**
UST FINDER RELEASE	**0**	0.50	0	0	2	NR	NR	**2**
MA ASBESTOS	**2**	TP	NR	NR	NR	NR	NR	**2**
MA HW GEN	**0**	0.25	0	1	NR	NR	NR	**1**
RI MANIFEST	**0**	0.25	0	1	NR	NR	NR	**1**
MA MERCURY	**0**	0.50	1	0	0	NR	NR	**1**
Totals	**4**	--	2	4	23	10	0	**43**

NOTES:
TP = Target Property (the *subject property* per ASTM E1527-21)
NR = Not Required by ASTM E1527-21

5.1.1 Findings for the Subject Property

The subject property was identified within the Asbestos, ERNS, and Facility Index System/Facility Registry System (FINDS) databases.

In 2006, approximately 1,000 square ft (4,000 linear ft) of asbestos was removed from classrooms and crawlspaces. In 2017, approximately 12 linear ft of asbestos pipe wrap was removed from the subject property. Approximately 8 linear ft of asbestos from cement pipes was removed in July 2021. This asbestos was located outdoors.

The subject property was listed in the ERNS database under NRC Report Number 891302. In November 2008, a caller reported that an oil truck was driving down the road and spilled materials onto the ground while driving unknowingly. An estimated 50 gallons of fuel oil was reported as released. Absorbents were applied and the release was cleaned up. Based on this listing, the release occurred in Story Street, not on the subject property.

5.1.2 Findings for Adjoining and Surrounding Properties

Table 5-2 below describes properties identified in the EDR federal or state databases that are located within 0.25 miles of the subject property. Table 5-2 organizes findings by the EDR Map ID number.

As previously described in Section 2.4.3, groundwater flow at the subject property and immediate vicinity is inferred generally flow towards the east. Based on this groundwater flow direction, Mabbett was able to categorize the following properties identified in EDR databases as likely to be hydrologically upgradient, cross-gradient, or downgradient from the subject property. Contaminants released at upgradient or cross-gradient properties, and where the contaminants have reached groundwater, could have the potential to migrate in groundwater beyond the boundary of that property to reach the subject property. Contaminated groundwater that migrates beneath the subject property has the potential to impact environmental conditions.

Contaminants released to soil at upgradient or cross-gradient properties may migrate beyond the adjoining/surrounding property boundaries in sediment-laden stormwater. However, stormwater from these properties would not likely reach the subject property because of the many physical obstructions between the properties and the subject property; these obstacles include but are not limited to roads, curbs, and stormwater catch basins.

Contaminants released to groundwater at downgradient properties are assumed not to be a threat to environmental conditions at the subject property because the groundwater beneath these properties flows away from, and would not reach, the subject property.

TABLE 5-2
Records Identified in the EDR Radius Report

EDR Map ID(s)	Property Name(s) and Address	Database Listing(s)	Distance from Subject Property (feet)	Direction from Subject Property	Gradient Relative to Groundwater Flow in Area	REC? (Y/N)	Basis for REC Conclusion
5	17 Story Street	SHWS, RELEASE	125 ft	NNW	Crossgradient	N	Class A-1 RAO submitted in 1995.
6	60 Western Ave	SHWS, RELEASE	165 ft	NNW	Crossgradient	N	Class A-2 RAO submitted in 2001.
7	Across from 3 Brook Pasture Ln	SHWS, RELEASE	774 ft	ESE	Downgradient	N	Class A-1 RAO submitted in 2008.
8, 9	Neal Automotive 15 Western Ave	HW GEN, RCRA-VSQG, FINDS, ECHO, MANIFEST	975 ft	NE	Downgradient	N	No reported releases or violations.
10	Essex Sanitary Landfill Off Landing Road	ODI	1,410 ft	SSE	Crossgradient	N	Crossgradient and at a lower elevation than the subject property.
11	Martin St and Shepard Memorial	SHWS, RELEASE	1,700 ft	E	Downgradient	N	Utility Release Abatement Measure (URAM) from 2003; downgradient form the subject property.
12	Bothway Farm Southern Ave	SHWS, SWF/LF, INST CONTROL, RELEASE, ASBESTOS	1,750 ft	SSE	Crossgradient	N	Release associated with property more than one mile away. LF associated with crossgradient landfill.
13	Transfer Station 30 Landing Road	MERCURY	1,750 ft	SSE	Crossgradient	N	For collection and disposal of wastes

5.1.3 Aerial Photographs

Mabbett reviewed aerial photographs provided by EDR of the subject property and surrounding area. Aerial photographs were available for the years 1938, 1952, 1960, 1965, 1972, 1978, 1986, 1995, 2010, 2014, 2018, and 2023. Historical Aerial Photographs are provided in Appendix E. Certain details of the aerial photographs were difficult to ascertain due to the resolution and/or wide scale of the aerial photographs.

In the earliest aerial photograph dated 1938, the subject property was used as farmland. Two to three structures were present on the northern portion of the subject property near Story Street. Much of the nearby land appeared utilized for agricultural purposes.

No significant changes were noted on the subject property until 1960. The Essex Elementary School had been constructed at this time, along with the manmade pond on the southern corner of the subject property. The gymnasium addition was clearly present on aerial photographs by 1986. Of not, this addition reportedly occurred in 1975, but due to the quality of the aerial photograph dated 1978, was not confirmed until 1986. By 1995, a playground had been constructed by the southern property boundary. No significant changes were noted in the remaining aerial photographs dated through 2023.

The review of aerial photographs did not definitively identify past uses indicating RECs in, on, or at the subject property or surrounding area.

5.1.4 Historical USGS Topographic Maps

Historical USGS topographic maps provided by EDR were available for the subject property, adjoining areas, and the surrounding area for the years 1888, 1893, 1915, 1919, 1943, 1945, 1950, 1956, 1966, 1985, 1997, 2005, 2012, 2015, 2018, and 2021. The Historical Topo Map Report is included in Appendix E.

In the earliest topographic maps dated 1888 the subject property was depicted as undeveloped. By 1893, one structure was mapped on the northern boundary of the subject property by Story Street. Alewife Brook was mapped northeast of the subject property. Between 1915 and 1919, several structures and a roadway are depicted bisecting the subject property. By 1945, the roadway was no longer present and only one structure was depicted.

By 1966, the Essex Elementary School was depicted, along with the manmade pond in the southern corner of the subject property. By 1985, the gymnasium had been added to the subject property, bringing it to its current configuration. No significant changes were noted on the subject property in the remaining topographic maps dated through 2021.

The review of historical USGS topographic maps did not definitively identify past uses indicating RECs in, on, or at the subject property or surrounding area.

5.1.5 Historical City Directories

Historical City Directories provided by EDR were available for the subject property and for select addresses within the surrounding area for the years 1988, 1992, 1995, 2000, 2005, 2010, 2014, 2017, and 2020. A copy of the City Directory search is provided in Appendix E.

The subject property (12 Sory Street) was listed with the following occupants:

- 1988: Unlisted
- 1992: Cape Ann Collaborative
- 1995, 2000: Town of Essex School Department
- 2005: Unlisted
- 2010: Essex Elementary School, Essex School Superintendent
- 2014: Manchester Essex Regional School District

- 2017: Town of Essex
- 2022: Essex Elementary School, Manchester Essex Regional School District, Jennifer Roberts, Joan Endicott, John Kwiatek, Kanitah Conley, Linda Parady, Adrienne MacNeill

The Historical City Directory information did not definitively identify past uses indicating RECs in, on, or at the subject property or surrounding area.

5.1.6 Sanborn Fire Insurance Maps

Sanborn Fire Insurance maps were requested for the subject property from EDR but were not available for the subject property and surrounding areas. The Sanborn "Unmapped Property" document provided by EDR is provided in Appendix E.

5.1.7 Municipal Records

Mabbett requested current and historical environmentally pertinent information associated with the subject property from the Town of Essex in September 2025. Departments contacted included the Fire Department, City Clerk, Board of Health, Conservation Department, and Building Department.

Mabbett reviewed available permits from the Town of Essex Building Department. These permits included electrical and building permits.

Grease trap pumping records were reviewed at the Essex Board of Health for 2024.

In 1995, a complaint was filed for a septic odor in front of the school building. In September 2005, the septic tank and pump chamber at the subject property were abandoned. The septic tank was located on the northeastern wall of the school building with its associate leach field located further northeast of the septic tank. Of note, two unlabeled tanks were also depicted next to the corner of the school. Their use, contents, and sizes could not be ascertained by this document.

In 1997, the MassDEP commented on a NPDES permit application for the discharge of up approximately 20 gallons of boiler blowdown to a slump in the basement of the school. MassDEP was concerned about chemicals from the boiler within the discharge, the possibility of sewage entering the discharge, and the overall water quality standards of the discharge.

In May 2005, an indoor air quality assessment was performed. The presence of volatile organic compounds (VOCs) was not detected in any of the rooms analyzed.

In 2002, fecal coliform was detected in the pond at the subject property.

In March 2002, the Essex Conservation Commission was requested to "determine the applicability of the Wetlands Protection Act for the removal of underground heating oil storage tanks at the Essex Elementary and Middle School, 12 Story Street." No other information about the heating oil tank(s) was available for review.

Files reviewed from the Building Department and Board of Health are included in Appendix A.

5.1.8 Other Historical Sources

No other readily available historical sources were available for review.

6.0 SUBSURFACE VAPOR MIGRATION

Mabbett conducted a qualitative screening for potential Vapor Encroachment Conditions (VEC) that may affect the subject property. The screening used information about the current and historical usage of the subject property available from the EDR Radius Report to evaluate Chemicals of Concern (COCs), including petroleum hydrocarbons and non-petroleum chemicals. A copy of the EDR report is provided in Appendix D.

ASTM E 2600-10 defines an area of concern (AOC) with a minimum search radius of 1,760 ft (0.3 mile) from the subject property boundary when identifying properties contaminated with non-petroleum COCs that could potentially present a vapor intrusion risk at the subject property. For sites contaminated with petroleum hydrocarbon COCs, the AOC minimum search radius is 528 ft (0.1 mile) from the subject property boundary.

Mabbett considered the nature and extent of on-site and nearby sources of potential subsurface vapor migration by evaluating the current and historical usage of the subject property, the physical setting, and the regulatory agency database information (summarized in Section 5.0). To pose a vapor encroachment risk, releases must have contaminants that have migrated to groundwater, and the groundwater must have the potential to flow beneath the subject property. Additionally, the contaminant released must have the potential to migrate upward from groundwater to soil gas and then to the atmosphere.

Neither the subject property nor hydrologically upgradient or cross-gradient properties were identified as having releases of petroleum and non-petroleum COCs meeting these criteria within proximity to the Essex Elementary School building. Due to the suspected oil release, the risk of vapor encroachment conditions existing at the subject property is considered medium.

7.0 INTERVIEWS

Mabbett interviewed the individuals listed in Table 7-1 for information regarding environmental conditions at the subject property. Information from the interview is incorporated throughout this Phase I ESA.

TABLE 7-1
Interviews Completed for this Phase I ESA

Role	Name	Title/Company	Years in Current Role	Interview Type
Maintenance Supervisor	Steve Hunt	Manchester Essex Schools	19+ years	In-person site reconnaissance; user questionnaire

8.0 OTHER ENVIRONMENTAL CONDITIONS

8.1 Lead Based Paint

Lead-based paint (LBP) was commonly used prior to their ban in 1978. As such, it is possible that LBP is present on surfaces that were painted prior to 1978. Painted surfaces with cracking and peeling paints were observed during Mabbett's site reconnaissance.

8.2 Asbestos Containing Materials

Asbestos has historically been used in a wide range of building materials, including roofing shingles, ceiling and floor tiles, paper products, pipe insulation, asbestos cement products, and more.

Mabbett was provided with a copy of the *Asbestos Hazard Emergency Response Act (AHERA) 3 Year Reinspection Report* dated January 2023 and prepared by Atlas Technical Consultants LLC. This document identified locations of known asbestos at the subject property, including floor tile and tile mastic, joint compound and associated gypsum wall board, pipe insulation, purple sink sealant, black sink sealant, grey sink sealant, interior door frame caulking, and other mastics.

9.0 CONCLUSIONS AND RECOMMENDATIONS

Mabbett performed a Phase I ESA of Essex Elementary School (the subject property) at 12 Story Street in Essex, Essex County, Massachusetts in conformance with the scope and limitations of ASTM E1527-21. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report.

This Phase I ESA Report presents the results of non-intrusive environmental due diligence activities performed by Mabbett on behalf of the JCJ and the Town of Essex to support decision making about architectural feasibility at Essex Elementary School. The subject property for this Phase I ESA encompasses approximately 9.75 acres of land.

The Phase I ESA findings are summarized as follows:

- **Recognized Environmental Conditions (RECs)**

  During the site reconnaissance, a red colored petroleum staining was observed on the concrete floor of the boiler room, which was located sub-grade in the northeastern portion of the Essex Elementary School. Additionally, a slight petroleum sheen was observed within a pit filled with groundwater in the boiler room. According to Manchester Essex Schools Maintenance Supervisor, after periods of heavy precipitation, groundwater can seep through the concrete floor and enter the boiler room. Parts of the boiler room floor were observed to be visibly wet during the site reconnaissance. The oily sheen may have originated from a heating oil underground storage tank (UST) or aboveground storage tank (AST) previously associated with the boiler room; however, Mabbett was unable to confirm its size, contents, or historical location at the subject property. The indications observed of an oil release within the boiler room and the potential for that release to have impacted groundwater represents a REC.

- **Historical Recognized Environmental Conditions (HRECs)**

  No HRECs were identified on or affecting the subject property.

- **Controlled Recognized Environmental Conditions (CRECs)**

  No CRECs were identified on or affecting the subject property.

- **Data Gaps**

- According to a municipal record, the Conservation Commission was requested to determine the applicability of the Wetlands Protection Act for the removal of underground heating oil storage tanks at 12 Story Street in March 2002. Mabbett was unable to obtain documentation confirming the removal of a UST at the subject property nor environmental conditions associated with the removal of an UST. No records were available for review pertaining to its size, location, or contents. A vent pipe, but no fill pipe, was observed exiting the northeastern wall of the Essex Elementary School near the current generator. Suspected UST piping was observed entering through the wall of the boiler room; however, the source and purpose of this piping could not be confirmed. The lack of information and documentation pertaining to this UST record represents a data gap.

- **Business Environmental Risks (BERs)**

  Regulated Building Materials: According to the 2023 Asbestos Hazard Emergency Response Act (AHERA) Inspection Report, documented asbestos containing material (ACM) are present throughout the elementary school. Considering the age of the existing school building, lead-based paint (LBP) was presumably used during original construction and subsequent upkeep through 1978, and such coatings are anticipated to be present on a significant portion of interior and exterior surfaces. The documented presence of ACM and presumed presence of LBP represents a business environmental risk (BER) due to the added cost of abatement during future demolition or renovation of the building.

Fill Soils: The U.S Department of Agriculture (USDA) Web Soil Survey identified the soils located beneath the elementary school and southeast of the elementary school as Urban land (i.e., urban fill). The potential for the quality of fill materials to result in elevated environmental premiums for off-site management during future redevelopment activities is considered a BER.

10.0 REFERENCES

ASTM E1527-21 - Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

EDR Aerial Photo Decade Package, July 2, 2025, Inquiry 8036777.8.

EDR Certified Sanborn Map Report, July 2, 2025, Inquiry 8036777.3.

EDR City Directory Image Report, July 4, 2025, Inquiry 80367775.

EDR Historical Topo Map Report, July 2, 2025, Inquiry 8036777.4.

EDR Radius Map Report with GeoCheck, July 2, 2025, Inquiry 8036777.2s.

Environmental Working Group (EWG), 2023. PFAS Contamination in the U.S. map application. Accessed at https://www.ewg.org/interactive-maps/pfas_contamination/map/, on July 23, 2025.

FEMA, Flood Map Service Center, FIRMette Tool, accessed at https://msc.fema.gov/portal/search, July 3, 2025.

MassDEP EEA Data Portal, https://eeaonline.eea.state.ma.us/portal#!/home.

Northeastern University, *PFAS Sites and Community Resources*, accessed at https://experience.arcgis.com/experience/12412ab41b3141598e0bb48523a7c940/page/Page-1/?views=Presumptive-Contamination, on July 23, 2025.

United States Department of Fish and Wildlife, 2018. Wetlands Mapper, accessed at https://www.fws.gov/wetlands/data/mapper.html, on July 3, 2025.

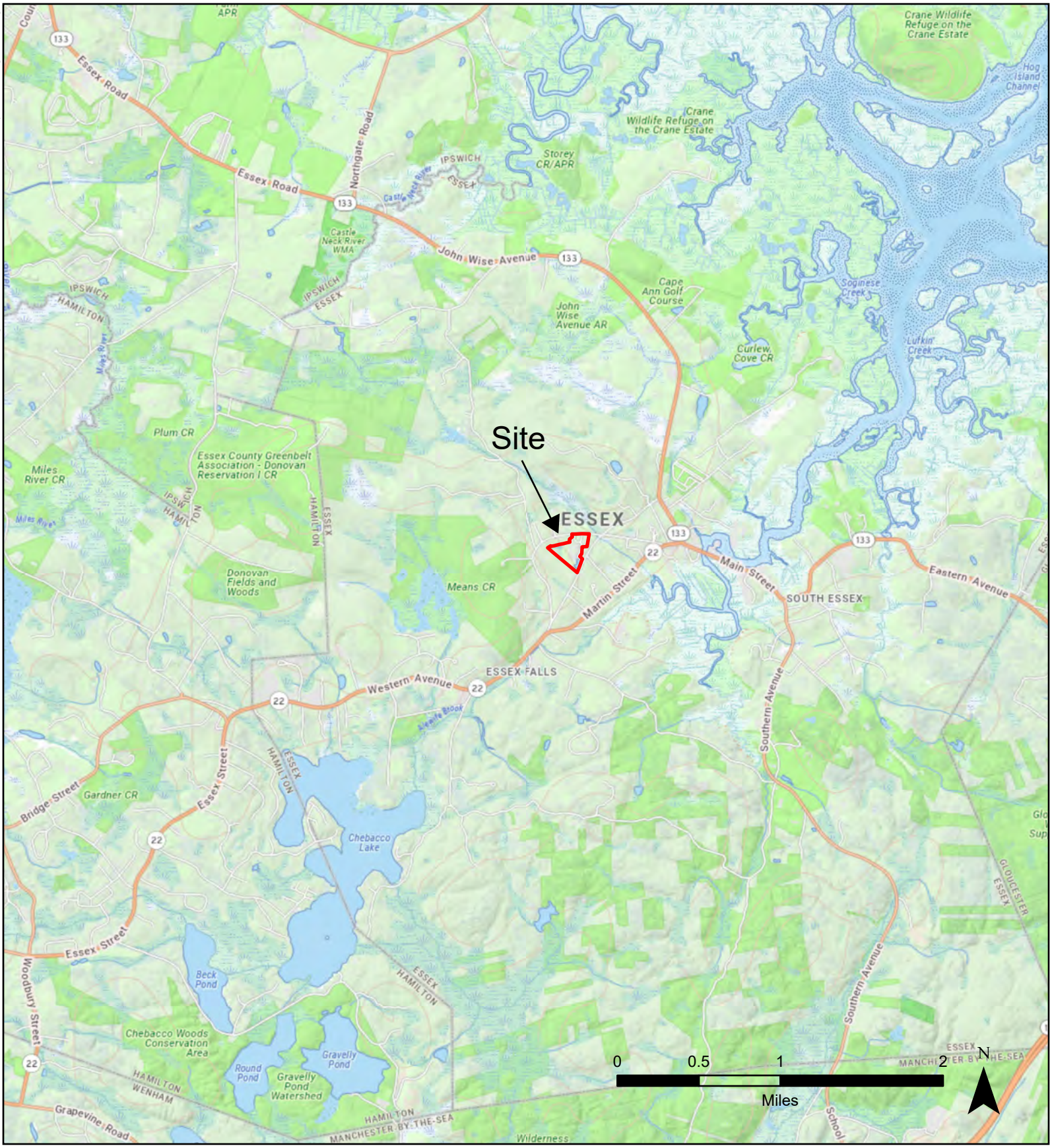
USEPA, accessed at https://awsedap.epa.gov/public/extensions/PFAS_Tools/PFAS_Tools.html, on July 23, 2025.

USGS Interactive Bedrock Map of the United States, accessed at https://mrdata.usgs.gov/geology/state/state.php?state=CA, on July 3, 2025.

USGS, 7.5 Minute Topographic Map, Brockton Quadrangle, accessed at https://store.usgs.gov/map-locator, on July 3, 2025.

FIGURES

C:\Users\EliBDining\Mabbett & Associates, Inc. (GCC)\Mabbett - Projects\Working Files\Design



Mabbett
Scientists | Engineers | Program Managers
105 Central Street, Suite 4100
Stoneham, MA 02180
T. (781) 275-6050
www.mabbett.com
©2025 Mabbett & Associates. Inc.

SITE LOCUS

ESSEX ELEMENTARY SCHOOL
12 STORY STREET
ESSEX, MA 01929

FIGURE 1-1

Drawn By: EBD	Approved By: CEW
Projection: NAD 1983 StatePlane Massachusetts FIPS 2001 (Meters)	
Project Number: R2025131.001.003	Date: 9/22/2025

C:\Users\EliBDining\Mabbett & Associates, Inc. (GCC)\Mabbett - Projects\Working Files\Design



Mabbett
Scientists | Engineers | Program Managers
105 Central Street, Suite 4100
Stoneham, MA 02180
T. (781) 275-6050
www.mabbett.com
©2025 Mabbett & Associates. Inc.

SITE LAYOUT

ESSEX ELEMENTARY SCHOOL
12 STORY STREET
ESSEX, MA 01929

FIGURE 1-2

Drawn By: EBD	Approved By: CEW
Projection: NAD 1983 StatePlane Massachusetts FIPS 2001 (Meters)	
Project Number: R2025131.001.003	Date: 10/21/2025

Notes:
MassGIS, USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information. Data refreshed October 3, 2025.

APPENDIX A

SUPPORTING DOCUMENTS

129	5				1 of 1	GOVERNMENT
MAP	LOT	SUB LOT	BUILDING	UNIT	CARD	**Essex**

	Total Card	Total Parcel
APPRAISED:	4,558,200/	4,558,200
USE VALUE:	4,558,200/	4,558,200
ASSESSED:	4,558,200/	4,558,200

PROPERTY LOCATION

No	Alt No	Direction/Street/City
12		STORY ST, Essex

OWNERSHIP

Unit #:

Owner 1:	TOWN OF ESSEX ELEMENTARY
Owner 2:	SCHOOL
Owner 3:	
Street 1:	ESSEX TOWN HALL
Street 2:	30 MARTIN ST
Twn/City:	ESSEX
St/Prov:	MA Cntry: Own Occ:
Postal:	01929 Type:

PREVIOUS OWNER

Owner 1:	
Owner 2:	
Street 1:	
Twn/City:	
St/Prov:	Cntry:
Postal:	

NARRATIVE DESCRIPTION

This parcel contains 9.75 ACRES of land mainly classified as IMPROV EDUC with a SCHOOL Building built about 1958, having primarily BRICK Exterior and 52259 Square Feet, with 1 Unit, 2 Baths, 0 3/4 Bath, 0 HalfBath, 0 Rooms, and 0 Bdrm.

OTHER ASSESSMENTS

Code	Descrip/No	Amount	Com. Int

IN PROCESS APPRAISAL SUMMARY

Use Code	Land Size	Building Value	Yard Items	Land Value	Total Value
934	9.750	3,873,400	22,400	662,400	4,558,200
Total Card	9.750	3,873,400	22,400	662,400	4,558,200
Total Parcel	9.750	3,873,400	22,400	662,400	4,558,200

Source: Market Adj Cost | Total Value per SQ unit /Card: 87.22 /Parcel: 87.22

PREVIOUS ASSESSMENT

Tax Yr	Use	Cat	Bldg Value	Yrd Items	Land Size	Land Value	Total Value	Asses'd Value	Notes	Date
2025	934	FV	3,794,200	20000	9.75	597,000	4,411,200		Year End Roll	12/16/2024
2025	934	NC	3,794,200	20000	9.75	597,000	4,411,200		Year End Roll	11/16/2024
2024	934	FV	3,420,600	20000	9.75	575,300	4,015,900		Year End Roll	12/28/2023
2023	934	PTCH	3,079,800	20000	9.75	575,300	3,675,100	3,675,100	patch	3/15/2023
2023	934	FV	3,079,800	20000	9.75	575,300	3,675,100	3,675,100	Year End Roll	1/18/2023
2022	934	FV	3,018,500	20000	9.75	527,300	3,565,800	3,565,800	Year End Roll	1/10/2022
2021	934	FV	3,018,500	20000	9.75	507,700	3,546,200	3,546,200	Year End Roll	12/28/2020
2020	934	FV	2,851,500	18500	9.75	509,900	3,379,900	3,379,900	Year End Roll	1/6/2020

SALES INFORMATION

TAX DISTRICT | PAT ACCT.

Grantor	Legal Ref	Type	Date	Sale Code	Sale Price	V	Tst	Verif	Notes
			1/1/1900			No	No		

BUILDING PERMITS

Date	Number	Descrip	Amount	C/O	Last Visit	Fed Code	F Descrip	Comment
8/24/2016	3596	RENOVATE	67,750	C				
7/22/2009	2541	MANUAL	3,700	C				SCHOOL ALTERATIONS
5/30/2007	2291	MANUAL	4,000	C				CRUSHED STONE FOUN
8/17/2005	2018	MANUAL	105,743	C				WHEELCHAIR LIFT/BA
8/2/2002	726	ADDITION	200,000	C				ATTACH 48X70 MODUL
6/25/1990	72		25	C				RAZE GARA

PROPERTY FACTORS

Item	Code	Description	%	Item	Code	Description
Z				water		
o				Sewer		
n				Electri		
Census:				Exmpt		
Flood Haz:						
D	0	0	100	Topo		
s				Street		
t				Gas:		

LAND SECTION (First 7 lines only)

Use Code	Description	LUC Fact	No of Units	Depth / PriceUnits	Unit Type	Land Type	LT Factor	Base Value	Unit Price	Adj	Neigh	Neigh Influ	Neigh Mod	Infl 1	%	Infl 2	%	Infl 3	%	Appraised Value	Alt Class	%	Spec Land	J Code	Fact	Use Value	Notes
934	IMPROV EDU		43560		SQUARE FE	SITE		0	10.5	1.00	6									457,380						457,400	
934	IMPROV EDU		150		FRONT FEE	SITE		0	200.	1.00	6									30,000						30,000	
934	IMPROV EDU		3.69		ACRES	SITE		0	20,000.	1.00	6									73,800						73,800	
934	IMPROV EDU		5.06		ACRES	SITE		0	20,000.	1.00	6									101,200						101,200	

Legal Description

Entered Lot Size

Total Land: 10.1

Land Unit Type: AC

User Acct	1356
GIS Ref	
GIS Ref	
Insp Date	04/17/13

Parcel ID 129-5

!1262!

PRINT

Date	Time
09/24/25	09:10:29

LAST REV

Date	Time
10/18/18	10:11:57

brenda

1262

Patriot Properties Inc.

USER DEFINED

Prior Id # 1:	36-3
Prior Id # 2:	
Prior Id # 3:	
Prior Id # 1:	
Prior Id # 2:	
Prior Id # 3:	
Prior Id # 1:	
Prior Id # 2:	
Prior Id # 3:	
ASR Map:	
Fact Dist:	
Reval Dist:	
Year:	
LandReason:	
BldReason:	
CivilDistrict:	
Ratio:	

ACTIVITY INFORMATION

Date	Result	By	Name
4/17/2013	Measur+1Visi	399	KEITH HAWLEY
12/28/1990		RP	RP
5/18/1988	Measur+Liste	AS	AS

Sign: VERIFICATION OF VISIT NOT DATA __/__/__

Total AC/HA: 9.75000 Total SF/SM: 424710 Parcel LUC: 934 IMPROV EDUC Prime NB Desc SITE INDEX 6 Total: 662,380 Spl Credit Total: 662,400

Disclaimer: This Information is believed to be correct but is subject to change and is not warranteed. Database: AssessPro - Essex pwright 2026

EXTERIOR INFORMATION

Type:	58 - SCHOOL
Sty Ht:	1 - 1
(Liv) Units:	1 Total: 1
Foundation:	1 - CONCRETE
Frame:	6 - OTHER
Prime Wall:	7 - BRICK
Sec Wall:	%
Roof Struct:	4 - FLAT
Roof Cover:	11 - MEMBRANE
Color:	1981
View / Desir:	A - AVERAGE

GENERAL INFORMATION

Grade:	C - AVERAGE
Year Blt:	1958 Eff Yr Blt:
Alt LUC:	Alt %:
Jurisdict:	Fact:
Const Mod:	
Lump Sum Adj:	

INTERIOR INFORMATION

Avg Ht/FL:	STD
Prim Int Wall	1 - DRYWALL
Sec Int Wall:	%
Partition:	
Prim Floors:	12 - CONCRETE
Sec Floors:	5 - LINO/VINYL 50 %
Bsmnt Flr:	
Subfloor:	
Bsmnt Gar:	
Electric:	
Insulation:	
Int vs Ext:	
Heat Fuel:	1 - OIL
Heat Type:	3 - FORCED H/W
# Heat Sys:	
% Heated:	% AC:
Solar HW:	NO Central Vac: NO
% Com Wal	% Sprinkled

BATH FEATURES

Full Bath	2	Rating:	
A Bath:		Rating:	
3/4 Bath:		Rating:	
A 3QBth		Rating:	
1/2 Bath:		Rating:	
A HBth:		Rating:	
OthrFix:		Rating:	

OTHER FEATURES

Kits:		Rating:	
A Kits:		Rating:	
Frpl:		Rating:	
WSFlue:		Rating:	

CONDO INFORMATION

Location:	
Total Units:	
Floor:	
% Own:	
Name:	

DEPRECIATION

Phys Cond:	AV - Average	32. %
Functional:		%
Economic:		%
Special:		%
Override:		%
Total:		32 %

CALC SUMMARY

Basic $ / SQ:	115.00
Size Adj.:	0.86148131
Const Adj.:	1.02910507
Adj $ / SQ:	101.954
Other Features:	10000
Grade Factor:	1.00
NBHD Inf:	1.00000000
NBHD Mod:	
LUC Factor:	1.00
Adj Total:	5696240
Depreciation:	1822797
Depreciated Total:	3873443

COMMENTS

ESSEX ELEMENTARY SCHOOL.

RESIDENTIAL GRID

1st Res Grid	Desc:	# Units

Level	FY	LR	DR	D	K	FR	RR	BR	FB	HB	L	O
Other												
Upper												
Lvl 2												
Lvl 1												
Lower												

Totals	RMs:	BRs:	Baths: 2	HB

REMODELING

Exterior:	
Interior:	
Additions:	
Kitchen:	
Baths:	
Plumbing:	
Electric:	
Heating:	
General:	

RES BREAKDOWN

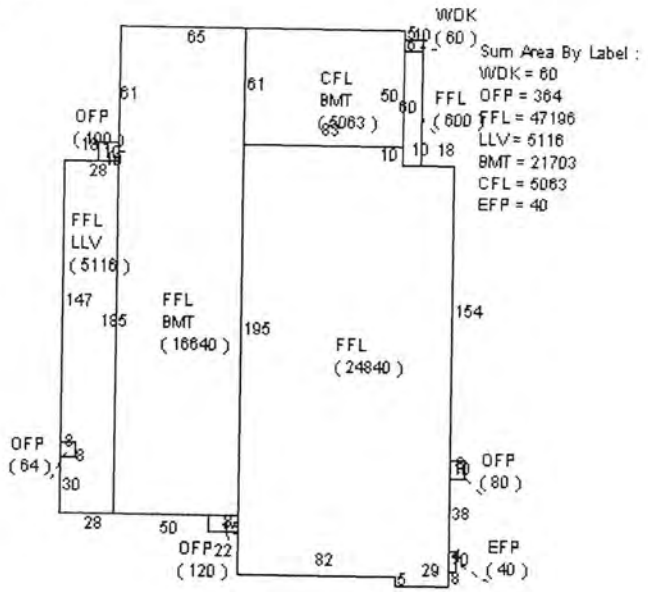
No Unit	RMS	BRS	FL
Totals			

COMPARABLE SALES

Rate	Parcel ID	Typ	Date	Sale Price

WtAv$/SQ:	AvRate:	Ind.Val	
Juris. Factor:		Before Depr:	101.95
Special Features:	0	Val/Su Net:	48.70
Final Total:	3873400	Val/Su SzAd	74.12

SKETCH



SUB AREA

Code	Description	Area - SQ	Rate - AV	Undepr Value
FFL	1ST FLOOR	47,196	101.950	4,811,812
BMT	BASEMENT	21,703	25.490	553,176
LLV	LOWR LEVEL	5,116	40.780	208,638
CFL	CATHEDRL	5,063	20.390	103,238
OFP	OPEN PORCH	364	17.490	6,368
WDK	WOOD DECK	60	16.000	960
EFP	ENCL PORCH	40	51.200	2,048

	Net Sketched Area:	79,542		Total:	5,686,240
Size Ad	52259	Gross Area	79542	FinArea	52259

SUB AREA DETAIL

Sub Area	% Usbl	Descrip	% Type	Qu	# Ten

MOBILE HOME

Make: Model: Serial #: Year: Color:

SPEC FEATURES/YARD ITEMS

PARCEL ID 129-5

Code	Description	A	Y/S	Qty	Size/Dim	Qual	Con	Year	Unit Price	D/S	Dep	LUC	Fact	NB	Fa	Appr Value	JCod	JFact	Juris. Value
85	PAVING	D	Y	1	30000.00	A	AV	1988	1.46	T	50	934				21,900			21,900
2	SHED/FR	D	Y	1	10x20	F	FR	1958	6.09	T	55	934				500			500

More: N Total Yard Items: 22,400 Total Special Features:

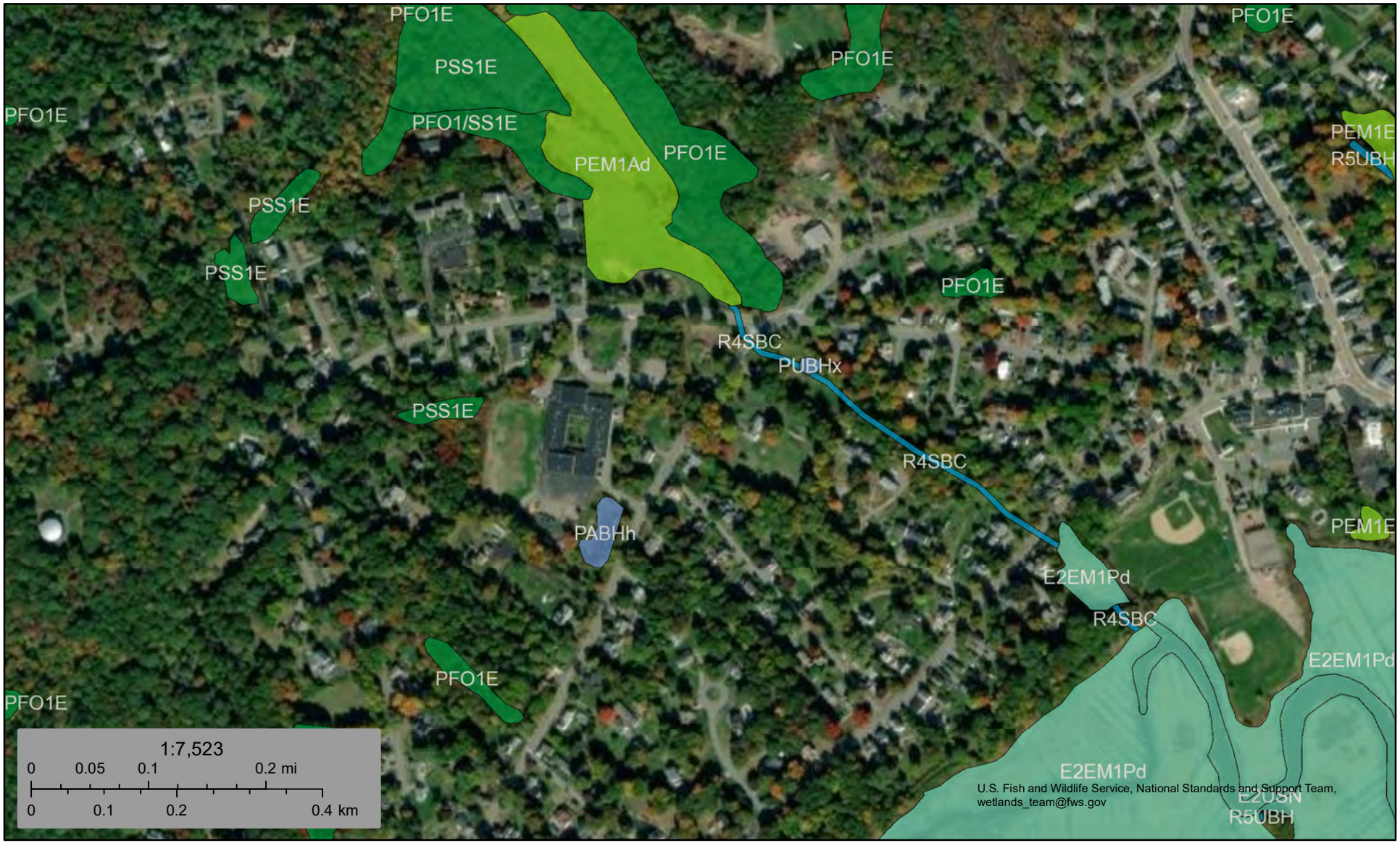
IMAGE

AssessPro Patriot Properties, Inc



U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands



September 19, 2025

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Flood Hazard Layer FIRMette

FEMA

70°47'39"W 42°38'9"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

70°47'2"W 42°37'43"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/19/2025 at 7:18 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

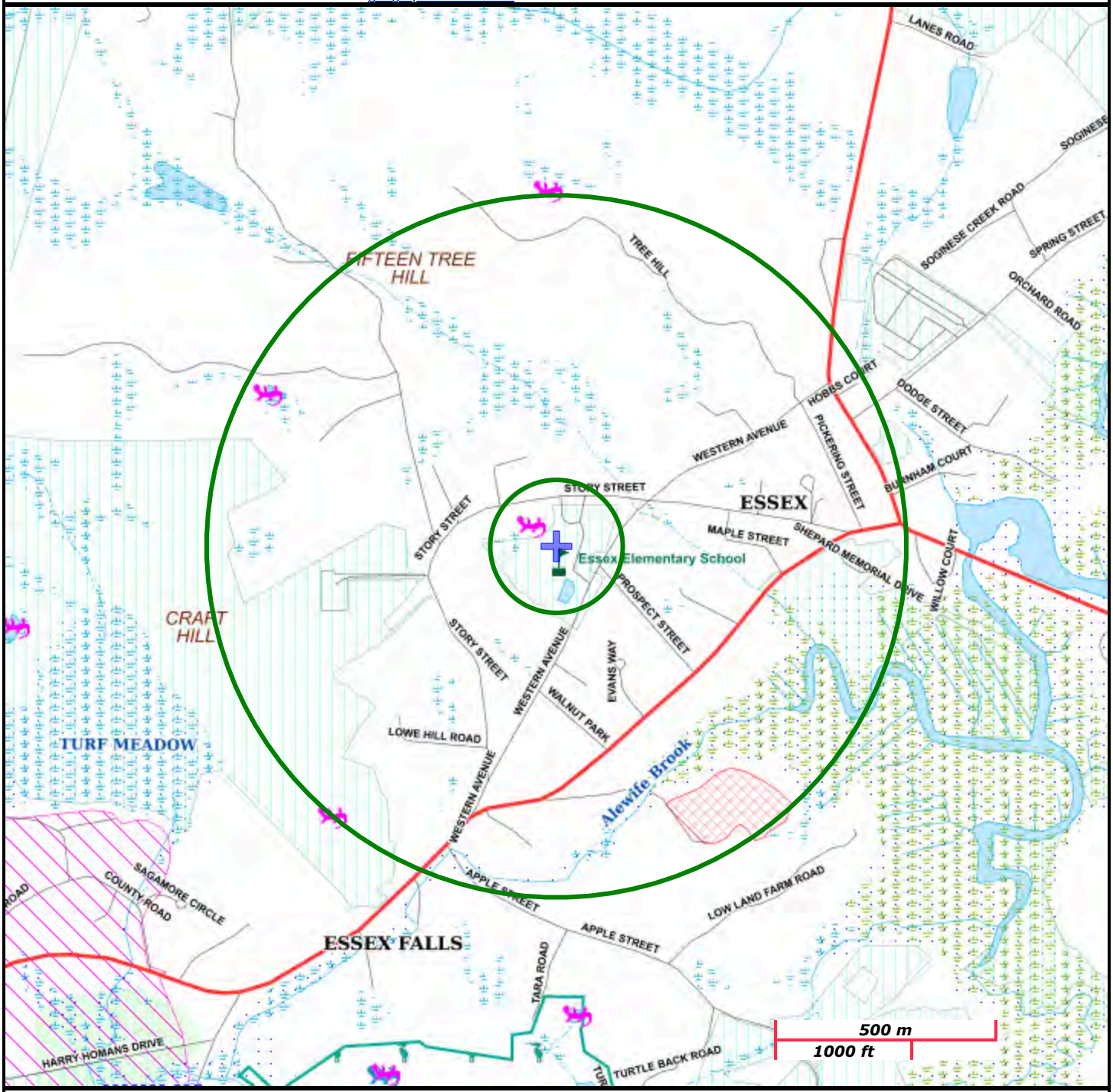
Site Information:

12 STORY ST ESSEX, MA

NAD83 UTM Meters:
4721519mN , 353222mE (Zone: 19)
October 6, 2025

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: https://www.mass.gov/orgs/massgis-bureau-of-geographic-information.

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

NHESP Pri-Hab of Rare Species; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.



Map Scale: 1:2,340 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 30 60 120 180

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Essex County, Massachusetts, Southern Part
Survey Area Data: Version 21, Aug 27, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 22, 2022—Jun 5, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
70B	Ridgebury fine sandy loam, 0 to 3 percent slopes	3.0	28.6%
316B	Scituate fine sandy loam, 3 to 8 percent slopes, very stony	2.1	19.8%
420B	Canton fine sandy loam, 3 to 8 percent slopes	3.2	30.4%
602	Urban land	2.2	21.2%
Totals for Area of Interest		**10.4**	**100.0%**

129-5

Commonwealth of Massachusetts
Department of Fire Services
BOARD OF FIRE PREVENTION REGULATIONS
(Please add zip codes & electrician's cell #; contract # & bld permit # if applicable.)

Official Use Only	
Permit No.	
Occupancy and Fee Checked [Rev. 1/07]	(leave blank)

APPLICATION FOR PERMIT TO PERFORM ELECTRICAL WORK

All work to be performed in accordance with the Massachusetts Electrical Code (MEC), 527 CMR 12.00

(PLEASE PRINT IN INK OR TYPE ALL INFORMATION) **Date:** 10/24/2017

City or Town of: Essex

By this application the undersigned gives notice of his or her intention to perform the electrical work described below.

Location (Street & Number) 12 Story St.

Owner or Tenant Manchester-Essex Reg. School District **Telephone No** 978-526-4412

Owner's Address 36 Lincoln St., Manchester-by-the-Sea, MA 01944

Is this permit in conjunction with a building permit? Yes ☐ No ☑ **(Check Appropriate Box)**

Purpose of Building Municipal **Utility Authorization No.** _____

Existing Service _____ **Amps** _____ **Volts** **Overhead** ☐ **Undgrd** ☐ **No. of Meters** _____

New Service _____ **Amps** _____ **Volts** **Overhead** ☐ **Undgrd** ☐ **No. of Meters** _____

Number of Feeders and Ampacity _____

Location and Nature of Proposed Electrical Work: Replacement of existing Lights with LEDs

Completion of the following table may be waived by the Inspector of Wires.

No. of Recessed Luminaires	**No. of Ceil.-Susp. (Paddle) Fans**		**No. of Transformers** / **Total KVA**
No. of Luminaire Outlets	**No. of Hot Tubs**		**Generators** / **KVA**
No. of Luminaires	**Swimming Pool** Above grnd. ☐ In-grnd. ☐		**No. of Emergency Lighting Battery Units**
No. of Receptacle Outlets	**No. of Oil Burners**		**FIRE ALARMS** / **No. of Zones**
No. of Switches	**No. of Gas Burners**		**No. of Detection and Initiating Devices**
No. of Ranges	**No. of Air Cond.** / **Total Tons**		**No. of Alerting Devices**
No. of Waste Disposers	**Heat Pump Totals:** Number / Tons / KW		**No. of Self-Contained Detection/Alerting Devices**
No. of Dishwashers	**Space/Area Heating KW**		**Local** ☐ **Municipal Connection** ☐ **Other**
No. of Dryers	**Heating Appliances** / **KW**		**Security Systems:* No. of Devices or Equivalent**
No. of Water Heaters / **KW**	**No. of Signs**	**No. of Ballasts**	**Data Wiring: No. of Devices or Equivalent**
No. Hydromassage Bathtubs	**No. of Motors**	**Total HP**	**Telecommunications Wiring: No. of Devices or Equivalent**
OTHER:			

Attach additional detail if desired, or as required by the Inspector of Wires.

Estimated Value of Electrical Work: $ 100,000 (When required by municipal policy.)

Work to Start: ASAP Inspections to be requested in accordance with MEC Rule 10, and upon completion.

INSURANCE COVERAGE: Unless waived by the owner, no permit for the performance of electrical work may issue unless the licensee provides proof of liability insurance including "completed operation" coverage or its substantial equivalent. The undersigned certifies that such coverage is in force, and has exhibited proof of same to the permit issuing office.

CHECK ONE: INSURANCE ☒ BOND ☐ OTHER ☐ (Specify:)

I certify, under the pains and penalties of perjury, that the information on this application is true and complete.

FIRM NAME: Guardian Energy Management Solutions **LIC. NO.:** A1547A

Licensee: Matt Whittemore **Signature** [signature] **LIC. NO.:** _____

(If applicable, enter "exempt" in the license number line.)

Address: 420 Northboro Rd Central Marlborough 01752 MA **Bus. Tel. No.:** 781-560-3682 **Alt. Tel. No.:** 508-597-1333

*Security System Contractor License required for this work; if applicable, enter the license number here: _____

OWNER'S INSURANCE WAIVER: I am aware that the Licensee *does not have* the liability insurance coverage normally required by law. By my signature below, I hereby waive this requirement. I am the (check one) ☐ owner ☐ owner's agent.

Owner/Agent Signature _____ **Telephone No.** _____

PERMIT FEE: $ 35

4418

129-5

Commonwealth of Massachusetts
Department of Fire Services
BOARD OF FIRE PREVENTION REGULATIONS

Official Use Only
Permit No. _____
Occupancy and Fee Checked _____
[Rev. 1/07] (leave blank)

APPLICATION FOR PERMIT TO PERFORM ELECTRICAL WORK

All work to be performed in accordance with the Massachusetts Electrical Code (MEC), 527 CMR 12.00

(PLEASE PRINT IN INK OR TYPE ALL INFORMATION) **Date:** 8-21-17

City or Town of: Essex *To the Inspector of Wires:*

By this application the undersigned gives notice of his or her intention to perform the electrical work described below.

Location (Street & Number) 12 Story Street

Owner or Tenant Manchester Essex Regional School District **Telephone No.** 978-526-2065

Owner's Address P.O Box 1407

Is this permit in conjunction with a building permit? Yes ☐ No ☐ (Check Appropriate Box)

Purpose of Building School **Utility Authorization No.** _____

Existing Service _____ **Amps** ____/____ **Volts** **Overhead** ☐ **Undgrd** ☐ **No. of Meters** _____

New Service _____ **Amps** ____/____ **Volts** **Overhead** ☐ **Undgrd** ☐ **No. of Meters** _____

Number of Feeders and Ampacity _____

Location and Nature of Proposed Electrical Work: New Fire Alarm System

Completion of the following table may be waived by the Inspector of Wires.

No. of Recessed Luminaires	**No. of Ceil.-Susp. (Paddle) Fans**	**No. of Transformers**	**Total KVA**
No. of Luminaire Outlets	**No. of Hot Tubs**	**Generators**	**KVA**
No. of Luminaires	**Swimming Pool** Above grnd. ☐ In-grnd. ☐	**No. of Emergency Lighting Battery Units**	
No. of Receptacle Outlets	**No. of Oil Burners**	**FIRE ALARMS**	**No. of Zones** Addressable
No. of Switches	**No. of Gas Burners**	**No. of Detection and Initiating Devices**	156
No. of Ranges	**No. of Air Cond.** **Total Tons**	**No. of Alerting Devices**	77
No. of Waste Disposers	**Heat Pump Totals:** Number / Tons / KW	**No. of Self-Contained Detection/Alerting Devices**	
No. of Dishwashers	**Space/Area Heating KW**	**Local** ☐ **Municipal Connection** ☐ **Other**	
No. of Dryers	**Heating Appliances KW**	**Security Systems:* No. of Devices or Equivalent**	
No. of Water Heaters KW	**No. of Signs** **No. of Ballasts**	**Data Wiring: No. of Devices or Equivalent**	
No. Hydromassage Bathtubs	**No. of Motors** **Total HP**	**Telecommunications Wiring: No. of Devices or Equivalent**	
OTHER:			

Estimated Value of Electrical Work: $ 173,969.00 *Attach additional detail if desired, or as required by the Inspector of Wires.* (When required by municipal policy.)

Work to Start: 8-23-17 Inspections to be requested in accordance with MEC Rule 10, and upon completion.

INSURANCE COVERAGE: Unless waived by the owner, no permit for the performance of electrical work may issue unless the licensee provides proof of liability insurance including "completed operation" coverage or its substantial equivalent. The undersigned certifies that such coverage is in force, and has exhibited proof of same to the permit issuing office.

CHECK ONE: INSURANCE ☐ BOND ☐ OTHER ☐ (Specify:)

I certify, under the pains and penalties of perjury, that the information on this application is true and complete.

FIRM NAME: Jupiter Electric, Inc. **LIC. NO.:** A9679

Licensee: James E. Marshall **Signature** _____ **LIC. NO.:** A9679

(If applicable, enter "exempt" in the license number line.)

Address: 142B Lafayette Road Salisbury, MA 01952 **Bus. Tel. No.:** _____ **Alt. Tel. No.:** _____

*Per M.G.L. c. 147, s. 57-61, security work requires Department of Public Safety "S" License: Lic. No. _____

OWNER'S INSURANCE WAIVER: I am aware that the Licensee *does not have* the liability insurance coverage normally required by law. By my signature below, I hereby waive this requirement. I am the (check one) ☐ owner ☐ owner's agen

Owner/Agent Signature _____ **Telephone No.** _____

PERMIT FEE: $ 35.00

#34968 Rc'd 9/5/17 BC

No. of Water Heaters	KW	No. of Signs	No. of Ballasts	Data Wiring: No. of Devices or Equivalent
No. Hydromassage Bathtubs		No. of Motors	Total HP	Telecommunications Wiring: No. of Devices or Equivalent

Town of Essex

BUILDING PERMIT

Amount Paid $0.00 AMT. 0 CK. NO.

VALIDATION

DATE: August 24, 2016

PERMIT NO. **3596**

APPLICANT GLENN BATTISTELLI, LLC ADDRESS PO BOX 496, BEVERLY MA 01915 (CONTR'S LICENSE) 2123

PERMIT TO REMODEL (TYPE OF IMPROVEMENT) NO. STORY (PROPOSED USE) NO. OF DWELLING UNITS

AT (LOCATION) 12 STORY STREET (NO) (STREET)

MAP 129 LOT 5 OLD MAP/LOT 36/3

BUILDING IS TO BE _____ WIDE BY _____ LONG BY _____ FT. IN HEIGHT AND SHALL CONFORM IN CONSTRUCTION

TO TYPE _____ USE GROUP _____ BASEMENT WALLS OR FOUNDATION _____

REMARKS PROJECT: CONVERT 30' X 20' LOCKER ROOM INTO TWO (2) 15' X 10' CLASSROOMS.

* Persons contracting with unregistered contractors do not have access to the guaranty fund (as set forth in MGL c. 142A).

AREA OR VOLUME _____ (CUBIC/SQUARE FEET) ESTIMATED COST $67,750.00 PERMIT FEE $0.00

OWNER MERSD - AVI VRBAS, DIRECTOR OF FINANCE AND OPERATIONS

ADDRESS 36 LINCOLI

BUILDING DEPT.

BY BS/mell

No. Hydromassage Bathtubs		No. Water Closets or Urinals Required or Provided

H&A HABEEB & ASSOCIATES ARCHITECTS

August 16, 2016

Avi Urbas
Director of Finance and Operations
Manchester –Essex Regional School District
36 Lincoln Street
Manchester –by-the –Sea, MA. 01944

Re : BUILDING CODE COMPLIANCE LETTER
H&A JN 1308.02

Dear Avi,

The following is the Building Code Compliance Letter for the Building Inspector:

The Essex Elementary School was constructed in two phases. The original one story building of 31,280 SF was constructed in 1957. A one story addition of 11,500 SF was completed in 1975. Within this new addition, in the South West corner contains the Gymnasium, the Boys' Locker Room and the Girls' Locker Room. The Existing Girls' Locker Room is the subject of this renovation.

The Girls' Locker Room is being divided into two sections length wise, leaving the area that is currently used for lockers as the area to be renovated into two rooms, Area #1 at 136 SF and Area #2 at 159 SF. Door #1 is a new one-hour fire rated door that leads in to the Primary corridor. This Primary corridor is on the other side of the North wall of Areas #1 and #2. This corridor is a transitional element for the new 1975 addition. The North wall of Areas #1 and #2 is also a Load Bearing wall and has a one-hour fire rating. This was evidenced by checking the existing plans and checking the adjacent doors leading into the Primary corridor. These doors are one-hour fire rated. The school does not have a Sprinkler System.

Please note the following summary by categories below:

Fire Rated Walls:	The perimeter walls of the Girls' Locker Room is a concrete block one-hour fire rated wall with the North wall load bearing. All fenestrations will maintain a one-hour fire rating.
Fire Rated Doors:	The one new door and hardware leading into the Primary Corridor from Area #1 is also one-hour fire rated. All existing doors remain the same.
Fire Rated Windows:	The Windows in the North wall of Areas #1 and #2 are one-hour fire rated. Glass will not exceed 1296 square inches pre window.

150 LONGWATER DR
NORWELL, MA
02061-1618
781-871-9804
habeebarch.com

District:	Manchester-Essex
School Name:	Essex Elementary School
Address:	12 Story Street Essex, MA 01929
School Hours:	
In-session Contact:	
Off-Hours Contact:	
Approach Hazards:	
Notes:	

First Floor

Side C

Side B

Side D



Side A

Legend

- Single Door
- Double Door
- Window
- Stairs
- Ramp
- Elevator
- Fire Extinguisher
- Gas Shut-Off
- Electrical Shut-Off
- Water Shut-Off
- Chair Lift
- Sprinkler Shutoff
- Generator
- Camera
- Fire Standpipe

129-5
36-3

Commonwealth of Massachusetts

Department of Fire Services

BOARD OF FIRE PREVENTION REGULATIONS

Official Use Only

Permit No. _____

Occupancy and Fee Checked _____

[Rev. 9/05] (leave blank)

APPLICATION FOR PERMIT TO PERFORM ELECTRICAL WORK

All work to be performed in accordance with the Massachusetts Electrical Code (MEC), 527 CMR 12.00

(PLEASE PRINT IN INK OR TYPE ALL INFORMATION) **Date:** 8-10-16

City or Town of: Essex *To the Inspector of Wires:*

By this application the undersigned gives notice of his or her intention to perform the electrical work described below.

Location (Street & Number) Elementary School

Owner or Tenant _____ **Telephone No.** _____

Owner's Address 12 Story ST.

Is this permit in conjunction with a building permit? **Yes** ☒ **No** ☐ **(Check Appropriate Box)**

Purpose of Building _____ **Utility Authorization No.** _____

Existing Service — **Amps** — **Volts** **Overhead** ☐ **Undgrd** ☐ **No. of Meters** —

New Service _____ **Amps** / **Volts** **Overhead** ☐ **Undgrd** ☐ **No. of Meters** _____

Number of Feeders and Ampacity _____

Location and Nature of Proposed Electrical Work: Added 2 class RMS. outlets, switches, In New walls

Completion of the following table may be waived by the Inspector of Wires.

No. of Recessed Luminaires	**No. of Ceil.-Susp. (Paddle) Fans**		**No. of Transformers** / **Total KVA**
No. of Luminaire Outlets	**No. of Hot Tubs**		**Generators** / **KVA**
No. of Luminaires	**Swimming Pool** Above grnd. ☐ In-grnd. ☐		**No. of Emergency Lighting Battery Units**
No. of Receptacle Outlets	**No. of Oil Burners**		**FIRE ALARMS** / **No. of Zones**
No. of Switches	**No. of Gas Burners**		**No. of Detection and Initiating Devices**
No. of Ranges	**No. of Air Cond.** / **Total Tons**		**No. of Alerting Devices**
No. of Waste Disposers	**Heat Pump Totals:** / **Number** / **Tons** / **KW**		**No. of Self-Contained Detection/Alerting Devices**
No. of Dishwashers	**Space/Area Heating KW**		**Local** ☐ **Municipal Connection** ☐ **Other**
No. of Dryers	**Heating Appliances** / **KW**		**Security Systems:* No. of Devices or Equivalent**
No. of Water Heaters / **KW**	**No. of Signs**	**No. of Ballasts**	**Data Wiring: No. of Devices or Equivalent**
No. Hydromassage Bathtubs	**No. of Motors**	**Total HP**	**Telecommunications Wiring: No. of Devices or Equivalent**
OTHER:			

Attach additional detail if desired, or as required by the Inspector of Wires.

Estimated Value of Electrical Work: _____ (When required by municipal policy.)

Work to Start: _____ Inspections to be requested in accordance with MEC Rule 10, and upon completion.

INSURANCE COVERAGE: Unless waived by the owner, no permit for the performance of electrical work may issue unless the licensee provides proof of liability insurance including "completed operation" coverage or its substantial equivalent. The undersigned certifies that such coverage is in force, and has exhibited proof of same to the permit issuing office.

CHECK ONE: INSURANCE ☐ BOND ☐ OTHER ☐ (Specify:)

I certify, under the pains and penalties of perjury, that the information on this application is true and complete.

FIRM NAME: _____ **LIC. NO.:** _____

Licensee: Kenneth H. Keyes **Signature** Kenneth Keyes **LIC. NO.:** 070888

(If applicable, enter "exempt" in the license number line.) **Bus. Tel. No.:** 978-948-2898

Address: 30 Fairmount Ave. Haverhill MA 01830 **Alt. Tel. No.:** 479-0533

*Security System Contractor License required for this work; if applicable, enter the license number here: _____

OWNER'S INSURANCE WAIVER: I am aware that the Licensee *does not have* the liability insurance coverage normally required by law. By my signature below, I hereby waive this requirement. I am the (check one) ☐ owner ☐ owner's agent.

Owner/Agent Signature _____ **Telephone No.** _____

PERMIT FEE: $ 194.

#307

Ok To issue 7/22/09 AL

APPLICATION FOR PLAN EXAMINATION AND Building Permit

TOWN OF ESSEX MASSACHUSETTS

No. 2541 Fee $ N/C

AS-BUILT REQUIRED FOR NEW DWELLINGS

IMPORTANT – Applicant to complete all items

1 LOCATION OF BUILDING

OWNER Town of Essex

STREET 12 Story st

SUBDIVISION _____ MAP 36 LOT NO. 3 LOT SIZE _____

BOARD OF HEALTH YES / NO	FLOOD PLAIN YES / NO
CONSERVATION YES / NO	D.P.W. YES / NO
WETLANDS YES / NO	FIRE DEPT. YES / NO

2 TYPE AND COST OF BUILDING

A. TYPE OF IMPROVEMENT
- ☐ New building
- ☐ Addition – Specify _____
- ☑ Alteration
- ☐ Repair, replacement
- ☐ Foundation only
- ☐ Other – Specify _____

B. OWNERSHIP
- ☐ Private (individual, corporation, nonprofit institution, etc.)
- ☐ Public (Federal, State, or local government)

C. EST. OF IMPROVEMENT

$ 3,700.00

D. PROPOSED USE

Residential
- ☐ One family
- ☐ Two or more family Enter number of units _____
- ☐ Transient hotel, motel of dormitory Enter number of units _____
- ☐ Garage
- ☐ Carport
- ☐ Other – Specity _____

CHANGE OF USE YES (NO)

IF YES:
CURRENT USE _____

PROPOSED USE _____

Non residential – Describe in detail proposed use of buildings, e.g., food processing plant, machine shop, laundry building at hospital, elementary school, secondary school, college, parochial school, parking garage for department store, rental office building, office building at industrial plant. If use of existing building is being changed, enter proposed use.

elementary school

DESCRIPTION OF WORK TO BE PERFORMED

construct metal stud partition and add one five rated door.

3 SELECTED CHARACTERISTICS OF BUILDING

E. CHIMNEYS & FIREPLACES

No. and type chimneys Ø

No. and type fireplaces Ø

Name of Mason Ø

F. PRINCIPAL TYPE OF HEATING FUEL
- ☑ GAS
- ☐ OIL
- ☐ ELECTRICITY
- ☐ COAL
- ☐ OTHER – SPECIFY _____

G. TYPE OF SEWAGE DISPOSAL*
- ☑ PUBLIC
- ☐ PRIVATE (Septic Tank, etc.)

H. TYPE OF WATER SUPPLY*
- ☑ PUBLIC OR PRIVATE CO.
- ☐ PRIVATE (well, cistern)

I. TYPE OF MECHANICAL

Will there be central air conditioning?
☐ YES ☐ NO

Will there be an elevator?
☐ YES ☑ NO

J. DIMENSIONS

Number of Entries	
Building Length	
Building Width	
Building Heigh (Average grade to top of roof)	

K. NUMBER OF OFF STREET PARKING SPACES

Enclosed	
Outdoors	

L. RESIDENTIAL BUILDINGS ONLY

Number of rooms		
Number of bathrooms	Full	
	Partial	

* See Board of Health requirements sheet

SECRETARY

PAUL J. COTE, JR.

DEPT. FILE COPY

BUILDING PERMIT

AMOUNT PAID: N/A (waived)

VALIDATION

APPLICANT Essex Elementary School DATE May 30, 2007 PERMIT NO. 2291

ADDRESS 12 Story Street (NO.) (STREET) (CONTR'S LICENSE)

PERMIT TO Greenhouse (TYPE OF IMPROVEMENT) ( ) NO. STORY Educational (PROPOSED USE) NUMBER OF DWELLING UNITS

AT (LOCATION) 12 Story Street (NO.) (STREET) ZONING DISTRICT

BETWEEN (CROSS STREET) AND (CROSS STREET)

SUBDIVISION Map 36 LOT 3 BLOCK LOT SIZE

BUILDING IS TO BE 8 FT. WIDE BY 26 FT. LONG BY 8 FT. IN HEIGHT AND SHALL CONFORM IN CONSTRUCTION

TO TYPE USE GROUP BASEMENT WALLS OR FOUNDATION (TYPE)

REMARKS: Dig crushed stone "foundation" (8'x26') to support greenhouse.
*Persons contracting with unregistered contractors do not have access to the guaranty fund (as set forth in MGL c.142A)

AREA OR VOLUME (CUBIC/SQUARE FEET) ESTIMATED COST $ 4,000.00 PERMIT FEE $ N/A

OWNER MERSD - Essex Elementary School

ADDRESS 12 Story Street, Essex, MA 01929

BUILDING DEPT. BY BI

FORM NO. I.C.C. - BP 2003

(Affidavit on reverse side of application to be completed by authorized agent of owner)

C. EST. OF IMPROVEMENT
$ Less Than 4K

of existing building is being changed, enter proposed use.
Greenhouse structure to be used for Educational Purposes

DESCRIPTION OF WORK TO BE PERFORMED
Dig "foundation", 8x26 To Support Greenhouse - Crushed Stone

~~Essex Elementary School~~
12 Story Street
Essex, MA 01929
(978) 768-7324

3 SELECTED CHARACTERISTICS OF BUILDING

E. CHIMNEYS & FIREPLACES
No. and type chimneys Ø
No. and type fireplaces Ø
Name of Mason Ø

G. TYPE OF SEWAGE DISPOSAL*
☒ PUBLIC
☐ PRIVATE (Septic Tank, etc.)

H. TYPE OF WATER SUPPLY*
☒ PUBLIC OR PRIVATE CO.
☐ PRIVATE (well, cistern)

J. DIMENSIONS
Number of Entries 1
Building Length 26
Building Width 8
Building Heigh (Average grade to top of roof) 8

K. NUMBER OF OFF STREET PARKING SPACES N/A
Enclosed N/A
Outdoors N/A

F. PRINCIPAL TYPE OF HEATING FUEL
☐ GAS
☐ OIL
☒ ELECTRICITY – FOR FANS ONLY
☐ COAL
☒ OTHER – SPECIFY

I. TYPE OF MECHANICAL
Will there be central air conditioning?
☐ YES ☒ NO
Will there be an elevator?
☐ YES ☒ NO

L. RESIDENTIAL BUILDINGS ONLY
Number of rooms N/A
Number of bathrooms Full N/A
Partial N/A

See Board of Health requirements sh...

36-3

The Commonwealth of Massachusetts
Executive Office of Health and Human Services
Department of Public Health
250 Washington Street, Boston, MA 02108-4619

MITT ROMNEY
GOVERNOR

KERRY HEALEY
LIEUTENANT GOVERNOR

RONALD PRESTON
SECRETARY

PAUL J. COTE, JR.
COMMISSIONER

RECEIVED
MAY 23 2005
TOWN OF ESSEX
BOARD OF HEALTH

May 18, 2005

Roger L. Young
Assistant Superintendent for Finance/Facilities
Manchester-Essex Regional School District
P.O. Box 1407
Manchester, MA 01944

Dear Mr. Young:

Enclosed are copies of the reports by Sharon Lee, Environmental Analyst of our Emergency Response/Indoor Air Quality Program, on her visit to conduct indoor air assessments at the Essex Elementary and Middle School and Modular Annex. The reports show that there were problems identified. Please refer to the recommendation sections for advice on how to correct these problems.

If you have any questions regarding the report or if we can be of further assistance in this matter, please feel free to call us at (617) 624-5757.

Sincerely,

Suzanne K. Condon, Associate Commissioner
Center for Environmental Health

Enclosure
cc: Mike Feeney, Director, Emergency Response/Indoor Air Quality, CEH
Robert Shaps, Superintendent, Manchester-Essex Regional School District
Essex Board of Health
Eric Gordon, Principal, Essex Elementary and Middle School
Senator Bruce E. Tarr
Representative Anthony J. Verga

ings to reduce the likelihood of symptoms in sensitive individuals (NIOSH, 1997). A question and answer sheet concerning latex allergy is attached as Appendix B (NIOSH, 1998).

Also was the amount of materials stored inside classrooms (Picture 23). In classrooms throughout the school, items were seen on windowsills, tabletops, counters, bookcases and desks. The amount of items stored in classrooms provides a means for dusts, dirt and other potential respiratory irritants to accumulate and make it difficult for custodial staff to clean.

Conclusions/Recommendations

In view of the findings at the time of the visit, the following recommendations are made:

1. Examine each univent for function. Operate univents while classrooms are occupied. Check fresh air intakes for repair and increase the percentage of fresh air intake if necessary.
2. Examine exhaust vents for function and make repairs as necessary.
3. Operate all ventilation systems that are operable throughout the building (e.g., gym, auditorium, classrooms) continuously during periods of school occupancy independent of thermostat control to maximize air exchange.
4. Remove all obstructions from univents and exhaust vents to facilitate airflow. Close classroom doors to improve air exchange.
5. Remove debris and dust accumulated on the ventilation grilles.
6. Consult a ventilation engineer concerning re-balancing of the ventilation systems and the calibration of univent fresh air control dampers throughout the school. Ventilation industrial standards recommend that mechanical ventilation systems be balanced every five years (SMACNA, 1994).

7. For buildings in New England, periods of low relative humidity during the winter are often unavoidable. Therefore, scrupulous cleaning practices should be adopted to minimize common indoor air contaminants whose irritant effects can be enhanced when the relative humidity is low. To control for dusts, a high efficiency particulate arrestance (HEPA) filter equipped vacuum cleaner in conjunction with wet wiping of all surfaces is recommended. Avoid the use of feather dusters. Drinking water during the day can help ease some symptoms associated with a dry environment (throat and sinus irritations).

8. Examine the feasibility of increasing HVAC filter efficiency. Note that prior to any increase of filtration, each unit should be evaluated by a ventilation engineer as to whether they can maintain function with more efficient filters.

9. Identify and repair sources of water leaks. Replace water-damaged ceiling tiles. These ceiling tiles can be a source of microbial growth. Examine the non-porous surface beneath the removed ceiling tiles and disinfect with an appropriate antimicrobial.

10. For removal of tiles directly adhered to the ceiling, such removal would be considered a renovation activity that can release particulates and spores in particular, if the material is moldy. Replacement of ceiling tiles may also involve glues that contain VOCs. In order to minimize occupant exposure, repairs should be done while the building is unoccupied.

11. Examine plants in classrooms for mold growth in water catch basins. Disinfect water catch basins if necessary. Remove plants from ventilation sources.

12. Remove plants growing against building and its foundation to prevent water intrusion through brickwork.

13. Ensure water is flowing in the ramp and crawlspace water channels. Examine and remove any debris that may impede water movement.

RECEIVED

14. *Operate* auxiliary fan in classroom 9 at least 15-20 minutes prior and following any science laboratory projects.

15. Ensure doors leading to the storage and crawlspace remain closed to prevent the movement of odors and materials into occupied areas.

16. Refrain from using food as materials for projects.

17. Relocate or consider reducing the amount of materials stored in classrooms to allow for more thorough cleaning of classrooms. Clean items regularly with a wet cloth or sponge to prevent excessive dust build-up.

18. Consider discontinuing the use of tennis balls on furniture and replacing tennis balls with alternative "glides". Refer to Picture 24 for an example.

19. Extend exhaust pipe above ventilation equipment to prevent entrainment of odors and particles.

20. Consider adopting the US EPA document, *Tools for Schools* (US EPA, 2000b), as a means to maintaining a good indoor air quality environment in the building. This document can be downloaded from the Internet at http://www.epa.gov/iaq/schools/index.html.

21. Refer to resource manuals and other related indoor air quality documents for further building-wide evaluations and advice on maintaining public buildings. Copies of these materials are located on the MDPH's website: http://www.state.ma.us/dph/beha/iaq/iaqhoFtme.htm.

OK TO issue 7/31/02 BS

TOWN OF ESSEX

36-3

APPLICATION FOR PLAN EXAMINATION AND

RECEIVED
AUG 1 5 2002
TOWN OF ESSEX
BOARD OF SELECTMEN

Commonwealth of Massachusetts
Board of Building Regulations and Standards
Manufactured Buildings Program
LABEL REQUEST FORM

This Section for State Use Only

		Label Numbers Issued:			
Date Received	8/12/02	79877 79878 79879 79880 79881			
Fee Received	$ 250.00				
Check Number	5603	Date Issued:	8/12/02	Issued by:	K Spencer

This Section to be Completed by Manufacturer – PLEASE PRINT OR TYPE

SECTION 1 – MANUFACTURER INFORMATION		BBRS\DPS I.D. #	4200
Manufacturer Name	Miller Building Systems	MC #	086
Street	64 Hess Road		
City/State/Zip	Leola Pa. 17540		
Manufacturer Telephone Number: (717) 656-2081		Fax Number: (717) 656-6271	
Manufacturer - Plant Inspector	Jesse Wanchek		
Third Party Agency	PFS Corporation	TPIA #	02
Number of Labels	5	Total Amount Attached	$ 250.00
Manufacturer's Serial Number	10252-1-5	Manufacturer's Model Designation	2173

SECTION 2 – LOCATION OF BUILDING	
Street	12 Storey Street
City/State/Zip	Essex Ma. 01929

SECTION 3 – BUILDER/DEALER/CERTIFIED INSTALLER INFORMATION			
Builder/Dealer	Vanguard Modular Building Systems		
Street	160 Sylvan Street		
City/State/Zip	Danvers	Ma.	01923
Certified Installer	William LaVoie		
Licensed Construction Supervisor	William LaVoie	License Number:	055079254S
		Expiration Date:	8-12-04

This form shall be completed by the manufacturer when requesting manufactured building labels. All information shall be clearly indicated. Incomplete forms will be returned to the manufacturer unprocessed.

This request shall be forwarded to the State Board of Building Regulations and Standards - CERC Building, Paul A. Dever School - 1380 Bay Street, Taunton, MA 02780

Bbrs\Forms2\mfgLabelRequest
June 15, 2001

AS-BUILT REQUIRED FOR NEW DWELLINGS

IMPORTANT – Applicant to complete all items

1 OWNER Town of Essex

Ok To issue 7/31/02 BJ

TOWN OF ESSEX MASSACHUSETTS

APPLICATION FOR PLAN EXAMINATION AND Building Permit

No. 226 Fee $ No Fee Town project

AS-BUILT REQUIRED FOR NEW DWELLINGS

IMPORTANT – Applicant to complete all items 7/30/02 E.W.

1 LOCATION OF BUILDING

OWNER Town of Essex

STREET Essex Elementary + Middle School
12 Story Street

SUBDIVISION _____ MAP 36 LOT NO. 3 LOT SIZE 250 k ±

BOARD OF HEALTH	YES / NO	FLOOD PLAIN	YES / NO
CONSERVATION	YES / NO	D.P.W.	YES / NO
WETLANDS EP	YES / NO	FIRE DEPT.	YES / NO

2 TYPE AND COST OF BUILDING

A. TYPE OF IMPROVEMENT

- ☐ New building
- ☒ Addition – Specify Temporary modular classrooms
- ☐ Alteration
- ☐ Repair, replacement
- ☐ Foundation only
- ☐ Other – Specify _____

B. OWNERSHIP

- ☐ Private (individual, corporation, nonprofit institution, etc.)
- ☒ Public (Federal, State, or local government)

C. EST. OF IMPROVEMENT

$ 200,000

D. PROPOSED USE

Residential

- ☐ One family
- ☐ Two or more family
  Enter number of units _____
- ☐ Transient hotel, motel of dormitory
  Enter number of units _____
- ☐ Garage
- ☐ Carport
- ☒ Other – Specity Classrooms

CHANGE OF USE YES / NO

IF YES:
CURRENT USE _____

PROPOSED USE _____

Non residential – Describe in detail proposed use of buildings, e.g., food processing plant, machine shop, laundry building at hospital, elementary school, secondary school, college, parochial school, parking garage for department store, rental office building, office building at industrial plant. If use of existing building is being changed, enter proposed use.

Elementary / middle School

DESCRIPTION OF WORK TO BE PERFORMED

Attach 48'x70' Modular Classroom building to existing school

3 SELECTED CHARACTERISTICS OF BUILDING

E. CHIMNEYS & FIREPLACES

No. and type chimneys _____

No. and type fireplaces _____

Name of Mason _____

F. PRINCIPAL TYPE OF HEATING FUEL

- ☒ GAS L/P
- ☐ OIL
- ☐ ELECTRICITY
- ☐ COAL
- ☐ OTHER – SPECIFY _____

G. TYPE OF SEWAGE DISPOSAL*

- ☐ PUBLIC
- ☐ PRIVATE (Septic Tank, etc.) N/A

H. TYPE OF WATER SUPPLY*

- ☐ PUBLIC OR PRIVATE CO.
- ☐ PRIVATE (well, cistern) N/A

I. TYPE OF MECHANICAL

Will there be central air conditioning?
- ☒ YES ☐ NO

Will there be an elevator?
- ☐ YES ☒ NO

J. DIMENSIONS

Number of Entries	2
Building Length	70
Building Width	48
Building Heigh (Average grade to top of roof)	13'

K. NUMBER OF OFF STREET PARKING SPACES

Enclosed	
Outdoors	

L. RESIDENTIAL BUILDINGS ONLY

Number of rooms		
Number of bathrooms	Full	
	Partial	

* See Board of Health requirements sheet

TOWN OF ESSEX ... APPLICATION FOR PLAN EXAMINATION AND

The Commonwealth of Massachusetts

TOWN OF ESSEX 36-3

BUILDING DEPARTMENT

APPLICATION FOR PERMIT TO BUILD

To the Inspector of Buildings:

The undersigned hereby applies for a permit to build according to the following specifications:—

1. Owner's name TOWN OF ESSEX
2. Owner's address ESSEX MASS
3. Architect's name W.H. JONES & SON
4. Builder's name INTERSTATE CONST CO.
5. Builder's address 194 BROADWAY SAUGUS MASS
6. Location of building, No. ..... Street .....
7. Size of lot N.A.
8. Is this a new building, addition or a removal? ADDITION & REMODEL PARTS OF EXISTING
9. Side of Street. North ..... South ..... East ..... West .....
10. If removal, from where? .....
11. What is the purpose of building? SCHOOL
12. Material of building? BRICK BLOCK - CONCRETE
13. If for a dwelling, for how many families? N.A.
14. Is there to be a store in the lower story? NO How many? .....
15. Size of building, No. of feet front 156'-4"; No. of feet deep 70'-0; No. of stories .....
16. No. of feet from the level of the ground to the highest part of the roof 24'-
17. Size of ell, No. of feet front .....; No. of feet deep .....; No. of feet high .....
18. How near the line of the street? .....
19. How near the line of adjoining lot? Right .....; Left .....; Rear .....
20. Nearest building is ..... feet in a ..... direction .....
21. What will be the means of access to roof? .....

22. Size of floor timbers, 1st ..... 2d ..... 4th ..... 5th .....

The Commonwealth of Massachusetts

TOWN OF ESSEX 36-3

BUILDING DEPARTMENT

APPLICATION FOR PERMIT TO BUILD

To the Inspector of Buildings:

The undersigned hereby applies for a permit to build according to the following specifications:—

1. Owner's name TOWN OF ESSEX
2. Owner's address ESSEX MASS
3. Architect's name W.H. JONES & SON
4. Builder's name INTERSTATE CONST CO.
5. Builder's address 194 BROADWAY SAUGUS MASS
6. Location of building, No..... Street.....
7. Size of lot N.A.
8. Is this a new building, addition or a removal? ADDITION & REMODEL PARTS OF EXISTING
9. Side of Street. North..... South..... East..... West.....
10. If removal, from where? .....
11. What is the purpose of building? SCHOOL
12. Material of building? BRICK BLOCK - CONCRETE
13. If for a dwelling, for how many families? N.A.
14. Is there to be a store in the lower story? NO How many?.....
15. Size of building, No. of feet front 156'-4"; No. of feet deep 70'-0; No. of stories.....
16. No. of feet from the level of the ground to the highest part of the roof 24'-
17. Size of ell, No. of feet front.....; No. of feet deep.....; No. of feet high.....
18. How near the line of the street? .....
19. How near the line of adjoining lot? Right.....; Left .....; Rear.....
20. Nearest building is..... feet in a..... direction.....
21. What will be the means of access to roof? .....
22. Size of floor timbers, 1st.....; 2d.....; 3d.....; 4th.....; 5th.....
23. No. of feet span.....; Distance to centers.....
24. Will the building be erected on solid or filled land? SOLID
25. What is the material of foundation? REINF. CONCRETE
26. Will the roof be flat, pitched, mansard, hip or gambrel? FLAT
27. Material of roof covering? METAL DECK - GYPBOARD - INSUL. TAR & GRAVEL
28. Will the building be heated by steam, furnace, stoves, or grates? STEAM
29. No. of brick walls? ALL Where located?..... Thickness? 12"
30. Number of rooms? .....
31. Fireplace? X
32. Size of Studding? .....
33. Estimated cost (must be filled out) .....
34. Will the building conform to the requirements of the law? .....
35. Is a sewage disposal system to be constructed, altered, installed or repaired in connection with this project? Yes..... No ✓
36. What is, or will be the water supply for this building? TOWN WATER
37. Is the above water supply suitable and available for year round use? YES

Signature of applicant..... Peter W Nuchols FOR INTERSTATE CONST CO.

Applicant agrees to give the Inspector of Buildings 24 hours' notice before lathing, plastering or closing in studding on this building.

The building will conform to the requirements of the law.

REMARKS

.....

.....

.....

FORM 1067 HOBBS & WARREN, INC. (REVISED

APPLICATION FOR PLAN EXAMINATION AND Building Permit

No..... Fee $.....

IMPORTANT – *Applicant to complete all items*

1 LOCATION OF BUILDING

OWNER ESSEX ELEMENTARY SCHOOL

STREET 12 STORY STREET

ESSEX MA

SUBDIVISION _____ MAP 36 LOT NO. 3 LOT SIZE _____

BOARD OF HEALTH YES / NO	FLOOD PLAIN YES / NO
CONSERVATION YES / NO	D.P.W. YES / NO
WETLANDS YES / NO	FIRE DEPT. YES / NO

2 TYPE AND COST OF BUILDING

A. TYPE OF IMPROVEMENT

- ☐ New building
- ☐ Addition – Specify _____
- ☒ Alteration
- ☐ Repair, replacement
- ☐ Foundation only
- ☐ Other – Specify _____

B. OWNERSHIP

- ☐ Private (individual, corporation, nonprofit institution, etc.)
- ☒ Public (Federal, State, or local government)

C. EST. OF IMPROVEMENT

$ 1400.00 MATERIALS ONLY

D. PROPOSED USE

Residential

- ☐ One family
- ☐ Two or more family
  Enter number of units _____
- ☐ Transient hotel, motel of dormitory
  Enter number of units _____
- ☐ Garage
- ☐ Carport
- ☒ Other – Specity SCHOOL

CHANGE OF USE YES NO (NO circled)

IF YES:
CURRENT USE _____

PROPOSED USE _____

Non residential – Describe in detail proposed use of buildings, e.g., food processing plant, machine shop, laundry building at hospital, elementary school, secondary school, college, parochial school, parking garage for department store, rental office building, office building at industrial plant. If use of existing building is being changed, enter proposed use.

ELEMENTARY SCHOOL

DESCRIPTION OF WORK TO BE PERFORMED

PARTITION SECTION OF ROOM IN LOWER LEVEL OF ELEMENTARY SCHOOL.

3 SELECTED CHARACTERISTICS OF BUILDING

E. CHIMNEYS & FIREPLACES

No. and type chimneys _____

No. and type fireplaces _____

Name of Mason _____

F. PRINCIPAL TYPE OF HEATING FUEL

- ☐ GAS
- ☐ OIL
- ☐ ELECTRICITY
- ☐ COAL
- ☐ OTHER – SPECIFY _____

G. TYPE OF SEWAGE DISPOSAL*

- ☐ PUBLIC
- ☐ PRIVATE (Septic Tank, etc.)

H. TYPE OF WATER SUPPLY*

- ☐ PUBLIC OR PRIVATE CO.
- ☐ PRIVATE (well, cistern)

I. TYPE OF MECHANICAL

Will there be central air conditioning?
☐ YES ☐ NO

Will there be an elevator?
☐ YES ☐ NO

J. DIMENSIONS

Number of Entries	
Building Length	
Building Width	
Building Heigh (Average grade to top of roof)	

K. NUMBER OF OFF STREET PARKING SPACES

Enclosed	
Outdoors	

L. RESIDENTIAL BUILDINGS ONLY

Number of rooms		
Number of bathrooms	Full	
	Partial	

* See Board of Health requirements sheet

TOWN OF ESSEX MASSACHUSETTS

APPLICATION FOR PLAN EXAMINATION AND

TOWN OF ESSEX MASSACHUSETTS

APPLICATION

No..... Fee $.....

Dick.
THIS IS FW
THE DOOR AT
THE SCHOOL WE
DISCUSSED -
DO THEY HAVE
TO PAY $25.00
WALT

Mr. Carter:
Thank you!
J. Madera

1 LOCATION OF BUILDING

OWNER TOWN OF

STREET STORY

ESSEX, MA

SUBDIVISION

2 TYPE AND COST OF BUILDING

A. TYPE OF IMPROVEMENT

- ☐ New building
- ☒ Addition – Specify DOOR TO COURTYARD
- ☐ Alteration
- ☐ Repair, replacement
- ☐ Foundation only
- ☐ Other – Specify

B. OWNERSHIP

- ☐ Private (individual, corporation, nonprofit institution, etc.)
- ☒ Public (Federal, State, or local government)

C. EST. OF IMPROVEMENT

$ DONATION OF MATERIALS & LABOR

- ☐ Two or more family
  Enter number of units
- ☐ Transient hotel, motel of dormitory
  Enter number of units
- ☐ Garage
- ☐ Carport
- ☐ Other – Specity

CHANGE OF USE

IF YES:
CURRENT USE

PROPOSED USE

Non residential – Describe in detail proposed use of buildings, e.g., food processing plant, machine shop, laundry building at hospital, elementary school, secondary school, college, parochial school, parking garage for department store, rental office building, office building at industrial plant. If use of existing building is being changed, enter proposed use.

WE WOULD LIKE TO PUT IN A DOOR FROM KINDERGARTEN CLASSROOM TO THE COURTYARD

DESCRIPTION OF WORK TO BE PERFORMED

SEE ABOVE.

3 SELECTED CHARACTERISTICS OF BUILDING

E. CHIMNEYS & FIREPLACES

No. and type chimneys

No. and type fireplaces

Name of Mason

F. PRINCIPAL TYPE OF HEATING FUEL

- ☐ GAS
- ☐ OIL
- ☐ ELECTRICITY
- ☐ COAL
- ☐ OTHER – SPECIFY

G. TYPE OF SEWAGE DISPOSAL*

- ☐ PUBLIC
- ☐ PRIVATE (Septic Tank, etc.)

H. TYPE OF WATER SUPPLY*

- ☐ PUBLIC OR PRIVATE CO.
- ☐ PRIVATE (well, cistern)

I. TYPE OF MECHANICAL

Will there be central air conditioning?
☐ YES ☐ NO

Will there be an elevator?
☐ YES ☐ NO

J. DIMENSIONS

Number of Entries	
Building Length	
Building Width	
Building Heigh (Average grade to top of roof)	

K. NUMBER OF OFF STREET PARKING SPACES

Enclosed	
Outdoors	

L. RESIDENTIAL BUILDINGS ONLY

Number of rooms	
Number of bathrooms – Full	
Number of bathrooms – Partial	

* See Board of Health requirements sheet

APPLICATION FOR PLAN EXAMINATION AND Building Permit

TOWN OF ESSEX MASSACHUSETTS

No..... Fee $...N/A.....

IMPORTANT – *Applicant to complete all items*

1 LOCATION OF BUILDING

OWNER TOWN OF ESSEX DPW

STREET STORY ST

SUBDIVISION N/A MAP 36 LOT NO. 3 LOT SIZE

BOARD OF HEALTH	YES / (NO)	FLOOD PLAIN	YES / (NO)
CONSERVATION	YES / (NO)	D.P.W.	(YES) / NO
WETLANDS	YES / (NO)	FIRE DEPT.	YES / (NO)

2 TYPE AND COST OF BUILDING

A. TYPE OF IMPROVEMENT
- ☐ New building
- ☐ Addition – Specify
- ☐ Alteration
- ☐ Repair, replacement
- ☐ Foundation only
- ☑ Other – Specify DEMOLITION

D. PROPOSED USE
Residential
- ☐ One family
- ☐ Two or more family
  Enter number of units
- ☐ Transient hotel, motel of dormitory
  Enter number of units
- ☐ Garage
- ☐ Carport
- ☐ Other – Specity

CHANGE OF USE YES/NO

IF YES:
CURRENT USE

PROPOSED USE

B. OWNERSHIP
- ☐ Private (individual, corporation, nonprofit institution, etc.)
- ☑ Public (Federal, State, or local government)

Non residential – Describe in detail proposed use of buildings, e.g., food processing plant, machine shop, laundry building at hospital, elementary school, secondary school, college, parochial school, parking garage for department store, rental office building, office building at industrial plant. If use of existing building is being changed, enter proposed use.

WATER TANK

C. EST. OF IMPROVEMENT

$15,800.-

DESCRIPTION OF WORK TO BE PERFORMED

DEMOLISH OLD REINFORCED TANK, REMOVE TO APPROVED ABC SITE – REGRATE

3 SELECTED CHARACTERISTICS OF BUILDING

E. CHIMNEYS & FIREPLACES

No. and type chimneys N/A

No. and type fireplaces N/A

Name of Mason

F. PRINCIPAL TYPE OF HEATING FUEL
- ☐ GAS
- ☐ OIL
- ☐ ELECTRICITY
- ☐ COAL
- ☐ OTHER – SPECIFY

N/A

G. TYPE OF SEWAGE DISPOSAL*
- ☐ PUBLIC
- ☐ PRIVATE (Septic Tank, etc.)

N/A

H. TYPE OF WATER SUPPLY*
- ☐ PUBLIC OR PRIVATE CO.
- ☐ PRIVATE (well, cistern) N/A

I. TYPE OF MECHANICAL

Will there be central air conditioning?
☐ YES ☐ NO

Will there be an elevator?
☐ YES ☐ NO

N/A

J. DIMENSIONS

Number of Entries	N/A
Building Length	
Building Width	
Building Heigh (Average grade to top of roof)	

K. NUMBER OF OFF STREET PARKING SPACES

Enclosed	N/A
Outdoors	

L. RESIDENTIAL BUILDINGS ONLY

Number of rooms		
Number of bathrooms	Full	
	Partial	

* See Board of Health requirements sheet

115 WEST EMERSON STREET · P. O. BOX 112 · MELROSE, MASSACHUSETTS 02176 · (617) 665-0399

NO. 3038

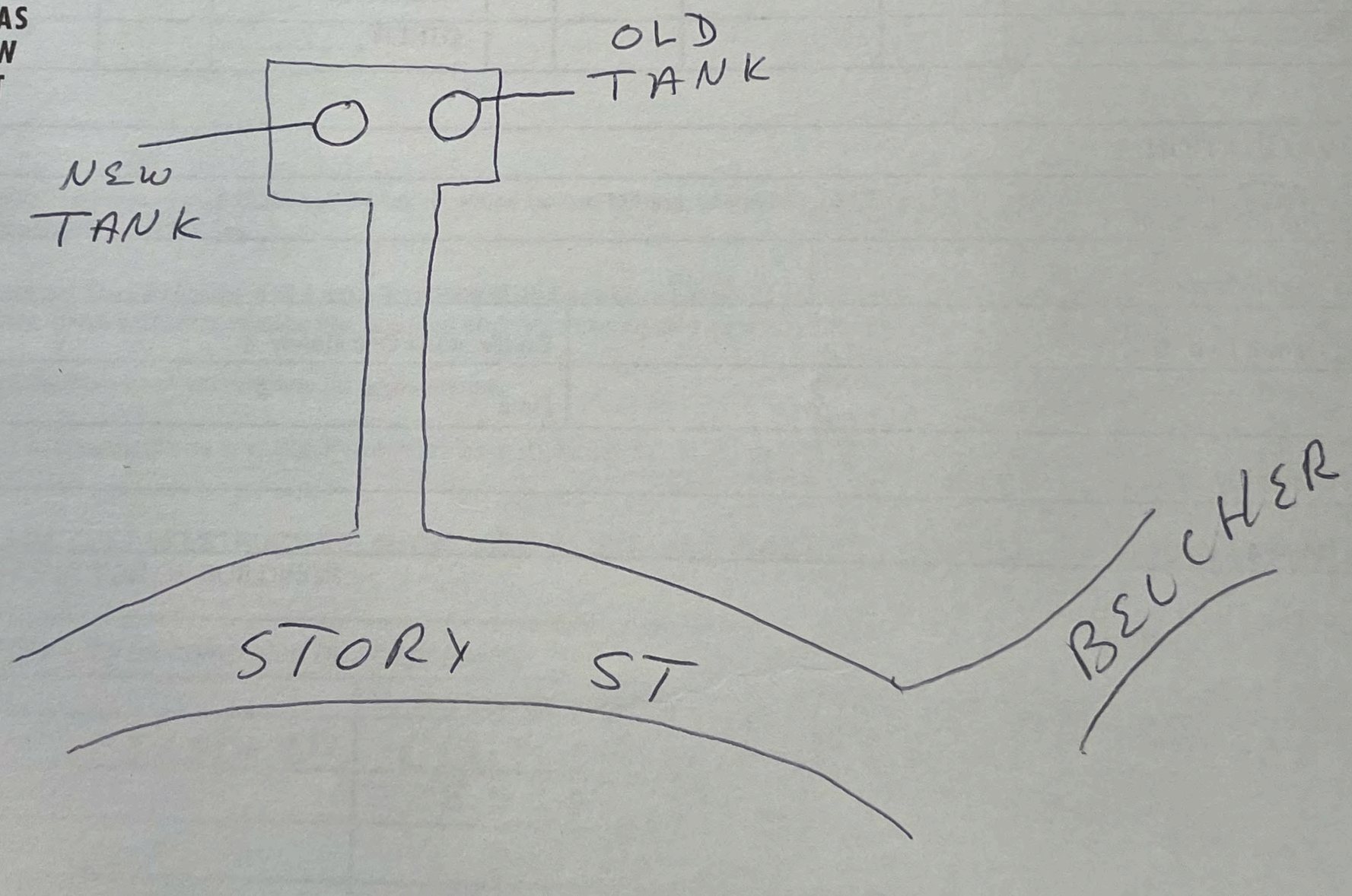
July 28, 1975

8 ZONING	
DISTRICT	
USE	
FRONT YARD	
SIDE YARD	SIDE YARD
REAR YARD	PERCENTAGE OF LOT COVERAGE
NOTES	

9 SITE OR PLOT PLAN – *For Applicant Use* (IF NOT PROVIDED SEPARATELY)

NAME STREET, AVENUE, COURT OR WAY STORY ST

USING THIS AS STREET, SHOW SITE OR PLOT PLAN HERE



TOWN OF ESSEX INCORPORATED FEB 15 1819 MASSACHUSETTS

APPLICATION FOR PLAN EXAMINATION AND Building Permit

No..... Fee $...25 -.....

IMPORTANT – *Applicant to complete all items*

1 LOCATION OF BUILDING

OWNER Essex Elementary School

STREET 12 Story St

Essex, MA 01929

SUBDIVISION _____ MAP 36 LOT NO. 3 LOT SIZE _____

BOARD OF HEALTH YES / NO	FLOOD PLAIN YES / NO
CONSERVATION YES / NO	D.P.W. YES / NO
WETLANDS YES / NO	FIRE DEPT. YES / NO

2 TYPE AND COST OF BUILDING

A. TYPE OF IMPROVEMENT

- ☐ New building
- ☐ Addition – Specify _____
- ☐ Alteration
- ☐ Repair, replacement
- ☐ Foundation only
- ☒ Other – Specify Storage Shed - unattached to main building

B. OWNERSHIP

- ☐ Private (individual, corporation, nonprofit institution, etc.)
- ☒ Public (Federal, State, or local government)

C. EST. OF IMPROVEMENT

$ 1500-2000 for materials

D. PROPOSED USE

Residential

- ☐ One family
- ☐ Two or more family
  Enter number of units _____
- ☐ Transient hotel, motel of dormitory
  Enter number of units _____
- ☐ Garage
- ☐ Carport
- ☒ Other – Specity School - Storage

CHANGE OF USE YES/NO

IF YES:

CURRENT USE _____

PROPOSED USE _____

Non residential – Describe in detail proposed use of buildings, e.g., food processing plant, machine shop, laundry building at hospital, elementary school, secondary school, college, parochial school, parking garage for department store, rental office building, office building at industrial plant. If use of existing building is being changed, enter proposed use.

Elementary School

DESCRIPTION OF WORK TO BE PERFORMED Shed dimensions: 10 ft X 20 ft.

No. Shore Technical H.S. has agreed to build a masonary storage shed for the Essex Elementary School. Gasoline and gas operated equipment will be stored away from the main building.

3 SELECTED CHARACTERISTICS OF BUILDING

E. CHIMNEYS & FIREPLACES

No. and type chimneys _____

No. and type fireplaces _____

Name of Mason _____

F. PRINCIPAL TYPE OF HEATING FUEL

- ☐ GAS
- ☐ OIL
- ☐ ELECTRICITY
- ☐ COAL
- ☐ OTHER – SPECIFY _____

G. TYPE OF SEWAGE DISPOSAL*

- ☐ PUBLIC
- ☐ PRIVATE (Septic Tank, etc.)

H. TYPE OF WATER SUPPLY*

- ☐ PUBLIC OR PRIVATE CO.
- ☐ PRIVATE (well, cistern)

I. TYPE OF MECHANICAL

Will there be central air conditioning?

☐ YES ☐ NO

Will there be an elevator?

☐ YES ☐ NO

J. DIMENSIONS

Number of Entries	
Building Length	
Building Width	
Building Heigh (Average grade to top of roof)	

K. NUMBER OF OFF STREET PARKING SPACES

Enclosed	
Outdoors	

L. RESIDENTIAL BUILDINGS ONLY

Number of rooms		
Number of bathrooms	Full	
	Partial	

* See Board of Health requirements sheet

AS-BUILT REQUIRED FOR NEW DWELLINGS

Waive fee

Commonwealth of Massachusetts

Department of Fire Services

BOARD OF FIRE PREVENTION REGULATIONS

Official Use Only

Permit No. _____

Occupancy and Fee Checked _____

[Rev. 11/99] (leave blank)

APPLICATION FOR PERMIT TO PERFORM ELECTRICAL WORK

All work to be performed in accordance with the Massachusetts Electrical Code (MEC), 527 CMR 12.00

(PLEASE PRINT IN INK OR TYPE ALL INFORMATION) Date: 8-22-05

City or Town of: ESSEX *To the Inspector of Wires:*

By this application the undersigned gives notice of his or her intention to perform the electrical work described below.

Location (Street & Number) 12 STORY ST

Owner or Tenant ESSEX ELEM + MIDDLE SCHOOL Telephone No. _____

Owner's Address _____

Is this permit in conjunction with a building permit? Yes ☒ No ☐ (Check Appropriate Box)

Purpose of Building SCHOOL Utility Authorization No. _____

Existing Service ____ Amps _____ Volts Overhead ☐ Undgrd ☐ No. of Meters _____

New Service _____ Amps _____ Volts Overhead ☐ Undgrd ☐ No. of Meters _____

Number of Feeders and Ampacity _____

Location and Nature of Proposed Electrical Work: WIRE HANDICAP CHAIR LIFT AT STAGE

Completion of the following table may be waived by the Inspector of Wi

No. of Recessed Fixtures	No. of Ceil-Susp. (Paddle) Fans	No. of Transformers	Total KVA
No. of Lighting Outlets	No. of Hot Tubs	Generators	KVA
No. of Lighting Fixtures	Swimming Pool Above grnd. ☐ In-grnd. ☐	No. of Emergency Lighting Battery Units	
No. of Receptacle Outlets	No. of Oil Burners	FIRE ALARMS	No. of Zones
No. of Switches	No. of Gas Burners	No. of Detection and Initiating Devices	
No. of Ranges	No. of Air Cond. Total Tons	No. of Alerting Devices	
No. of Waste Disposers	Heat Pump Totals: Number / Tons / KW	No. of Self-Contained Detection/Alerting Devices	
No. of Dishwashers	Space/Area Heating KW	Local ☐ Municipal Connection ☐ Other	
No. of Dryers	Heating Appliances KW	Security Systems: No. of Devices or Equivalent	
No. of Water Heaters KW	No. of Signs / No. of Ballasts	Data Wiring: No. of Devices or Equivalent	
No. Hydromassage Bathtubs	No. of Motors Total HP	Telecommunications Wiring: No. of Devices or Equivalent	
OTHER:			

Attach additional detail if desired, or as required by the Inspector of W

INSURANCE COVERAGE: Unless waived by the owner, no permit for the performance of electrical work may issue unl the licensee provides proof of liability insurance including "completed operation" coverage or its substantial equivalent. Th undersigned certifies that such coverage is in force, and has exhibited proof of same to the permit issuing office.

CHECK ONE: INSURANCE ☒ BOND ☒ OTHER ☐ (Specify:) _____ 12-31-05 (Expiration Date)

Estimated Value of Electrical Work: 1800.- (When required by municipal policy.)

Work to Start: 8-22-05 Inspections to be requested in accordance with MEC Rule 10, and upon completion.

I certify, under the pains and penalties of perjury, that the information on this application is true and complete.

FIRM NAME: CURTIS ELECTRIC CORP. LIC. NO.: A7237

Licensee: WILLIAM A. SWIFT Signature _____ LIC. NO.: E22990

(If applicable, enter "exempt" in the license number line.)

Address: 76 SANDERSON AVE. LYNN MA 01902 Bus. Tel. No.: 781 593 5300 Alt. Tel. No.: _____

OWNER'S INSURANCE WAIVER: I am aware that the Licensee *does not have* the liability insurance coverage normally required by law. By my signature below, I hereby waive this requirement. I am the (check one) ☐ owner ☐ owner's age

Owner/Agent

Signature _____ Telephone No. _____

PERMIT FEE $

Commonwealth of Massachusetts
City/Town of Essex

System Pumping Record

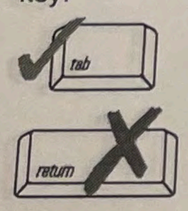
Form 4

RECEIVED
JAN 06 2025
TOWN OF ESSEX
BOARD OF HEALTH

DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with your local Board of Health to determine the form they use. The System Pumping Record must be submitted to the local Board of Health or other approving authority within 14 days from the pumping date in accordance with 310 CMR 15.351.

A. Facility Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. System Location:

12 Story
Address

City/Town | State | Zip Code

2. System Owner:

Essex Elementary
Name

Address (if different from location)

Essex
City/Town

MA
State

Zip Code

Telephone Number

B. Pumping Record

1. Date of Pumping 12/27/24 Date

2. Quantity Pumped: 2000 Gallons

3. Component: ☐ Cesspool(s) ☐ Septic Tank ☐ Tight Tank ☒ Grease Trap EXTERIOR

☐ Other (describe):

4. Effluent Tee Filter present? ☐ Yes ☒ No If yes, was it cleaned? ☐ Yes ☐ No

5. Observed condition of component pumped:

Heavy Grease

6. System Pumped By:

Rich Cook
Name

Vehicle License Number

Stewart's Septic 58 So Kimball St. , Bradford,MA
Company

7. Location where contents were disposed:

20 So.Mill St.,Bradford,MA

Signature of Hauler | Date

Signature of Receiving Facility (or attach facility receipt) | Date

t5form4.doc• 11/12

12 STORY STREET

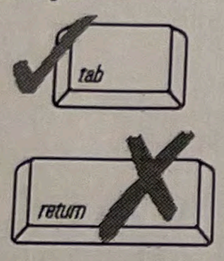
Commonwealth of Massachusetts
City/Town of Essex
System Pumping Record
Form 4

RECEIVED
JAN 06 2025
TOWN OF ESSEX
BOARD OF HEALTH

DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with your local Board of Health to determine the form they use. The System Pumping Record must be submitted to the local Board of Health or other approving authority within 14 days from the pumping date in accordance with 310 CMR 15.351.

A. Facility Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. System Location: 12 Story
Address
City/Town | State | Zip Code

2. System Owner: Essex Elementary
Name
Address (if different from location)
Essex | MA | Zip Code
City/Town | State
Telephone Number

B. Pumping Record

1. Date of Pumping 12/27/24 (Date) 2. Quantity Pumped: 30 total (Gallons)
3. Component: ☐ Cesspool(s) ☐ Septic Tank ☐ Tight Tank ☒ 2 Grease Trap Int
☐ Other (describe):
4. Effluent Tee Filter present? ☐ Yes ☒ No If yes, was it cleaned? ☐ Yes ☐ No
5. Observed condition of component pumped: Heavy Grease
1 trap not full - interior pump in trap goes up to ceiling...
6. System Pumped By: Rich Cook
Name | Vehicle License Number
Stewart's Septic 58 So Kimball St. , Bradford,MA
Company
7. Location where contents were disposed:
20 So.Mill St.,Bradford,MA

Signature of Hauler | Date

Signature of Receiving Facility (or attach facility receipt) | Date

No A003-05

Fee ____

COMMONWEALTH OF MASSACHUSETTS
Town of Essex, Board of Health

CERTIFICATE OF COMPLIANCE

Description of Work: Abandonment of Component(s)

Sewer ID #: 636

The undersigned hereby certify that the Sewage Disposal System component(s),

☒ ~~Septic Tank~~

☒ ~~Pump Chamber~~ Combination

☐ Cesspool/Leach Pits/Leach Chamber

☐ Tight Tank

Abandoned by: William Cornetta

At: 12 Story Street

Have/has been abandoned in accordance with the provisions of 310 CMR 15.00 (Title 5) for the above referenced components. Components and their locations are based on information from the Board of Health files and personal knowledge of the installer. If any non abandoned components are later discovered on the property, it is the responsibility of the property owner to properly abandon the component(s) in accordance with applicable existing laws & regulations.

Installer William Cornetta

Inspector Elaine Wozny

Date 9/1/05

BOARD OF HEALTH
Town Hall 30 Martin Street, Essex, MA 01929-1219
Telephone (978) 768-7614 email: boh@essexma.org

Application for Disposal System Abandonment Permit

A003-05
Number

$ —
Fee

Application is hereby made for a permit to abandon existing septic system to connect to public sewer

1. Location of Facility:
12 STORY ST
Address or Lot #

Assessor Map & Lot # 36 Sewer ID # 3

2. Owner Information
TOWN OF ESSEX (ELEMENTARY School)
Name

Address (if different from above)

ESSEX MA 01929
City/Town State Zip Code

3. Installer Information
William J. Cornetta 68 HIGH Popples RD 978-265-6974
Name Address & Phone

4. Type of Building:

☐ Dwelling ☒ Other School

Gallons per Day design flow

5 Components to be Abandoned

☒ Septic Tank

☒ Pump Chamber

☐ cesspool/leach pits/leach chamber

☐ Tight Tank

Method of Abandonment

☐ removal

☒ Crush bottom & fill

School #10 9-1-05 Breaking bottom





12 STORY STREET

School 11 9-1-05 Breaking bottom

School #4 9-1-05





School #5 9-1-05

12 STORY STREET



9-1-05

School #2



9-1-05

School #1

School # 4 9-1-05





School # 5 9-1-05

12 STORY STREET



School #6 9-1-05



School #7 9-1-05

School #8 9-1-05





School 9 9-1-05 breaking bottom

BOARD OF HEALTH
TOWN HALL 30 MARTIN STREET, ESSEX, MASSACHUSETTS 01929-1219
TELEPHONE (978)768-7614

November 5, 2002

RECEIVED
NOV 27 2002
TOWN OF ESSEX
BOARD OF HEALTH

Essex Elementary and Middle School
12 Story Street
Essex, MA 01929
Attn: Principal Eric Gordon

Dear Mr. Gordon,

On October 28, our Administrator approved an emergency waiver to allow emergency pesticide treatment for yellow jackets in one of the school classrooms. This application and approval process follows the 2000 MA *Act to Protect Children and Families from Harmful Pesticides*.

It is a requirement of the *Act to Protect Children and Families from Harmful Pesticides* that all schools develop and implement an Integrated Pest Management (IPM) Plan. Included with your emergency waiver application was a copy of an Indoor Pest Management Plan. Sections one through six (1-6) of the school plan received by the BOH have not been completed. This may be deemed noncompliance with the *Act to Protect Children and Families from Harmful Pesticides.* Please complete the plan immediately and send a copy to the BOH for our records.

If you have any questions, please contact our Administrator at 978 768-7614.

Sincerely,
ESSEX BOARD OF HEALTH

Paul Rullo,
Chair

Sandra Pelkie

Karin Staiti Carroll

36/3/0/1 ✓

✓

Commonwealth of Massachusetts
ESSEX, Massachusetts

RECEIVED
AUG 1 2000
TOWN OF ESSEX
BOARD OF HEALTH

System Pumping Record

System Owner Town of Essex

System Location 12 Story St. Essex Elementary School

Date of Pumping 7-20-00 **Quanity Pumped** 10,000

Cesspool yes **Septic Tank** (yes) **Tight Tank** yes **Failed System** yes
NOTE: All cesspools MUST be pumped

System Pumped By: ESSEX SEPTIC SERVICE, 127 Main St., Essex, MA 01929 768-3636

Contents Transferred To: Glou. WWTP **Other** Fitchburg **date** 7-20-71

**** CONDITION OF CESSPOOL / SEPTIC TANK / TIGHT TANK**

Circle YES if there is a problem ** **Circle NO if there is NO problem**

Breakout or Ponding	yes	no		**Breakout or Ponding**	yes	no		**Breake out or leaking**	yes	(no)	
Cesspool Structure	yes	no		**Tank Structure**	yes	no		**Tank structure**	yes	(no)	
Liquid levels above inlet invert				**Liquid level above outlet invert**							
	yes	no			yes	no					
				Tees or baffles missing or broken							
					yes	no					

**** If YES circled on any of the above items please describe the PROBLEM(S) you have seen**_____

_____

Pumper/Inspector _____ **Please print Name** _____

RECEIVED

36,3

RECEIVED

OCT 0 1 2008

TOWN OF ESSEX
BOARD OF HEALTH

CITY/TOWN OF Essex

Septic System Function Check Reporting Form

Note: This function check/pumping form must be filled out any time you visit a site

Property owner's name: Essex Elementary School

Property address: 12 Story St

Contents Transferred To: Gloucester _____

Ipswich _____ **Other** Bradford

System Pumped By: **ESSEX SEPTIC SERVICE, INC.**

Date: 8/8/08 **Gallons pumped:** 2500

Pumper name: mike

_____ Cesspool
_____ Septic Tank
_____ Tight Tank
✓ Other

CONDITION OF CESSPOOL OR SEPTIC TANK

Description of any repairs:

12 STORY STREET

BOARD OF HEALTH

TOWN ESSEX

NAME ESSEX ELEMENTARY SCHOOL DATE 2-16-95

ADDRESS 12 STORY ST.

TELEPHONE NUMBER 768-7324

REASON FOR INSPECTION/VISIT COMPLAINT OF SEPTIC ODOR IN FRONT OF SCHOOL. COMPLAINT RECEIVED FROM DAVE FERRIS, DEP

CONTACT PEOPLE AT SITE Principal Michael Jacobson
Head Custodian Bill Caldwell

RESULTS OF INSPECTION/VISIT 2-16-95 No noticible odor noted in school. Odor was noted outside in area of upper parking lot. I walked this area + didn't see any evidence of break-out. I will try walking area again + follow brook to see if problem in this area. No evidence of water or overflow was noted near 3 sewer covers in front area of building - the odor did not appear to be in this area although the wind was blowing from this direction up to upper parking lot.

SUMMARY OF FINDINGS Checked file to determine type of system - refer to 11/4/93 report where similar complaint was filed.

(SEE OTHER SIDE)

12 STORY STREET

TOWN OF ESSEX - BOARD OF HEALTH

INSPECTION OF Emanating Septic Odor

NAME Essex Elementary School DATE 11/4/93

ADDRESS Story Street

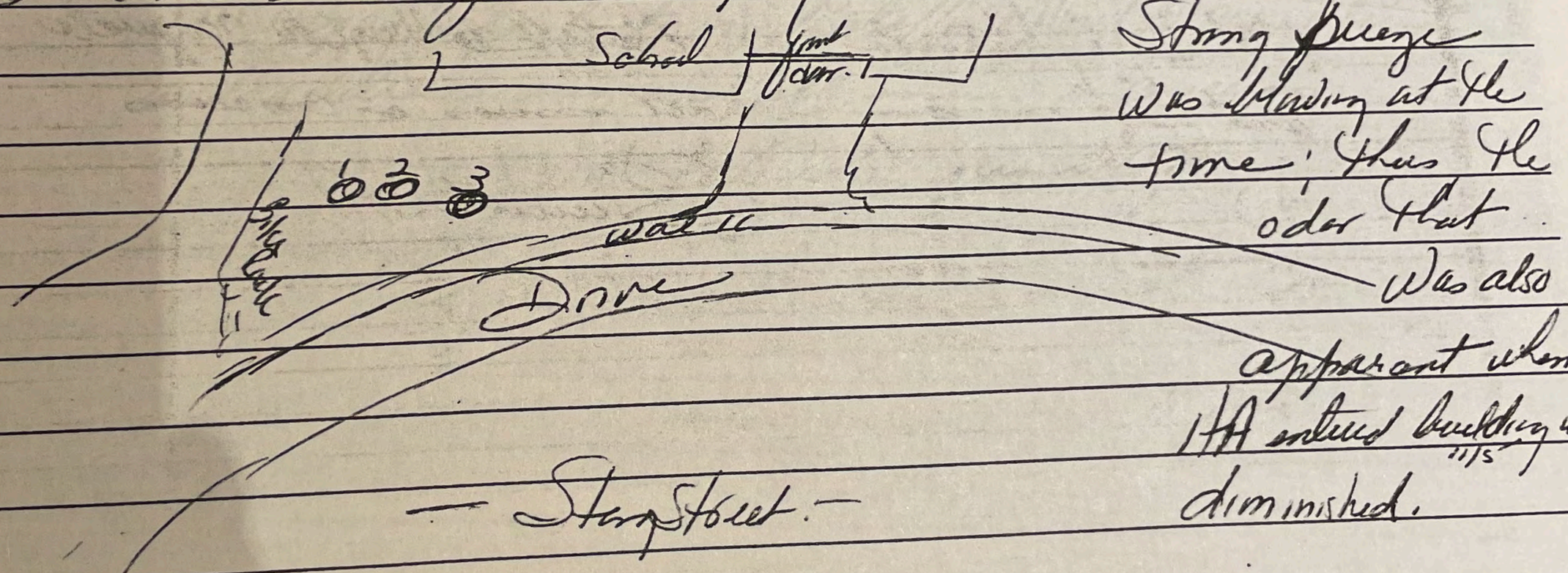
REMARKS: 11/4/93 Late evening after a public meeting, the current odor of septage was noted near "Sewer Covers" in front lawn from along the drive/walkway. No standing water or overflow evident.

11/5/93 AM Site visit to School to investigate above incident

Spoke with Principal Michael Jackson

Head Custodian William Caldwell.

Although neither had noticed a smell, there was odor close to the metal covers seeming to come through the "finger" holes on all covers especially the 3rd cover which fit less tightly than the other two. A strong breeze was blowing at the time; thus the odor that was also apparent when I/A entered building was diminished.



System is pumped each summer by Woodmansie. Mike Roy called re pumping today. States "they weren't bad this summer" and that at last pumping of a Tank (cover 1+2) & a Pump Chamber (cover #3) which "goes to" same set of leaching cesspools and tank. Custodian believes there is a plan on file for next week. School Budget 457 (area)

Baletta CHO
INSPECTOR

1) Will check pump chamber for possible
failed pump & then pump system
for repair.

2) Will investigate installation of Cement cover
(+3' diameter circular 'slab' type) to prevent
opening or smell escape

3) ? Venting of field which would avoid
back up of fumes. ? Pump chamber vented
through building plumbing.

4) Scheduled complete & Thorough Foundation &
Food Service Inspection provided 11/10
(Staff time today was limited).

Overall — a very pleasant, bright and clean facility
with Happy students and staff willing to cooperate
and address any and all issues or concerns

Barbara Hd

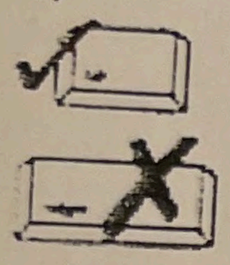
Commonwealth of Massachusetts

Asbestos Notification Form ANF-001

100035184
Decal Number

RECEIVED
JUL 3 2006
TOWN OF ESSEX
BOARD OF HEALTH

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



INSTRUCTIONS

1. All sections of this form must be completed in order to comply with DEP notification requirements of 310 CMR 7.15 and the Division of Occupational Safety (DOS) notification requirements of 453 CMR 6.12

A. Asbestos Abatement Description

1. a. Is this facility fee exempt - city, town, district, municipal housing authority, owner-occupied residence of four units or less? ☑ Yes ☐ No

   b. Provide blanket decal number if applicable: _____ Blanket Decal Number

2. Facility Location:

   ESSEX ELEMENTARY — a. Name of Facility
   Essex — c. City/Town
   MA — d. State
   12 STORY STREET — b. Street Address
   01929 — e. Zip Code
   _____ — f. Telephone Number

3. Worksite Location:

   CLASSES AND CRAWL SPA — a. Building Name/Building Location
   _____ — b. Building #
   _____ — c. Wing
   _____ — d. Floor
   _____ — e. Room

4. Is the facility occupied? ☑ Yes ☐ No

5. Asbestos Contractor:

   NEW ENGLAND SURFACE MAINTENANCE — a. Name
   WEYMOUTH — c. City/Town
   02189 — d. Zip Code
   850 WASHINGTON STREET — b. Address
   7813372117 — e. Telephone Number
   AC000196 — f. DOS License Number
   g. Contract Type: ☐ Written ☐ Verbal
   _____ — h. Facility Contact Person
   _____ — i. Contact Person's Title

6. PAUL W BROWN — a. Name of On-Site Supervisor/Foreman
   AS040577 — b. Supervisor/Foreman DOS Certification Number

7. OWNERS REP — a. Name of Project Monitor
   NA — b. Project Monitor DOS Certification Number

8. OWNERS REP — a. Name of Asbestos Analytical Lab
   NA — b. Asbestos Analytical Lab DOS Certification Number

9. 07/31/2006 — a. **Project Start Date (mm/dd/yyyy)**
   08/31/2006 — b. **End Date (mm/dd/yyyy)**
   7-7 — c. Work hours Mon-Fri.
   _____ — d. Work hours Sat-Sun.

10. a. What type of project is this?

    ☐ Demolition ☑ Renovation
    ☐ Repair ☐ Other, please specify:

    _____ — b. Describe

11. a. Check abatement procedures:

    ☑ Glove bag ☐ Encapsulation
    ☐ Enclosure ☐ Disposal only
    ☐ Cleanup ☐ Other, specify:
    ☑ Full containment

    _____ — b. Describe

12. Is the job being conducted: ☑ Indoors? ☐ Outdoors?

Go To Top

Commonwealth of Massachusetts

Asbestos Notification Form ANF-001

100035184
Decal Number

A. Asbestos Abatement Description (cont.)

13. Total amount of each type of Asbestos Containing Materials (ACM) to be removed, enclosed, or encapsulated:

	Lin. ft.	Sq. ft.
a. Total pipes or ducts (linear ft)	4000	
b. Total other surfaces (square ft)		1000
c. Boiler, breaching, duct, tank surface coatings		
d. Insulating cement		
e. Corrugated or layered paper pipe insulation	4000	
f. Trowel/Sprayer coatings		
g. Spray-on fireproofing		
h. Transite board, wall board		
i. Cloths, woven fabrics		
j. Other, please specify:		1000
k. Thermal, solid core pipe insulation		
l. Specify: DEBRIS		

14. Describe the decontamination system(s) to be used:

AS REQUIRED INCLUDING 453CMR6.14(4)(A)7.A IMPERVIOUS SURFACES

15. Describe the containerization/disposal methods to comply with 310 CMR 7.15 and 453 CMR 6.14(2) (g):

AS REQUIRED

16. For Emergency Asbestos Operations, the DEP and DOS officials who evaluated the emergency:

a. Name of DEP Official

b. Title

c. Date (mm/dd/yyyy) of Authorization

d. DEP Waiver #

e. Name of DOS Official

f. DOS Official Title

g. Date (mm/dd/yyyy) of Authorization

h. DOS Waiver #

17. Do prevailing wage rates as per M.G.L. c. 149, § 26, 27 or 27A–F apply to this project? ☑ Yes ☐ No

B. Facility Description

1. Current or prior use of facility: SCHOOL

2. Is the facility owner-occupied residential with 4 units or less? ☐ Yes ☑ No

3. a. Facility Owner Name: MERSD
   b. Address: 36 LINCOLN STREET
   c. City/Town: MANCHESTER
   d. Zip Code: 01944
   e. Telephone Number (area code and extension): 978-526-4919

4. a. Name of Facility Owner's On-Site Manager: ROGER YOUNG
   b. On-Site Manager Address:
   c. City/Town:
   d. Zip Code:
   e. Telephone Number (area code and extension):

ANF001

36/3/0/1

RECEIVED
AUG 0 3 1998
TOWN OF ESSEX
BOARD OF HEALTH

COMMONWEALTH OF MASSACHUSETTS
ESSEX, MASSACHUSETTS

SYSTEM PUMPING RECORD

SYSTEM OWNER	SYSTEM LOCATION
Essex Elementary School	12 Story St

DATE OF PUMPING 7/14/98 QUANITY PUMPED 10000 GALLONS

CESSPOOL: ____ YES, SEPTIC TANK: X YES, TIGHT TANK: ____ YES

SYSTEM PUMPED BY: ESSEX SEPTIC SERVICE License # _____

CONTENTS TRANSFERRED TO: B. Stone

DATE: 7/14/98 PUMPER/ INSPECTOR Mike

**CONDITION OF CESSPOOL OR SEPTIC TANK, _____

12 STORY STREET
MAP 129 LOT 5

INDOOR AIR QUALITY ASSESSMENT

Essex Elementary and Middle School
12 Story Street
Essex, MA 01929



RECEIVED
MAY 23 2005
TOWN OF ESSEX
BOARD OF HEALTH

Prepared by:
Massachusetts Department of Public Health
Center for Environmental Health
Emergency Response/Indoor Air Quality Program
May 2005

Background/Introduction

At the request of Roger Young, Business Manager, Manchester Essex Regional School District, the Massachusetts Department of Public Health (MDPH)'s Center for Environmental Health (CEH) provided assistance and consultation regarding indoor air quality at the Essex Elementary School (EES), 12 Story Street, Essex, Massachusetts. On May 7, 2004, a visit to conduct an indoor air quality assessment was made to this school by Sharon Lee, an Environmental Analyst in CEH's Emergency Response/Indoor Air Quality Program (ER/IAQ).

The EES is a single story brick building constructed in 1956. An addition containing the gym and library was constructed in 1976. Art and technology rooms occupy the basement. Classroom windows are openable throughout the building. Modular classrooms connected to the main building were added to the school around 2003. The modulars are the subject of a separate report. The main building is the subject of this report.

An indoor air quality investigation was conducted by an environmental consultant, HUB Testing Laboratory (HUB), on November 11, 2003. Their report indicated that carbon dioxide levels in many areas were elevated (HUB, 2003). No specific recommendations for remediation of the ventilation system were made in the HUB report.

Methods

Air tests for carbon monoxide, carbon dioxide, temperature and relative humidity were conducted with the TSI, Q-Trak, IAQ Monitor, Model 8551. Air tests for airborne particle matter with a diameter less than 2.5 micrometers were taken with the TSI, DUSTTRAK™

located in the top of the unit. Univents were not operating throughout the school at the time of the assessment. Obstructions to airflow, such as desks and other items located on or in front of univents, were also observed (Picture 4). To function as designed, univents must remain free of obstructions and allowed to operate.

Exhaust ventilation is provided by wall-, closet- or ceiling-mounted exhaust vents (Pictures 5 and 6), which are ducted to motorized rooftop fan units (Picture 7). Exhaust vents were either off, drawing weakly and/or blocked with materials in a number of classrooms surveyed (Picture 8). In addition, some wall vents are located near hallway doors (Picture 6). When hall doors are open, the exhaust is apt to draw hallway air rather than classroom air. As with the univents, exhaust vents must remain free of obstructions and allowed to operate. Classroom doors should also remain closed to facilitate air exchange.

Please note, some areas do not have mechanical or passive ventilation or openable windows (Table 1). A fresh air source is necessary for the dilution of indoor air pollutants. Without a source of fresh air, pollutants will persist in the indoor environment. This may lead to indoor air quality/comfort complaints.

To maximize air exchange, the MDPH recommends that ventilation equipment operate continuously during periods of school occupancy. In order to have proper ventilation with a mechanical supply and exhaust system, the systems must be balanced to provide an adequate amount of fresh air to the interior of a room while removing stale air from the room. It is recommended that existing ventilation systems be re-balanced every five years to ensure adequate air systems function (SMACNA, 1994). The date of the last servicing and balancing was not available at the time of the assessment.

The Massachusetts Building Code requires that each room have a minimum ventilation rate of 15 cubic feet per minute (cfm) per occupant of fresh outside air or openable windows (SBBRS, 1997; BOCA, 1993). The ventilation must be on at all times that the room is occupied. Providing adequate fresh air ventilation with open windows and maintaining the temperature in the comfort range during the cold weather season is impractical. Mechanical ventilation is usually required to provide adequate fresh air ventilation.

Carbon dioxide is not a problem in and of itself. It is used as an indicator of the adequacy of the fresh air ventilation. As carbon dioxide levels rise, it indicates that the ventilating system is malfunctioning or the design occupancy of the room is being exceeded. When this happens a buildup of common indoor air pollutants can occur, leading to discomfort or health complaints. The Occupational Safety and Health Administration (OSHA) standard for carbon dioxide is 5,000 parts per million parts of air (ppm). Workers may be exposed to this level for 40 hours/week, based on a time-weighted average (OSHA, 1997).

The MDPH uses a guideline of 800 ppm for publicly occupied buildings. A guideline of 600 ppm or less is preferred in schools due to the fact that the majority of occupants are young and considered to be a more sensitive population in the evaluation of environmental health status. Inadequate ventilation and/or elevated temperatures are major causes of complaints such as respiratory, eye, nose and throat irritation, lethargy and headaches. For more information concerning carbon dioxide, please see Appendix A.

The temperature measurements ranged from 71° F to 80° F, which were within or slightly above the MDPH recommended comfort guidelines (Table 1). The MDPH recommends that indoor air temperatures be maintained in a range of 70° F to 78° F in order to provide for the comfort of building occupants. In many cases concerning indoor air quality, fluctuations of

temperature in occupied spaces are typically experienced, even in a building with an adequate fresh air supply. In addition, temperature control is often difficult without operating the ventilation systems as designed (e.g., univents/exhaust vents deactivated/obstructed).

The relative humidity measurements ranged from 42 to 56 percent, which were within the MDPH recommended comfort range. The MDPH recommends a comfort range of 40 to 60 percent for indoor air relative humidity. The sensation of dryness and irritation is common in a low relative humidity environment. Relative humidity levels in the building would be expected to drop during the winter months due to heating. Low relative humidity is a very common problem during the heating season in the northeast part of the United States.

Microbial/Moisture Concerns

A number of rooms had water-stained ceiling tiles, indicating roof and/or plumbing leaks (Picture 9). Water-damaged ceiling tiles can provide a source of mold growth and should be replaced after a water leak is discovered and repaired. The school has a ceiling tile system where tiles are glued directly to the ceiling. Replacement of these ceiling tiles is difficult, since their removal appears to necessitate the destruction of the tile. Appropriate measures should be taken to minimize the aerosolization of particulates from tile removal/replacement.

The American Conference of Governmental Industrial Hygienists (ACGIH) and United States Environmental Protection Agency (US EPA) recommend that porous materials be dried with fans and heating within 24 to 48 hours of becoming wet (ACGIH, 1989; US EPA, 2001). If items are not dried within this time frame, mold growth may occur. The application of a mildewcide to mold colonized porous materials is not recommended.

Plants were noted in several classrooms. Some plants were placed near ventilation sources (Picture 10), while others were placed on porous materials (Picture 11). Plants can be a source of pollen and mold, which can be respiratory irritants for some individuals. Plants should also be located away from univents to prevent the aerosolization of dirt, pollen or mold. Plants should also be properly maintained and equipped with drip pans.

Efflorescence was noted on walls of the ramp way leading to the art area (Picture 12). The ramp way is built below ground and the exterior portion of the wall is in contact with soil (Picture 13). Efflorescence is a characteristic sign of water damage to building materials such as cement or plaster, but it is not mold growth. As moisture penetrates and works its way through exterior walls, water-soluble compounds dissolve, creating a solution. As the solution moves to the surface of the interior wall, water evaporates, leaving behind white, powdery mineral deposits. Efflorescence noted on these walls is likely the result of moisture from the soil in contact with the building.

To prevent groundwater seepage, this area was constructed with a series of channels through which groundwater could flow. These channels run along the ramp and through the crawlspace (Picture 14). Water in the channels did not appear to be stagnant at the time of the assessment. However, periodic inspections should be conducted to ensure debris is not blocking or hindering groundwater flow. Disruption of the flow may result in flooding and/or odors.

Several pathways exist for crawlspace air to migrate into occupied areas. Crawlspaces function as chaseways for pipes to run traverse a building. Pipes connect the boiler to classroom univents. MDPH staff randomly examined some univents. Spaces and holes were observed around pipes and within the air handling cabinet. These breaches can serve as pathways to draw air, odors and particulates from exterior wall cavities and the crawlspace into classrooms.

Heated air from HVAC system pipes can create drafts that rise from the crawlspace into classrooms. These drafts can also draw mold, spores and associated odors from the crawlspace.

A number of other conditions observed along the building exterior may be conducive to water penetration through the building envelope. One wall in the school courtyard had substantial clinging plant growth (Picture 15). Clinging plants can cause damage to brickwork through the insertion of tendrils into brick and mortar. Water can penetrate into the brick along the tendrils, which can subsequently freeze and thaw during the winter. This freezing/thawing action can weaken bricks and mortar, resulting in damage. This type of plant growth on brickwork is not recommended.

As discussed, a crawlspace is located in the school. The basement level storage area opens to the crawlspace area. The storage and crawlspace areas are accessible either via the technology room or by way of a staircase that leads from the main level to the basement (Picture 16). At the time of the assessment, the door to the storage area was not secured. In addition, the door to the stairway from the main level was open. Open doors, breaches and other openings (e.g., utility holes) allow for crawlspace odors and materials to penetrate occupied areas of the school. Doors should remain closed and breaches should be sealed to prevent movement of materials from the unoccupied storage and crawlspace areas to occupied areas of the school.

Shrubbery and other plants were also observed to be growing in cracks and crevices in close proximity to the foundation walls (Picture 17). The growth of roots against the exterior walls can bring moisture in contact with wall brick and eventually lead to cracks and/or fissures in the foundation below ground level. Over time, this process can undermine the integrity of the

building envelope and provide a means of water entry into the building through capillary action through foundation concrete and masonry (Lstiburek & Brennan, 2001).

Other Concerns

Indoor air quality can also be adversely impacted by the presence of respiratory irritants, such as products of combustion. The process of combustion produces a number of pollutants. Common combustion products include carbon monoxide, carbon dioxide, water vapor and smoke (fine airborne particle material). Of these materials, exposure to carbon monoxide and particulate matter with a diameter of 2.5 micrometers (μm) or less (PM2.5) can produce immediate, acute health effects upon exposure. To determine whether combustion products were present in the school environment, MDPH staff obtained measurements for carbon monoxide and PM2.5.

Carbon monoxide is a by-product of incomplete combustion of organic matter (e.g., gasoline, wood and tobacco). Exposure to carbon monoxide can produce immediate and acute health affects. Several air quality standards have been established to address carbon monoxide pollution and prevent symptoms from exposure to these substances. The MDPH established a corrective action level concerning carbon monoxide in ice skating rinks that use fossil-fueled ice resurfacing equipment. If an operator of an indoor ice rink measures a carbon monoxide level over 30 ppm, taken 20 minutes after resurfacing within a rink, that operator must take actions to reduce carbon monoxide levels (MDPH, 1997).

ASHRAE has adopted the National Ambient Air Quality Standards (NAAQS) as one set of criteria for assessing indoor air quality and monitoring of fresh air introduced by HVAC

systems (ASHRAE, 1989). The NAAQS are standards established by the US EPA to protect the public health from six criteria pollutants, including carbon monoxide and particulate matter (US EPA, 2000a). As recommended by ASHRAE, pollutant levels of fresh air introduced to a building should not exceed the NAAQS (ASHRAE, 1989). The NAAQS were adopted by reference in the Building Officials & Code Administrators (BOCA) National Mechanical Code of 1993 (BOCA, 1993), which is now an HVAC standard included in the Massachusetts State Building Code (SBBRS, 1997). According to the NAAQS established by the US EPA, carbon monoxide levels in outdoor air should not exceed 9 ppm in an eight-hour average (US EPA, 2000a).

Carbon monoxide should not be present in a typical, indoor environment. If it *is* present, indoor carbon monoxide levels should be less than or equal to outdoor levels. Outdoor carbon monoxide concentrations were non-detect or ND (Table 1). Carbon monoxide levels measured in the school were also ND.

The US EPA also established NAAQS for exposure to particulate matter. Particulate matter is airborne solids that can be irritating to the eyes, nose and throat. The NAAQS originally established exposure limits for particulate matter with a diameter of 10 μm or less (PM10). According to the NAAQS, PM10 levels should not exceed 150 micrograms per cubic meter ($\mu g/m^3$) in a 24-hour average (US EPA, 2000a). This standard was adopted by both ASHRAE and BOCA. Since the issuance of the ASHRAE standard and BOCA Code, US EPA proposed a more protective standard for fine airborne particles. This more stringent, PM2.5 standard requires outdoor air particulate levels be maintained below 65 $\mu g/m^3$ over a 24-hour average (US EPA, 2000a). Although both the ASHRAE standard and BOCA Code adopted the

PM10 standard for evaluating air quality, MDPH uses the more protective proposed PM2.5 standard for evaluating airborne particulate matter concentrations in the indoor environment.

Outdoor PM2.5 concentrations were measured at 12 μg/m^3 (Table 1). PM2.5 levels measured indoors were in a range of 13 to 38 μg/m^3. Frequently, indoor air levels of particulates can be at higher levels than those measured outdoors. A number of mechanical devices and/or activities that occur in schools can generate particulates during normal operations. Sources of indoor airborne particulates may include but are not limited to particles generated during the operation of fan belts in the HVAC system; cooking in the cafeteria stoves and microwave ovens; use of photocopiers, fax machines and computer printing devices; operation of an ordinary vacuum cleaner and heavy foot traffic indoors.

Indoor air quality can also be negatively influenced by the presence of materials containing volatile organic compounds (VOCs). VOCs are carbon-containing substances that have the ability to evaporate at room temperature. Frequently, exposure to low levels of total VOCs (TVOCs) may produce eye, nose, throat and/or respiratory irritation in some sensitive individuals. For example, chemicals evaporating from a paint can stored at room temperature would most likely contain VOCs. In an effort to determine whether VOCs were present in the building, air monitoring for TVOCs was conducted. An outdoor air sample was taken for comparison. Outdoor TVOC concentrations were ND. Indoor TVOC concentrations were ND in all but one area (Table 1). Room D, a resource room near the Psychology office, had a TVOC measurement of 0.2 ppm (Table 1).

Please note, TVOC air measurements are only reflective of the indoor air concentrations present at the time of sampling. Indoor air concentrations can be greatly impacted by the use TVOC containing products. While no TVOC levels measured exceeded background levels,

to any increase of filtration, univents should be evaluated by a ventilation engineer to ascertain whether units can maintain function with more efficient filters.

A number of exhaust/return vents, univent supply vents and personal fans were observed to have accumulated dust (Pictures 19 and 20). If exhaust vents are not functioning, backdrafting can occur, which can re-aerosolize accumulated dust particles. Re-activated univents and fans call also aerosolize dust accumulated on vents/fan blades.

Of note was the use of food as project materials (Picture 21). Exposed food products and reused food containers can attract a variety of pests. The presence of pests inside a building can produce conditions that can degrade indoor air quality. For example, rodent infestation can result in indoor air quality related symptoms due to materials in their wastes. Mouse urine is known to contain a protein that is a known sensitizer (US EPA, 1992). A sensitizer is a material that can produce symptoms in exposed individuals, including nose irritations and skin rashes. Pest attractants should be reduced/eliminated. Proper food storage is an integral component in maintaining indoor air quality. Food should be properly stored and clearly labeled. Reuse of food containers (e.g., for art projects) is not recommended since food residue adhering to the container surface may serve to attract pests.

In an effort to reduce noise from sliding chairs, tennis balls had been spliced open and placed on chair legs (Picture 22). Tennis balls are made of a number of materials that are a source of respiratory irritants. Constant wearing of tennis balls can produce fibers and off-gas VOCs. Tennis balls are made with a natural rubber latex bladder, which becomes abraded when used as a chair leg pad. Use of tennis balls in this manner may introduce latex dust into the school environment. Some individuals are highly allergic to latex (e.g., spina bifida patients) (SBAA, 2001). It is recommended that the use of materials containing latex be limited in

buildings to reduce the likelihood of symptoms in sensitive individuals (NIOSH, 1997). A question and answer sheet concerning latex allergy is attached as Appendix B (NIOSH, 1998).

Also was the amount of materials stored inside classrooms (Picture 23). In classrooms throughout the school, items were seen on windowsills, tabletops, counters, bookcases and desks. The amount of items stored in classrooms provides a means for dusts, dirt and other potential respiratory irritants to accumulate and make it difficult for custodial staff to clean.

Conclusions/Recommendations

In view of the findings at the time of the visit, the following recommendations are made:

1. Examine each univent for function. Operate univents while classrooms are occupied. Check fresh air intakes for repair and increase the percentage of fresh air intake if necessary.
2. Examine exhaust vents for function and make repairs as necessary.
3. Operate all ventilation systems that are operable throughout the building (e.g., gym, auditorium, classrooms) continuously during periods of school occupancy independent of thermostat control to maximize air exchange.
4. Remove all obstructions from univents and exhaust vents to facilitate airflow. Close classroom doors to improve air exchange.
5. Remove debris and dust accumulated on the ventilation grilles.
6. Consult a ventilation engineer concerning re-balancing of the ventilation systems and the calibration of univent fresh air control dampers throughout the school. Ventilation industrial standards recommend that mechanical ventilation systems be balanced every five years (SMACNA, 1994).

7. For buildings in New England, periods of low relative humidity during the winter are often unavoidable. Therefore, scrupulous cleaning practices should be adopted to minimize common indoor air contaminants whose irritant effects can be enhanced when the relative humidity is low. To control for dusts, a high efficiency particulate arrestance (HEPA) filter equipped vacuum cleaner in conjunction with wet wiping of all surfaces is recommended. Avoid the use of feather dusters. Drinking water during the day can help ease some symptoms associated with a dry environment (throat and sinus irritations).

8. Examine the feasibility of increasing HVAC filter efficiency. Note that prior to any increase of filtration, each unit should be evaluated by a ventilation engineer as to whether they can maintain function with more efficient filters.

9. Identify and repair sources of water leaks. Replace water-damaged ceiling tiles. These ceiling tiles can be a source of microbial growth. Examine the non-porous surface beneath the removed ceiling tiles and disinfect with an appropriate antimicrobial.

10. For removal of tiles directly adhered to the ceiling, such removal would be considered a renovation activity that can release particulates and spores in particular, if the material is moldy. Replacement of ceiling tiles may also involve glues that contain VOCs. In order to minimize occupant exposure, repairs should be done while the building is unoccupied.

1. Examine plants in classrooms for mold growth in water catch basins. Disinfect water catch basins if necessary. Remove plants from ventilation sources.

2. Remove plants growing against building and its foundation to prevent water intrusion through brickwork.

. Ensure water is flowing in the ramp and crawlspace water channels. Examine and remove any debris that may impede water movement.

14. Operate auxiliary fan in classroom 9 at least 15-20 minutes prior and following any science laboratory projects.

15. Ensure doors leading to the storage and crawlspace remain closed to prevent the movement of odors and materials into occupied areas.

16. Refrain from using food as materials for projects.

17. Relocate or consider reducing the amount of materials stored in classrooms to allow for more thorough cleaning of classrooms. Clean items regularly with a wet cloth or sponge to prevent excessive dust build-up.

18. Consider discontinuing the use of tennis balls on furniture and replacing tennis balls with alternative "glides". Refer to Picture 24 for an example.

19. Extend exhaust pipe above ventilation equipment to prevent entrainment of odors and particles.

20. Consider adopting the US EPA document, *Tools for Schools* (US EPA, 2000b), as a means to maintaining a good indoor air quality environment in the building. This document can be downloaded from the Internet at http://www.epa.gov/iaq/schools/index.html.

21. Refer to resource manuals and other related indoor air quality documents for further building-wide evaluations and advice on maintaining public buildings. Copies of these materials are located on the MDPH's website: http://www.state.ma.us/dph/beha/iaq/iaqhoFtme.htm.

References

ACGIH. 1989. Guidelines for the Assessment of Bioaerosols in the Indoor Environment. American Conference of Governmental Industrial Hygienists, Cincinnati, OH.

ASHRAE. 1989. Ventilation for Acceptable Indoor Air Quality. American Society of Heating, Refrigeration and Air Conditioning Engineers. ANSI/ASHRAE 62-1989

ASHRAE. 1992. Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter. American Society of Heating, Refrigeration and Air Conditioning Engineers. ANSI/ASHRAE 52.1-1992.

BOCA. 1993. The BOCA National Mechanical Code-1993. 8th ed. Building Officials & Code Administrators International, Inc., Country Club Hills, IL.

HUB. 2003. Hub Testing Laboratory Inc. Indoor Air Quality Baseline Report for Essex Elementary School. HUB I.D.: 15943. December 8, 2003.

Lstiburek, J. & Brennan, T. 2001. Read This Before You Design, Build or Renovate. Building Science Corporation, Westford, MA. U.S. Department of Housing and Urban Development, Region I, Boston, MA

MDPH. 1997. Requirements to Maintain Air Quality in Indoor Skating Rinks (State Sanitary Code, Chapter XI). 105 CMR 675.000. Massachusetts Department of Public Health, Boston, MA.

MEHRC. 1997. Indoor Air Quality for HVAC Operators & Contractors Workbook. MidAtlantic Environmental Hygiene Resource Center, Philadelphia, PA.

NIOSH. 1997. NIOSH Alert Preventing Allergic Reactions to Natural Rubber latex in the Workplace. National Institute for Occupational Safety and Health, Atlanta, GA.

NIOSH. 1998. Latex Allergy A Prevention. National Institute for Occupational Safety and Health, Atlanta, GA.

OSHA. 1997. Limits for Air Contaminants. Occupational Safety and Health Administration. Code of Federal Regulations. 29 C.F.R 1910.1000 Table Z-1-A.

Sanford. 1999. Material Safety Data Sheet (MSDS No: 198-17). Expo® Dry Erase Markers Bullet, Chisel, and Ultra Fine Tip. Sanford Corporation. Bellwood, IL.

SBAA. 2001. Latex In the Home And Community Updated Spring 2001. Spina Bifida Association of America, Washington, DC.

SBBRS. 1997. Mechanical Ventilation. State Board of Building Regulations and Standards. Code of Massachusetts Regulations. 780 CMR 1209.0

Essex Elementary/Middle School
12 Story Street, Manchester MA 01929

Table 1

Indoor Air Results
May 7, 2004

Location/ Room	Occupants in Room	Temp (°F)	Relative Humidity (%)	Carbon Dioxide (ppm)	Carbon Monoxide (ppm)	TVOCs (ppm)	PM2.5 (µg/m3)	Windows Openable	Ventilation		Remarks
									Supply	Exhaust	
background	0	77	49	347	ND	ND	12				Sunny; light breeze ~5mph.
art	21	71	51	653	ND	ND	30	Y # open: 0 # total: 4	Y wall (off)	Y wall (off)	Exterior DO, Exhaust blocked/occluded by furniture; clutter, FC re-use, kiln operating.
cafeteria	150	78	43	560	ND	ND	23	N # open: 0 # total: 0	Y wall	Y wall	Exterior DO
Counseling Office	1	76	43	786	ND	ND	19	N # open: 0 # total: 0	N undercut door	Y wall	Hallway DO; PF, clutter
D	1	77	44	652	ND	0.2	22	N # open: 0 # total: 0	N	Y ceiling	Hallway DO; PC, PF, wet toner copier.

ppm = parts per million
µg/m3 = micrograms per cubic meter

AD = air deodorizer
AP = air purifier
aqua. = aquarium
AT = ajar ceiling tile
BD = backdraft
CD = chalk dust
CP = ceiling plaster
CT = ceiling tile
DEM = dry erase materials
design = proximity to door
FC = food container
G = gravity
GW = gypsum wallboard
M = mechanical
MT = missing ceiling tile
NC = non-carpeted
ND = non detect
PC = photocopier
PF = personal fan
plug-in = plug-in air freshener
PS = pencil shavings
sci. chem. = science chemicals
TB = tennis balls
terra. = terrarium
UF = upholstered furniture
VL = vent location
WP = wall plaster

Comfort Guidelines

Carbon Dioxide: < 600 ppm = preferred
600 - 800 ppm = acceptable
> 800 ppm = indicative of ventilation problems

Temperature: 70 - 78 °F
Relative Humidity: 40 - 60%

Table 1-1

Essex Elementary/Middle School
12 Story Street, Manchester MA 01929

Table 1

Indoor Air Results
May 7, 2004

Location/ Room	Occupants in Room	Temp (°F)	Relative Humidity (%)	Carbon Dioxide (ppm)	Carbon Monoxide (ppm)	TVOCs (ppm)	PM2.5 (µg/m3)	Windows Openable	Ventilation		Remarks
									Supply	Exhaust	
gym	0	73	47	704	ND	ND	36	N # open: 0 # total: 0	Y wall (off)	Y ceiling (off)	
main office	1	76	45	553	ND	ND	20	N # open: 0 # total: 0	N	Y wall	Hallway DO; PC.
media	3	74	46	472	ND	ND	22	Y # open: 3 # total: 4	Y univent (off)	Y closet	Hallway and Inter-room DO; Supply blocked/occluded by furniture, dirt/debris; Exhaust blocked/occluded by dirt/debris; window-mounted AC, DEM, PF, plants.
nurses' office	2	76	46	835	ND	ND	24	N # open: 0 # total: 0	N	Y wall	Hallway DO

ppm = parts per million
µg/m3 = micrograms per cubic meter

AD = air deodorizer
AP = air purifier
aqua. = aquarium
AT = ajar ceiling tile
BD = backdraft
CD = chalk dust
CP = ceiling plaster
CT = ceiling tile
DEM = dry erase materials
design = proximity to door
FC = food container
G = gravity
GW = gypsum wallboard
M = mechanical
MT = missing ceiling tile
NC = non-carpeted
ND = non detect
PC = photocopier
PF = personal fan
plug-in = plug-in air freshener
PS = pencil shavings
sci. chem. = science chemicals
TB = tennis balls
terra. = terrarium
UF = upholstered furniture
VL = vent location
WP = wall plaster

Comfort Guidelines

Carbon Dioxide: < 600 ppm = preferred
600 - 800 ppm = acceptable
> 800 ppm = indicative of ventilation problems

Temperature: 70 - 78 °F
Relative Humidity: 40 - 60%

Essex Elementary/Middle School

12 Story Street, Manchester MA 01929

Table 1

Indoor Air Results

May 7, 2004

Location/ Room	Occupants in Room	Temp (°F)	Relative Humidity (%)	Carbon Dioxide (ppm)	Carbon Monoxide (ppm)	TVOCs (ppm)	PM2.5 (µg/m3)	Windows Openable	Ventilation		Remarks
									Supply	Exhaust	
principal's office	0	75	45	568	ND	ND	19	Y # open: 1 # total: 1	N	N	Hallway DO; window-mounted AC
Special Education Office	0	76	46	859	ND	ND	22	Y # open: 0 # total: 1	N	N	Hallway DO; window-mounted AC, plants.
Speech & Language	0	76	43	622	ND	ND	21	N # open: 0 # total: 0	N	Y ceiling	Hallway DO; CD.
teachers' lounge	0	77	44	507	ND	ND	13	N # open: 0 # total: 0	Y univent	Y wall	Hallway DO
1	18	77	44	826	ND	ND	24	Y # open: 3 # total: 3	Y univent	Y ceiling wall (off)	Hallway DO; Exhaust occluded with dirt/debris; CD, PF, TB, cleaners, FC re-use.

ppm = parts per million
µg/m3 = micrograms per cubic meter

AD = air deodorizer
AP = air purifier
aqua. = aquarium
AT = ajar ceiling tile
BD = backdraft
CD = chalk dust
CP = ceiling plaster
CT = ceiling tile
DEM = dry erase materials
design = proximity to door
FC = food container
G = gravity
GW = gypsum wallboard
M = mechanical
MT = missing ceiling tile
NC = non-carpeted
ND = non detect
PC = photocopier
PF = personal fan
plug-in = plug-in air freshener
PS = pencil shavings
sci. chem. = science chemicals
TB = tennis balls
terra. = terrarium
UF = upholstered furniture
VL = vent location
WP = wall plaster

Comfort Guidelines

Carbon Dioxide: < 600 ppm = preferred
600 - 800 ppm = acceptable
> 800 ppm = indicative of ventilation problems

Temperature: 70 - 78 °F
Relative Humidity: 40 - 60%

Table 1-3

Essex Elementary/Middle School

12 Story Street, Manchester MA 01929

Table 1

Indoor Air Results

May 7, 2004

Location/ Room	Occupants in Room	Temp (°F)	Relative Humidity (%)	Carbon Dioxide (ppm)	Carbon Monoxide (ppm)	TVOCs (ppm)	PM2.5 (µg/m3)	Windows Openable	Ventilation		Remarks
									Supply	Exhaust	
2	0	76	43	491	ND	ND	22	Y # open: 2 # total: 3	Y (off)	Y (off)	Hallway DO; Exhaust VL; CD, PF, cleaners, FC re-use.
4	18	76	46	1121	ND	ND	29	Y # open: 0 # total: 3	Y univent	Y ceiling wall	Hallway DO; Exhaust VL; CD, DEM, TB, clutter, FC re-use, plants.
6	0	77	46	726	ND	ND	21	Y # open: 0 # total: 3	Y univent	Y ceiling wall	Hallway DO; Exhaust blocked/occluded by dirt/debris; Exhaust VL; DEM, PF, cleaners.
7	21	77	48	918	ND	ND	22	Y # open: 2 # total: 3	Y univent	Y wall closet	Supply blocked/occluded by dirt/debris; Exhaust blocked/occluded by clutter, dirt/debris; DEM, TB, aqua/terra, cleaners.

ppm = parts per million

µg/m3 = micrograms per cubic meter

AD = air deodorizer

AP = air purifier

aqua. = aquarium

AT = ajar ceiling tile

BD = backdraft

CD = chalk dust

CP = ceiling plaster

CT = ceiling tile

DEM = dry erase materials

design = proximity to door

FC = food container

G = gravity

GW = gypsum wallboard

M = mechanical

MT = missing ceiling tile

NC = non-carpeted

ND = non detect

PC = photocopier

PF = personal fan

plug-in = plug-in air freshener

PS = pencil shavings

sci. chem. = science chemicals

TB = tennis balls

terra. = terrarium

UF = upholstered furniture

VL = vent location

WP = wall plaster

Comfort Guidelines

Carbon Dioxide: < 600 ppm = preferred
600 - 800 ppm = acceptable
> 800 ppm = indicative of ventilation problems

Temperature: 70 - 78 °F
Relative Humidity: 40 - 60%

Essex Elementary/Middle School

12 Story Street, Manchester MA 01929

Table 1

Indoor Air Results

May 7, 2004

Location/ Room	Occupants in Room	Temp (°F)	Relative Humidity (%)	Carbon Dioxide (ppm)	Carbon Monoxide (ppm)	TVOCs (ppm)	PM2.5 (µg/m3)	Windows Openable	Ventilation		Remarks
									Supply	Exhaust	
8	21	77	46	792	ND	ND	22	Y # open: 3 # total: 4	Y univent (weak)	Y ceiling wall	Exhaust VL; DEM, PF, TB, clutter, plants.
9	21	79	42	698	ND	ND	17	Y # open: 2 # total: 2	Y univent (off)	Y ceiling wall	Hallway DO; Exhaust VL; CD, DEM, FC re-use, plants, chemical odor buildup when laboratory in progress; exhaust fan installed in window.
10	16	78	42	937	ND	ND	24	Y # open: 1 # total: 2	Y univent	Y ceiling wall	DEM, cleaners, clutter.
11	18	78	42	688	ND	ND	19	Y # open: 3 # total: 3	Y univent	Y wall closet	CD, DEM, PF, cleaners, plants, orange cleaning odor.

ppm = parts per million
µg/m3 = micrograms per cubic meter

AD = air deodorizer
AP = air purifier
aqua. = aquarium
AT = ajar ceiling tile
BD = backdraft
CD = chalk dust
CP = ceiling plaster
CT = ceiling tile
DEM = dry erase materials
design = proximity to door
FC = food container
G = gravity
GW = gypsum wallboard
M = mechanical
MT = missing ceiling tile
NC = non-carpeted
ND = non detect
PC = photocopier
PF = personal fan
plug-in = plug-in air freshener
PS = pencil shavings
sci. chem. = science chemicals
TB = tennis balls
terra. = terrarium
UF = upholstered furniture
VL = vent location
WP = wall plaster

Comfort Guidelines

Carbon Dioxide:
< 600 ppm = preferred
600 - 800 ppm = acceptable
> 800 ppm = indicative of ventilation problems

Temperature: 70 - 78 °F
Relative Humidity: 40 - 60%

Table 1

Location/ Room	Occupants in Room	Temp (°F)	Relative Humidity (%)	Carbon Dioxide (ppm)	Carbon Monoxide (ppm)	TVOCs (ppm)	PM2.5 (µg/m3)	Windows Openable	Ventilation		Remarks
									Supply	Exhaust	
12	7	76	42	517	ND	ND	14	Y # open: 1 # total: 3	Y univent	Y wall closet	Hallway DO; CD, DEM, PF, TB plants.
13	20	80	44	992	ND	ND	20	Y # open: 3 # total: 3	Y univent (off)	Y wall closet	DEM, PF, clutter, items hangin from CT.
14	18	77	42	798	ND	ND	18	Y # open: 2 # total: 3	Y univent	Y wall boxes, VL	Hallway DO; CD, DEM, clutte plants.
15	16	76	49	1191	ND	ND	24	Y # open: 0 # total: 3	Y univent (off)	Y wall	Hallway DO; Exhaust blocked/occluded by clutter; Exhaust VL; DEM, PF, clean clutter, plants.

ppm = parts per million
µg/m3 = micrograms per cubic meter

AD = air deodorizer
AP = air purifier
aqua. = aquarium
AT = ajar ceiling tile
BD = backdraft
CD = chalk dust
CP = ceiling plaster
CT = ceiling tile
DEM = dry erase materials
design = proximity to door
FC = food container
G = gravity
GW = gypsum wallboard
M = mechanical
MT = missing ceiling tile
NC = non-carpeted
ND = non detect
PC = photocopier
PF = personal fan
plug-in = plug-in air freshener
PS = pencil shavings
sci. chem. = science chemi
TB = tennis balls
terra. = terrarium
UF = upholstered furnitur
VL = vent location
WP = wall plaster

Comfort Guidelines

Carbon Dioxide: < 600 ppm = preferred
600 - 800 ppm = acceptable
> 800 ppm = indicative of ventilation problems

Temperature: 70 - 78 °F
Relative Humidity: 40 - 60%

Essex Elementary/Middle School

12 Story Street, Manchester MA 01929

Table 1

Indoor Air Results

May 7, 2004

Location/ Room	Occupants in Room	Temp (°F)	Relative Humidity (%)	Carbon Dioxide (ppm)	Carbon Monoxide (ppm)	TVOCs (ppm)	PM2.5 (µg/m3)	Windows Openable	Ventilation		Remarks
									Supply	Exhaust	
16	23	75	56	2235	ND	ND	38	Y # open: 1 # total: 3	Y univent (off)	Y wall	CD, DEM, cleaners, clutter, plants.
17	5	76	44	613	ND	ND	15	Y # open: 1 # total: 4	Y univent (off)	Y wall (off)	Hallway DO; window-mounted AC, CD.
18	0	78	42	389	ND	ND	21	Y # open: 1 # total: 2	Y univent	Y ceiling	Hallway and **exterior** DO; Exhaust blocked/occluded by furniture, clutter, dirt/debris; #MT/AT: 1, CD, TB, cleaners, clutter, plants.
19	0	77	43	422	ND	ND	20	Y # open: 2 # total: 2	Y univent	Y ceiling	Hallway and **exterior** DO; Exhaust blocked/occluded by furniture, clutter; CD, DEM, aqua/terra, cleaners, food use/storage.

ppm = parts per million
µg/m3 = micrograms per cubic meter

AD = air deodorizer
AP = air purifier
aqua. = aquarium
AT = ajar ceiling tile
BD = backdraft
CD = chalk dust
CP = ceiling plaster
CT = ceiling tile
DEM = dry erase materials
design = proximity to door
FC = food container
G = gravity
GW = gypsum wallboard
M = mechanical
MT = missing ceiling tile
NC = non-carpeted
ND = non detect
PC = photocopier
PF = personal fan
plug-in = plug-in air freshener
PS = pencil shavings
sci. chem. = science chemicals
TB = tennis balls
terra. = terrarium
UF = upholstered furniture
VL = vent location
WP = wall plaster

Comfort Guidelines

Carbon Dioxide: < 600 ppm = preferred
600 - 800 ppm = acceptable
> 800 ppm = indicative of ventilation problems

Temperature: 70 - 78 °F
Relative Humidity: 40 - 60%

Essex Elementary/Middle School

12 Story Street, Manchester MA 01929

Table 1

Indoor Air Results

May 7, 2004

Location/ Room	Occupants in Room	Temp (°F)	Relative Humidity (%)	Carbon Dioxide (ppm)	Carbon Monoxide (ppm)	TVOCs (ppm)	PM2.5 (µg/m3)	Windows Openable	Ventilation		Remarks
									Supply	Exhaust	
20	4	77	44	597	ND	ND	16	Y # open: 1 # total: 2	Y univent	Y wall (off)	Exhaust blocked/occluded by clutter, plant(s); Exhaust VL; CD, FC re-use.

ppm = parts per million
µg/m3 = micrograms per cubic meter

AD = air deodorizer
AP = air purifier
aqua. = aquarium
AT = ajar ceiling tile
BD = backdraft
CD = chalk dust
CP = ceiling plaster
CT = ceiling tile
DEM = dry erase materials
design = proximity to door
FC = food container
G = gravity
GW = gypsum wallboard
M = mechanical
MT = missing ceiling tile
NC = non-carpeted
ND = non detect
PC = photocopier
PF = personal fan
plug-in = plug-in air freshener
PS = pencil shavings
sci. chem. = science chemicals
TB = tennis balls
terra. = terrarium
UF = upholstered furniture
VL = vent location
WP = wall plaster

Comfort Guidelines

Carbon Dioxide: < 600 ppm = preferred
600 - 800 ppm = acceptable
> 800 ppm = indicative of ventilation problems

Temperature: 70 - 78 °F
Relative Humidity: 40 - 60%

BOARD OF HEALTH

TOWN HALL, 30 MARTIN STREET, ESSEX, MASSACHUSETTS 01929-1219
TELEPHONE (978)768-7614

September 10, 2002

Essex Elementary and Middle School
12 Story Street
Essex, MA 01929
Attn: Principal Eric Gordon

Dear Mr. Gordon,

In August we received an inquiry questioning the water quality at the pond on the school grounds. As a precaution, we sampled the water and had it tested for fecal coliform. This organism is an indicator of other bacterial and viral organisms that could lead to gastrointestinal illnesses. A maximum of 200 colonies/100 ml. sample has been the acceptable limit. The sample tested from the pond was 270 colonies/100 ml. sample. Factors contributing to this count may be the low water elevation of the pond, neighboring failed septic systems, or animal pollution caused by pets and wildlife.

We are aware that these waters are not meant for bathing/swimming, however we do want to draw your attention to the potential impact of these waters on your students and other children who may use the pond. Since the testing, we have heard that the school sometimes uses the pond for school activities. In order to protect the students and the school, you may want to have the water sampled and tested by a DEP certified lab within a week of scheduled activities that require contact with the water (specifically mouth, eye, or ear, or open wound contact). As usual, handwashing is recommended after contact as the best precaution to lessen potential hand to mouth contamination. You may also choose to initiate methods to discourage unauthorized use of this pond by the public and students.

We offer this information to you as an aid. If we can be of service, or if you wish to discuss this further, please contact me at (978) 768 – 7614.

Sincerely,

Elaine Wozny

Elaine Wozny, C.H.O.
B.O.H. Administrator

Biomarine
16 EAST MAIN STREET, GLOUCESTER, MA 01930
TELEPHONE: (978) 281-0222 FAX: (978) 283-6296

CERTIFICATE OF ANALYSIS

Ms. Elaine Wozny
Essex Board of Health
Town Hall
Essex, MA 01929

Report No.: 26570
August 16, 2002

RE: ANALYSIS OF WATER FOR BACTERIOLOGICAL QUALITY

SAMPLE DESCRIPTION: One sample of water collected by customer on August 14, 2002 at 2:38pm.

FINDINGS:

Sample ID	Sample Location	Fecal Count/100 ml
26570	School Pond	**270**

METHOD: Standard Methods for the Examination of Water & Wastewater, 19th Edition, 1995, method 9222D.

REMARKS: The Commonwealth of Massachusetts Division of Water Pollution Control's 314 CMR 4.03 allows up to 200 fecal coliform/100 mL in Class B waters, and up to 1000 fecal coliform/100 mL in Class C waters. Class B waters are designated as a habitat for fish, other aquatic life and wildlife, and for primary and secondary contact recreation. Class C waters are designated for the uses of protection and propagation of fish, other aquatic life and wildlife, and for secondary contact recreation.

John Marietta/Lab Director

Massachusetts Certified Laboratory #MA026

RECEIVED
AUG 15 2002
TOWN OF ESSEX
BOARD OF HEALTH

RECEIVED
AUG 1 2002
TOWN OF ESSEX
BOARD OF HEALTH

Beach Sampling - Field Data Form

ction: ESSEX
ugust 14, 2002
laine Wozny

Delivered to Lab By: Elaine Wozny
Time of Delivery: 3:30pm

llect samples in areas of greatest bather load and at locations subject to contamination. At a uniform depth of 3 feet, collect samples 12 inches below water surface. Do not collect samples within 6 inches of bottom.

mple ID	Location (Note body of water, beach and collection area)	Time Collected	Type of Water salt/fresh	Water Temp °F	Water Clarity* clear/not clear	Swimmer Density	Observations** (of bathing water)
1	Centennial Grove	2:48	Fresh	87	4+'	Med	
2	Clammer's Beach	3:25	Salt	71	4+	Low	
3	Front Beach	3:29	Salt	70	4+	Low/M	
4	Camp Menorah	3:00	Fresh	85	3ft	M/H	
5	* School Pond (no A swimming area)	2:38	Fresh				
	* fecal coliform test						

***Water Clarity:** State reason not clear, i.e., turbidity, color of water.

****Observations:** T= Trash WS= Waste Solids SD= Sludge Deposits O= Oils A= Algae F= Fish die-offs J= Jellyfish B= Birds

Current Weather Conditions: Sunny Cloudy/Overcast Rainy Foggy Windy HHH

Air Temp: 93 °F **Wind Direction:** _____ **Time of Last High Tide:** 4:09 a.m.
Amount of Last Rainfall: 0.14" **Number of days from end of last rainfall to collection day:** 16 (7-29-02)

Comments: recd L. Oroleau 8/14/02 3:30pm

Biomarine
16 EAST MAIN STREET, GLOUCESTER, MA 01930
TELEPHONE: (978) 281-0222 FAX: (978) 283-6296

RECEIVED
JUN 17 2003
TOWN OF ESSEX
BOARD OF HEALTH

CERTIFICATE OF ANALYSIS

Mr. Paul Pennoyer
Essex Elementary & Middle School
12 Story Street
Essex, MA 01929

Report No.: 28290
June 12, 2003

RE: ANALYSIS OF POND WATER FOR BACTERIOLOGICAL QUALITY

SAMPLE DESCRIPTION: One sample of water taken from the Essex School pond, 12 Story Street, Essex, MA.

SAMPLING: Sample taken by Paul Pennoyer on June 10, 2003.

FINDINGS:

Sample Location	Time Sampled	E. coli/100 ml
Essex School Pond	PM	50

METHOD: EPA Method 1103.1 (modified), March 2000.

REMARKS: E. coli originate solely from intestinal sources as opposed to fecal coliforms and thus are a better indicator of fecal pollution. Mass. Department of Public Health currently accepts an E. coli count of <235/100 ml in fresh water bathing areas.

John Marieua/Lab Director

Fc: 978-768-2502

Massachusetts Certified Laboratory # MA026

TOTAL P.01

ESSEX ELEMENTARY SCHOOL

ESSEX, MASSACHUSETTS

DESCRIPTION OF FIELD WORK

August 21, 1974

It is intended to remove the top two feet of sandy loam from the area indicated on the enclosed plot plan within "Limits of Fieldwork". *This material to be disposed of by the Contractor.

The existing system which now drains the area (catch basins with feeder trenches), is to be augmented by porous drain feeder lines laid on the exposed bed. A backfill of approximately 18 inches of bank run sand and gravel, topped by 6 inches of loam, will return the area to the original grades. The field is to be reseeded for an open grassy play area.

It is not planned to change existing grades, except for very minor contour revisions. The only paving planned is to replace that taken by school expansion.

The planned drainage is of minimal depth, with an invert of only two feet; no sub-strata drainage is to be undertaken.

The existing watershed is unchanged.

W H Jones, Jr.
by Thomas D Jones
Aug 26, 1974

ESSEX BOARD OF SELECTMEN

TOWN HALL • MARTIN STREET • ESSEX, MASSACHUSETTS 01929-1219

Telephone (508) 768-6531

September 23, 1997

Mr. David Ferris
DEP Northeast Regional Office
10 Commerce Way
Woburn, Massachusetts 01801

SEP 25 1997

Dear Mr. Ferris:

In the DEP's correspondence of June 17, 1997, regarding the Elementary School Plan, the DEP requested the Town to submit final recommendations by September 12, 1997, and an NPDES permit application or plans for discharge elimination by November 14, 1997. The Town proposes to make these milestone dates October 17, 1997, and December 17, 1997, respectively. All other milestone/deadline dates will remain as outlined in the DEP's correspondence of June 17, 1997. These changes will not affect the final implementation date of July 1, 1998. Please call me at (978) 768-6921 if you have any questions or need further information.

Sincerely,

David L. Folsom
Selectman
Chairman, Sewer Study Committee

cc: Glenn Haas, DEP, Boston
John Higgins, DEP, Boston
Edward Bohlen, Esq., Attorney Generals Office
Eric Hall, EPA, Boston
Brian Cassidy, Esq., Ronan, Segal & Harrington
Richard Zeroka, CZM, Boston
Kelly Whalen, Dames & Moore
Essex Board of Health
Essex Board of Selectmen

ESSEX BOARD OF SELECTMEN

TOWN HALL • MARTIN STREET • ESSEX, MASSACHUSETTS 01929-1219
Telephone (508) 768-6531

TOWN OF ESSEX
BOARD OF HEALTH
RECEIVED
JUN 17 1997

June 16, 1997

Mr. Sabin M. Lord, Jr.
Regional Engineer for Resource Protection
DEP Northeast Regional Office
10 Commerce Way
Woburn, Massachusetts 01801

Dear Mr. Lord:

The Town of Essex submitted the Elementary School Plan to the DEP on July 1, 1996. Since the Town has not received any comments from the DEP regarding this plan the Town requests an extension for the construction completion deadline in the Elementary School Plan from July 1, 1997, to July 1, 1998. Please call me at (508) 768-6921 if you have any questions or need further information.

Sincerely,

David L. Folsom
Selectman
Chairman, Sewer Study Committee

cc: Glenn Haas, DEP, Boston
John Higgins, DEP, Boston
Edward Bohlen, Esq., Attorney Generals Office
Eric Hall, EPA, Boston
Brian Cassidy, Esq., Ronan, Segal & Harrington
Richard Zeroka, CZM, Boston
Kelley Whalen, Dames & Moore
Essex Board of Health
Essex Board of Selectmen

Bd of Health

DEC-TAM
ASBESTOS ABATEMENT SPECIALISTS

10 LOWELL JUNCTION ROAD ANDOVER, MASSACHUSETTS 01810-5906

508-470-2860
FAX 508-470-1017

RECEIVED
JAN 31 1990
ESSEX
BOARD OF HEALTH

January 29, 1990

Kenneth W. Capel, CHO, Agent
Town Hall
Essex, MA. 01929

Dear Mr. Capel:

The following agencies have been notified regarding asbestos removal at:
Essex Elementary School.

Regional EPA
JFK Bldg., Room 2103
Boston, Ma 02203

Scheduled Start Date: 2-20-90
Scheduled Completion: 2-23-90

DEQE, Air Quality Control
5 Commonwealth Ave.
Woburn, MA 01801

Dept. of Labor & Industries
Asbestos Control Technical Services
100 Cambridge Street
Boston, MA 02202

Very truly yours,

Michael Flannery

Estimator

MAP 129, LOT 5

Bd of Health

ED
ED

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
METROPOLITAN BOSTON - NORTHEAST REGIONAL OFFICE

WILLIAM F. WELD
Governor

ARGEO PAUL CELLUCCI
Lt. Governor

TOWN OF ESSEX
BOARD OF HEALTH
RECEIVED

TRUDY COXE
Secretary

DAVID B. STRUHS
Commissioner

June 17, 1997

David Folsom, Chairman
Sewer Study Committee
Town of Essex
Martin Street
Essex, MA 01929

JUN 18 1997

RE: Elementary School Plan

Dear Mr. Folsom:

The Department offers the following comments related to the elimination or obtaining an NPDES discharge permit for the boiler blowdown from the Essex Elementary School. The information provided indicates the school currently discharges approximately 20 gallons per week of boiler blowdown to a sump in the basement of the school. There are no additives employed in the boiler nor are any added to the boiler make up water. In addition to the boiler blowdown, the sump collects roof and foundation drains prior to discharging to a Town owned stormdrain. The following must be addressed in the final plan for this unpermitted discharge:

1. How often is the entire boiler drained? Is it ever drained for cleaning purposes? If so, what chemicals are used in the cleaning process. If this takes place than composite samples should be taken in order to characterize the discharge during this event.

2. The report mentions foundation drains, how far are those drains from the leaching facility servicing the school? Is there is a potential for sewage to short circuit to these drains? If so, than the effluent from the sump must be tested for the presence of sewage.

3. A pH of 11.01 does not comply with the water quality standards in 314 CMR 4.00. In addition, due to the size of the receiving stream it is not clear at this time whether lead and copper will create a water quality problem in the recieving stream as well. These issues must be addressed during the NPDES permitting process. Any future analysis must include Total Dissolved Solids.

Jun 14 04 10:12a

CONSERVATION COMMISSION

TOWN HALL 30 MARTIN STREET ESSEX MASSACHUSETTS 01929-1219

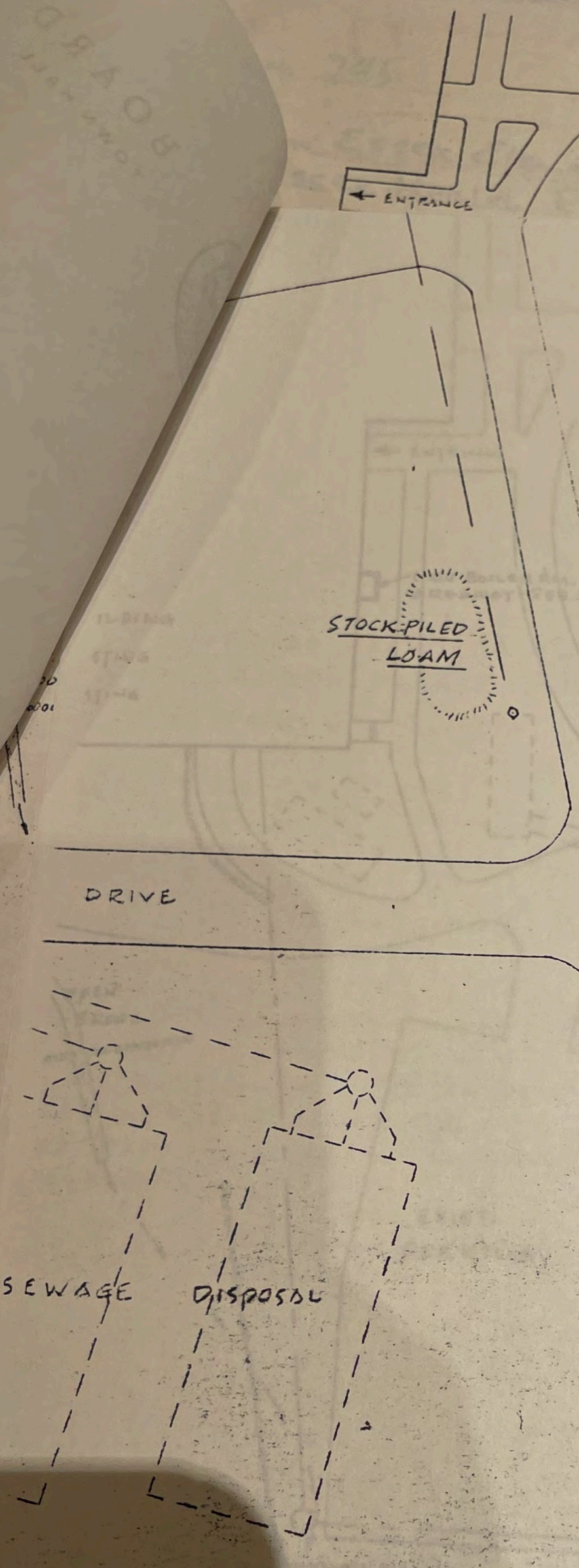
THE ESSEX CONSERVATION COMMISSION HAS BEEN REQUESTED BY THE BOARD OF SELECTMEN OF THE TOWN OF ESSEX TO DETERMINE THE APPLICABILITY OF THE WETLANDS PROTECTION ACT, M.G.L. CHAPTER 131, SECTION 40, FOR THE REMOVAL OF UNDERGROUND HEATING OIL STORAGE TANKS AT THE ESSEX ELEMENTARY AND MIDDLE SCHOOL, 12 STORY STREET. THE REQUEST WILL BE HEARD AT THE ESSEX ELEMENTARY AND MIDDLE SCHOOL, 12 STORY STREET, ON TUESDAY, MARCH 5, 2002, AT 7:35 P.M.

EDWIN PERKINS
CHAIRMAN
ESSEX CONSERVATION COMMISSION

Please place legal notice in the Gloucester Daily Times on Monday, February 25, 2002 Size 1 column

Mail invoice to: Board of Selectmen
Essex Town Hall
30 Martin Street
Essex, MA 01929

Tel. No. (978) 768-7531



EXISTING GRADE ——
NEW GRADE ——
EXISTING GRADE TO CHANG
BORING LOCATION

TRACED FROM SITE PLAN PR
ADDEN, PARKER, CLINCH &
DATE: JULY 31, 1957.

TO THE BEST OF MY KNOWLEDGE & BELIEF THE MATERIALS AND CONSTRUCTION INDICATED ON THESE DRAWINGS CONFORM TO THE BOARD OF SCHOOLHOUSE STRUCTURAL STANDARDS.

SIGNATURE

STREET

DRIVE

DRIVE

← ENTRANCE

NEW BOILER RM.
AREAWAY - SEE DETAIL

ILDING

STING

STING

OPEN
BROO

STOCK-PILE
LOAM

DRIVE

OPEN
BROOK

EXIST.
PARKING

SEWAGE DISPOSAL

BOARD OF HEALTH
Town Hall 30 Martin Street, Essex, MA 01929-1219
Telephone (978) 768-7614 email: boh@essexma.org

A003-05
Permit Number
Sewer ID # 636

Permit to Abandon Septic System Components

Permission is hereby granted to:

William Cornetta
Name

Name of Company

Address

City/Town

State

Zip Code

978 265-6974

to abandon the following component(s)

☒ Septic Tank

☒ Pump Chamber

☐ Cesspool/leach pit(s)/leach chamber

☐ Tight tank

Essex Elementry School
Facility Address

12 Story Street
City/Town

MA
State

01929
Zip Code

Town of Essex
Owner

Telephone Number

The work to be performed is further described in the Application for Disposal System Construction Permit. The applicant recognizes his/her duty to comply with Title 5 and the following local provisions or special conditions:

Eleni Wozny
Approved by

8-31-05
Date

BOH Administrator
Title

Manchester-by-the-Sea, MA 01944

DAVID P. CONNOLLY
SUPERINTENDENT

MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT
Office of the Superintendent
P.O. Box 1407
Manchester-by-the-Sea, MA 01944

Tel. (978) 526-4919
Fax: (978) 526-7585

DAVID P. CONNOLLY
SUPERINTENDENT

July 30, 2002

RECEIVED
JUL 30 2002
TOWN OF ESSEX
BOARD OF HEALTH

Board of Health
Town of Essex
30 Martin Street
Essex, MA 01929

Dear Essex Board of Health Members,

The Manchester Essex Regional School District is seeking approval of a building permit for the installation of four temporary portable classrooms at the Essex Elementary & Middle School at 12 Story Street. A question has arisen as to whether this construction constitutes an increase in design flow as per Title V. Please be advised that this temporary addition is necessitated by changes in curriculum and state requirements, not an increase in enrollment.

The advent of computer technology requires a computer lab that is currently crowded into our library. Individualized education required by Special Education students, as well as programs aimed at preparing small groups of students for standardized state testing require a different configuration of our teaching spaces. In addition, four new Spanish classes have been introduced for students K-8. Our student population remains fairly stable with little change from year to year. A smaller population in subsequent years usually offsets an occasional increase in a given year. Our current average class size is 21 students, which is substantially smaller than the building was originally designed to accommodate. A recent demographic study performed by the University of Massachusetts projected static student populations for both Essex and Manchester in the foreseeable future.

Given that Title V regulates flow from schools based on pupil count and not square footage or seats as other facilities do, we are confident that our proposed addition of this temporary space does not constitute an increase in design flow.

This addition is temporary. The District's long-range goal is to acquire additional space and combine the middle school students from Manchester and Essex in the same building. When this occurs, two or more classes of students will be served by the new space, thus reducing the student population at EEMS by 100 to 300 students. At that time, the original building will be capable of handling our specialized programs and we will have the portables removed and reconfigure existing spaces to suit our needs.

Please approve our building permit application at your July 30, 2002 meeting so that we can have these portables ready for occupancy by the start of classes in September.

Thank you for your prompt attention to this matter.

Sincerely,

David P. Connolly
Superintendent of Schools

The Manchester Essex Regional School District does not discriminate in its programs, activities or employment practices based on race, color, age, national origin, religion, gender, sexual orientation or disability.

BOARD OF HEALTH

TOWN HALL, 30 MARTIN STREET, ESSEX, MASSACHUSETTS 01929-1219
TELEPHONE (978)768-7614

COMPLAINT FORM

TYPE (Restaurant, Housing, etc.) Hot water @ the School

COMPLAINANT Sandra Pelkie

PHONE # 768-6121 DATE? April 2, 2003 TIME

NATURE OF COMPLAINT:

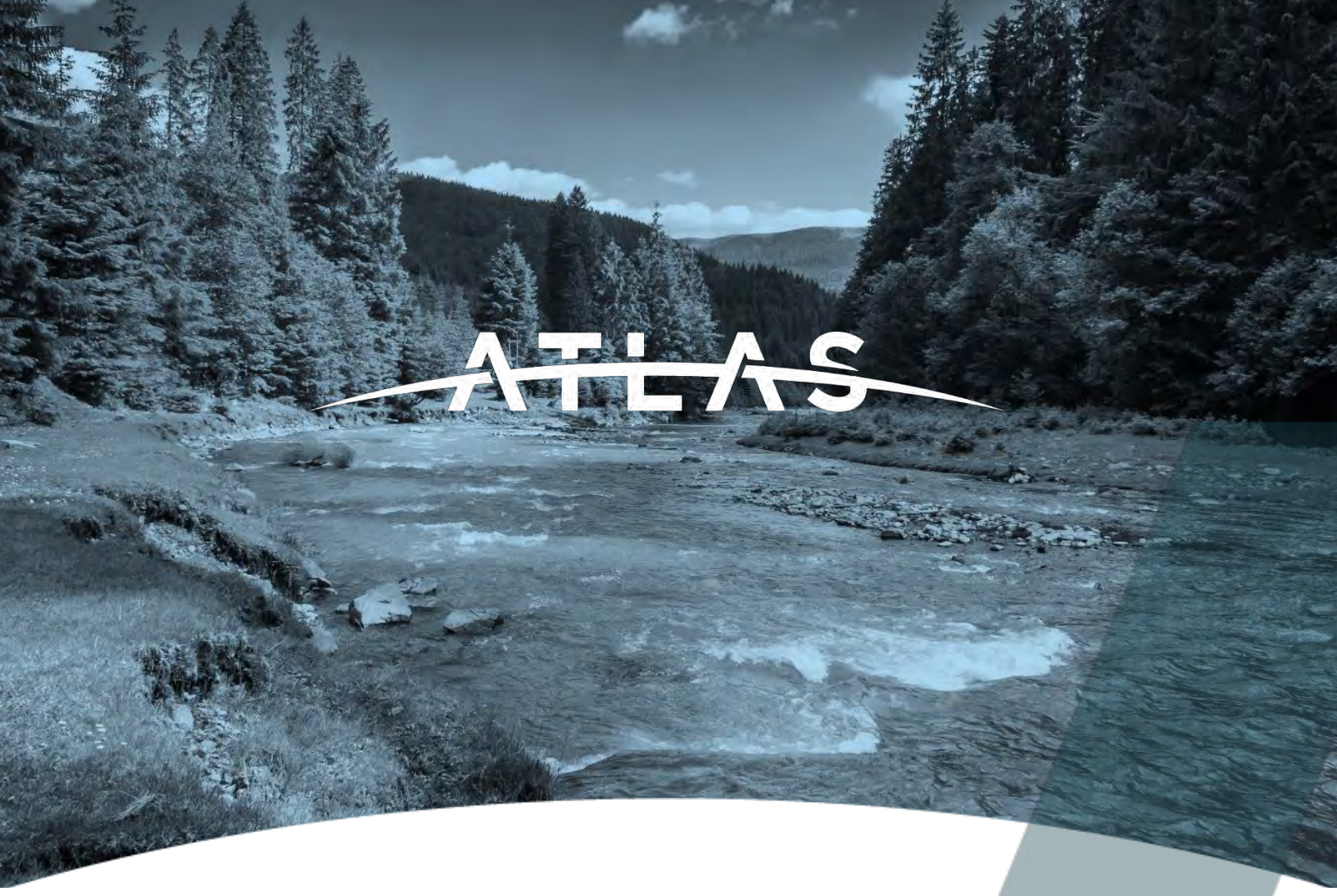
Essex Elementary + Middle School - Extremely hot water in the kindergarten room(s). Ms. Pelkie was told that a child was scalded by the hot water. Plumbing Inspector was called. He inspected the rooms and issued an order to change the separate "hot" + "cold" faucets to a mixed valve (one faucet) for hot + cold. The hot water has been shut off. The children cannot wash their hands after toilet use. Health hazard

REFERRED FOR FOLLOW-UP TO Elaine Wozny
PHONE# DATE

COMMENTS:

CLOSED NEEDS FURTHER EVALUATION

SIGNED



AHERA 3 YEAR REINSPECTION REPORT

ESSEX ELEMENTARY SCHOOL

12 Story Street
Manchester Massachusetts 01929
ATLAS PROJECT #6000006958 PHASE # 02

PREPARED FOR:

Mr. Jason Waldron
Facilities Manager
Manchester-Essex Regional School District
36 Lincoln Street
Manchester-by-the-Sea, Massachusetts 01944

PREPARED BY:

Atlas Technical Consultants LLC
10 State Street, Suite 100
Woburn, Massachusetts 01801

January 26, 2023

10 State Street, Suite 100
Woburn, MA 01801
| oneatlas.com

January 26, 2023

Dear Mr. Waldron,

Atlas Technical, LLC was contracted by Manchester-Essex Regional School District located at 36 Lincoln Street Manchester-by-the-Sea, Massachusetts 01944, to perform the asbestos AHERA 3-year re-inspection and provide this Management Plan for the Essex Elementary School located at 12 Story Street Manchester Massachusetts.

This asbestos three-year re-inspection and management plan was performed in compliance with 454 CMR 28.00. Daniel Roy MADLS Lic # AI900970, a Commonwealth of Massachusetts Department of Labor Standards (DLS) certified Asbestos Inspector, on December 28, 2022. A copy of the appropriate licenses and certifications can be found in Section 9.0.

The enclosed asbestos management plan was completed on January 26, 2023, by Michael Weydt, a Commonwealth of Massachusetts Department of Labor Standards (DLS) certified Asbestos Management Planner. The last 3-year inspection was completed by on January 27, 2020, by Ricardo Nunes MADLS Lic # AI000091.

ATLAS TECHNICAL CONSULTANTS LLC

Michael Weydt
Management Planner/Senior Project Manager
For Atlas Technical Consultants, LLC
Office:774-384-1252
Email: mike.weydt@oneatlas.com

Ricardo Nunes
Senior Management Planner
For Atlas Technical Consultants, LLC
Office:781-404-1375
Email: ric.nunes@oneatlas.com

Bryan Thompson
Division Manager, Group Services
For Atlas Technical Consultants, LLC
Office:781-404-1375
Email: bryan.thompson@oneatlas.com

TABLE OF CONTENTS

1. REVIEW OF EXISTING PAPERWORK/RECORD KEEPING 1
   1.1 Response Actions: 1
   1.2 A Summary of Atlas' Record Review Indicated the Following: 1
   1.3 2023 Response Actions Priority List 1
2. AHERA INSPECTION REPORT 2
   2.1 AHERA Terms, Abbreviations, and Acronyms 2
   2.2 Statement of Compliance 3
3. ASBESTOS INFORMATION 5
   3.1 General 5
   3.2 AHERA Classifications 5
      3.2.1 Thermal System Insulation (TSI) 5
      3.2.2 Miscellaneous Materials 6
      3.2.3 Surfacing Materials 6
   3.3 Methods of Survey Classification and Response Action Determination 6
   3.4 Asbestos Treatment Methods 7
      3.4.1 Repair and Encapsulation 7
      3.4.2 Enclosure 7
      3.4.3 Removal 7
   3.5 Response Action Recommendation / Implementation 7
   3.6 Risk Assessment and Asbestos Control 8
4. LOCAL EDUCATION AGENCY (LEA) 9
   4.1 LEA Responsibilities 9
   4.2 Confirmation of Designated Person 10
   4.3 Recommendation to LEA 10
5. PUBLIC NOTIFICATION 12
   5.1 Occupant Notification 12
   5.2 Plan for Notification 12
   5.3 ACM Locations 12
   5.4 Asbestos Activities 13
   5.5 National Emissions Standards for Hazardous Air Pollutants (NESHAPS) 13
      5.5.1 Demolition 13
      5.5.2 Renovation 13
   5.6 Massachusetts Department of Labor Standards (DLS) 13
   5.7 Massachusetts Department of Environmental Protection (DEP) 13
6. ASBESTOS-CONTAINING MATERIALS RESPONSE ACTIONS 14
   6.1 Response Action Determination Summary 14
   6.2 Response Action Descriptions 14

6.2.1 Removal 14
6.2.2 Repair 14
6.2.3 Encapsulation 14
6.2.4 Enclosure 14
6.2.5 Operation & Maintenance 15
6.3 AHERA Material/Condition Assessment Key for Functional Spaces As found in the School Report 15
6.4 Method of Response Action Determination for Surfacing and Miscellaneous ACM 15
6.5 Method of Response Action Determination for Thermal System Insulation (TSI) ACM 17
7. RESPONSE ACTION DETERMINATION SUMMARY 26
7.1 RESPONSE ACTION DETERMINATION SUMMARY 26
7.2 LEA Responsibilities 26
7.3 Training Requirements and Worker Protection 27
7.4 Periodic Surveillance & Re- Inspection 28
7.5 Warning Signs 28
7.6 Preventive Measures 28
7.7 Cleaning 29
7.7.1 Initial Cleaning 29
7.7.2 Additional Cleaning 29
7.8 Custodial and Maintenance Procedures: 30
7.8.1 Resilient Flooring Maintenance: 30
7.8.2 Dry or Spray Buffing of Resilient Flooring 30
7.8.3 Cleaning/Polishing of Resilient Flooring 31
7.8.4 Stripping of Floor Wax from Resilient Flooring 31
7.9 ACM Waste 31
8. SAFE WORK PRACTICES & PROCEDURES FOR ASBESTOS-CONTAINING MATERIALS 34
8.1 Introduction 34
8.2 Equipment 34
8.3 Pipe Insulation Repair 36
8.4 Asbestos-Containing Ceiling Tiles 37
8.5 ACM Above Suspended Ceilings (e.g., Spray-on Fireproofing) 37
8.6 Non-friable ACM 37
8.7 Glove-Bag Technique 38
8.8 Mini-Enclosure Operations 42
8.9 Asbestos-Debris Clean up Procedures 42
8.10 Asbestos Emergency Procedures 44
8.11 HEPA Vacuum 44
9. RECORDKEEPING 46
9.1 Summary 46

9.2 Sample Record Forms 46
10. DOCUMENTATION 48
10.1 Inspection Reports 48
11. ADDITIONAL DOCUMENTATION.....ERROR! BOOKMARK NOT DEFINED.
11.1 6-Month Surveillance.....49
11.2 Additional Training.....50
11.3 Additional Notifications 51
11.4 Asbestos Activities 52

TABLE 1 – Summary Table of Asbestos-Containing Materials 18

1. REVIEW OF EXISTING PAPERWORK/RECORD KEEPING

1.1 Response Actions:

Each Local Education Agency (LEA) must keep an updated copy of this management plan in its administrative office for each School under its administrative control or direction. This Plan must be available without restriction to the public-school personnel and their representatives, parents, and representatives of EPA and the State, for inspection during normal business hours.

Section 763.94 (Recordkeeping) of the AHERA Final Rule (40 CFR Part 763, Subpart E) and 454 CMR 28.13(10) requires that the following paperwork be obtained for all abatement activities: copies of all accreditations and licenses, copies of the company's (Abatement Contractor) license, copies of any required notifications, copies of disposal receipts, and records of the particulars of the job as to activity, location, and personnel used with their signatures, where applicable.

1.2 A Summary of Atlas' Record Review Indicated the Following:

- Response Actions Completed by Independent Abatement Contractors.
- No information was available for review.

- Six-Month Periodic Surveillance,
- No information was available for review.

- Three-year inspection reports
- No information was available for review.

- Annual Notifications,
- No information was available for review.

- Current custodial training certificates,
- No information was available for review

- Initial Asbestos inspection report,
- No information was available for review.

1.3 2023 Response Actions Priority List

All identified ACM and suspect materials assumed to be ACM that are not on the Response Actions Priority List should be maintained in accordance with the School's AHERA Management Plan.

2. AHERA INSPECTION REPORT

2.1 AHERA Terms, Abbreviations, and Acronyms

AHERA	Asbestos Hazard Emergency Response Act
Rule	40 CFR Part 763 Subpart E – Asbestos-Containing Materials in Schools Rule, including Appendices A, B, C, and D & 454 CMR 28.13 Requirements for Schools Subject to AHERA
Section	Sections 763.80 - 763.99 in the Rule
LEA	The Schools' Local Education Agency (as defined in the Rule)
Plan	The AHERA Management Plan for the School
Part	Subsections of the Plan
EPA	Environmental Protection Agency
OSHA	Occupational Safety and Health Administration
NESHAPS	National Emission Standards for Hazardous Air Pollutants
ACM	Asbestos-containing Building Material (as defined in the Rule)
ACM	Asbestos-containing Material
PACM	Presumed Asbestos-containing Material
Non-ACM	Non-Asbestos-containing Material
S No.	Bulk Sample Number
F	Friable
NF	Non-friable
HA	Homogeneous Area
FS	Functional Space
O&M	Operation and Maintenance Program *(Anything related to O&M shall only pertain to special cleaning and its frequency.*
MIS	Miscellaneous Building Material (as defined in the Rule)
CT	Ceiling Tile
FT	Floor Tile
FBGL	Fiberglass
TSI	Thermal Systems Insulation (as defined in the Rule)
SURF	Surfacing Materials
HVAC	Heating, Ventilation, and Air Conditioning System
N/A	Not Applicable
MA DLS	Massachusetts Department of Labor Standards *(Formerly DOS – Division of Occupational Safety)*

Other relevant terms, abbreviations, and acronyms may be found within regulations included in the Appendices.

2.2 Statement of Compliance

AHERA INSPECTION REPORT FOR MANAGEMENT PLAN

Essex Elementary School
12 Story Street Manchester Massachusetts

This School was inspected to comply with the Asbestos Hazard Emergency Response Act (AHERA), signed into law by President Reagan in 1986. This AHERA Inspection Report is derived from the inspection and classification of asbestos-containing material conducted by an Atlas accredited Asbestos Inspector. Suspected asbestos-containing materials have been previously sampled, analyzed, and assessed in accordance with 454 CMR 28.00.

Asbestos-containing materials were previously classified according to guidelines in the AHERA regulations. Based on a bulk sample's asbestos content and the sample's condition, location, and hazard potential, Atlas' accredited Asbestos Management Planner recommended a response action if deemed necessary, or the material should be maintained in good condition in accordance with the existing AHERA Management Plan.

In the event any of the materials identified in this Plan become damaged (e.g., loose, dislodge, fall apart, etc.), the LEA and designated person shall make a proper determination in making a response, e.g., call a licensed contractor to remove and dispose of the debris and make repairs or re-adhere the material.

Requirements of the Asbestos Hazard Emergency Response Act, Subpart E (Asbestos-containing Materials in Schools) were complied with for the purpose of this Inspection Report.

The following Consultant Accreditation Page identifies the inspectors and management planners who contributed to this Plan. Also provided are the certificate numbers, signatures, and each signature date.

CONSULTANT ACCREDITATION

Atlas Technical, LLC
Woburn, Massachusetts

1. Accredited Asbestos Inspector

Name: Daniel Roy

MA DLS Accreditation Number: AI900970 (Exp. Date 03/08/23)

Date: January 26, 2023

Signature: 

2. Accredited Asbestos Management Planner

Name: Michael Weydt

MA DLS Accreditation Number: AP900474 (Exp. Date 08/08/23

Date: January 26, 2023

Signature: 

3. Accredited Senior Asbestos Management Planner

Name: Ricardo Nunes

MA DLS Accreditation Number: AP900470 (Exp. Date 11/15/23)

Date: January 26, 2023

Signature: 

3. ASBESTOS INFORMATION

3.1 General

"Asbestos" is the term used to describe certain fibrous silicate minerals that were formerly widely used for insulating, construction, and other purposes. Asbestos fibers were used throughout the construction industry due to their properties of non-flammability, high tensile strength, and low heat conductance. In the northeast United States, the most commonly encountered types of asbestos are "chrysotile" and "amosite." Other types of asbestos are found in a wide variety of construction materials.

Asbestos poses a health hazard when very small asbestos fibers, approximately five micrometers in length, are released into the air and inhaled into the lungs. Once in the lungs, these fibers can either be expelled or become trapped. If they become trapped, the body cannot break the fibers down, and the lungs try to encase the foreign material with tissue. This process can cause scarring of the lung tissue that may ultimately result in impaired lung elasticity and subsequent chronic dysfunction. This disease is called asbestosis.

Asbestos diseases may manifest in other forms that are equally dangerous, such as mesothelioma, a form of lung cancer. The latency period of these diseases has been determined by medical professionals to be anywhere between ten- and thirty-years following exposure. For additional information regarding the health hazards of asbestos, consult Health Hazards of Asbestos, U.S. Department of Labor, Occupational Safety and Health Administration (OSHA 3040), and Guidance for Controlling Friable Asbestos-Containing Materials in Buildings, U.S. Environmental Protection Agency (EPA 560/5-83-002, March 1983). These documents are available from the regional office of the U.S. Environmental Protection Agency, Federal Office Building, 26 Federal Plaza, New York, New York 10007, 212-264-2525.

Asbestos-containing building materials (ACM) can be categorized into two groups: (1) friable; and (2) non-friable. Friable asbestos-containing material can be crumbled, pulverized, or reduced to dust or powder using hand pressure. The presence of friable ACM creates the need for the most urgent attention. In contrast, the presence of non-friable ACM should be documented, and proper handling procedures established to avoid allowing the material to deteriorate to a friable and potentially hazardous condition. Non-friable ACM and friable ACM must be assessed periodically to determine their potential for fiber release.

3.2 AHERA Classifications

AHERA classifies asbestos-containing materials as thermal system insulation, miscellaneous materials, or surfacing materials.

3.2.1 Thermal System Insulation (TSI)

The most common asbestos-containing thermal system insulation (TSI) is the following: air cell, which is an asbestos-containing paper; calcite and magnesia, which are powdery fibrous silicas; and preformed asbestos lagging or blocks. These types of TSI were used for many years as insulation wrapped around pipes, boilers, ducts, and hot water tanks in order to reduce thermal heat loss and prevent condensation.

When asbestos-containing insulation and its outer wrapping are in good condition, there is a minimal chance that asbestos fibers will become airborne, provided the insulation is not disturbed. Intact insulation may remain in place as long as its location and condition are documented and proper education is provided to individuals who may potentially disturb the insulation, thereby causing a fiber release episode.

If TSI is intact and in good condition, it must be maintained in order to monitor its condition since the physical condition of the insulation may change, thereby increasing the potential for fiber release. A fiber release episode may occur if asbestos insulation is frayed, punctured, ripped, water damaged, or vandalized. Whenever a fiber release occurs, the insulation should be repaired, encapsulated, enclosed, or removed in order to decrease the potential hazard to both human health and the environment.

3.2.2 Miscellaneous Materials

Floor and ceiling tiles are categorized as miscellaneous interior building materials. Of the two, ceiling tiles are the most common friable materials. Ceiling tiles may release asbestos fibers upon the slightest disturbance. Air currents from HVAC systems may also cause erosion of ceiling tiles and subsequent asbestos fiber release. Routine maintenance of pipes above asbestos-containing ceiling tiles can cause some fibers to be released due to disturbance of the tiles. Under normal conditions, non-friable miscellaneous ACM has virtually no potential for fiber release. However, if these materials are sanded, drilled, broken, or otherwise structurally disturbed, they can release fibers into the air and the environment.

3.2.3 Surfacing Materials

Acoustical troweled-on-plaster and sprayed-on fireproofing are categorized as surfacing ACM. Fireproofing insulation was applied as a fluffy coating to provide two to four-hour fire protection, so structural beams would not warp and collapse during a fire. Insulation of this type has a high potential to release fibers into the air upon any physical contact or by the action of air currents. Asbestos-containing plaster was also used for fireproofing and for acoustical purposes. Non-friable surfacing ACM with a low potential for disturbance also presents a low potential for fiber release.

3.3 Methods of Survey Classification and Response Action Determination

This School was inspected for ACM by a trained and licensed Atlas inspector. The inspector assessed the building materials and categorized similar materials into a homogeneous area (HA) group. The HA are listed by number, with a description of the material and a list of areas containing the material, called functional spaces. Bulk samples of each suspect HA were taken according to Section 763.86 of the Rule. Sample locations are described or noted on the building diagrams.

The inspector recorded the following for each HA: the approximate square or linear footage, activity in the area, risk factors, condition of the ACM, type of damage, if any, and the distribution of damage. These factors were considered when developing the response actions presented in this Plan.

These factors, the future building uses, and planned renovations all should be considered when the LEA must choose among the alternative response actions recommended or otherwise available for reducing the hazard to human life and the environment posed by the presence of ACM.

3.4 Asbestos Treatment Methods

Three categories of alternative treatments are available to treat or control asbestos-containing materials. Conditions that must be considered when determining the appropriate treatment method for ACM are location, quantity, physical condition, future uses, renovation or demolition plans, and any social, political, or economic constraints that may apply. The following are brief descriptions of the three categories of alternative treatments.

3.4.1 Repair and Encapsulation

Repair and encapsulation generally offer the least expensive form of treatment. Although this brings the material back to its original and/or non-friable condition, the activity must still be documented in an O&M Program to monitor the future condition of the material and its potential for hazard. This method, however, leaves the ACM in the building, where it will continue to age and deteriorate.

3.4.2 Enclosure

An enclosure offers a more expensive but more secure solution for some ACM. Building an impermeable case around asbestos-containing pipes or plaster can prevent the release of asbestos fibers due to deterioration and physical disturbance. However (as is also true for repair and encapsulation), the NESHAPS legislation requires that if future plans call for renovation, repair, or demolition, the ACM must first be removed. Enclosed ACM must also be included in an O&M Program.

3.4.3 Removal

Although initially the most expensive option, removal is often the most permanent and cost-effective solution. Not only are future potential hazards associated with asbestos-containing materials eliminated, but repair and periodic surveillance and inspection (as required with the options described above) also become unnecessary. Future problems or costs for asbestos control are thus eliminated.

3.5 Response Action Recommendation / Implementation

Regardless of the abatement method chosen, it is important to bear in mind that any disturbance of friable asbestos-containing material can cause fibers to be released if proper procedures and precautions are not observed.

Asbestos abatement workers licensed in Massachusetts must be employed to perform any large-scale operation (one involving greater than three square or three linear feet of asbestos). It is recommended that a Massachusetts DLS-certified asbestos project monitor be employed to ensure the safety of employees and building occupants and that proper work practices and procedures are followed during all phases of an

abatement project. Collecting samples to determine ambient air fiber levels upon project completion is also required. It is also recommended that ambient air fiber levels be measured before and during a project. These added precautionary measures greatly increase a school's ability to document and record pertinent data, thereby reducing its potential liability.

3.6 Risk Assessment and Asbestos Control

Actual risk due to asbestos exposure cannot be quantitatively defined, nor can the relationship between an exposure and its consequential effect be estimated. The only precise quantitative statement that can be made concerning asbestos is that zero exposure will give zero risk. It is generally agreed, however, that the greater the exposure, the greater the risk.

The above consideration, combined with the fact that over time, any building material will decay and eventually most systems will be replaced by newer, more advanced, and efficient systems, is the basis for the recommendation that, whenever possible, all exposed friable asbestos be removed and that any remaining asbestos-containing materials be controlled with an asbestos O&M Program. Recommended control methods are outlined in the Operation and Maintenance Program in Part VII. Appendix B of the Rule should be consulted regularly as a guide for specific work practices for jobs requiring contact with asbestos in a school. Again, remember that NESHAPS regulations currently in force require the proper removal of ACM before any major renovation, repair, or demolition occurs.

4. LOCAL EDUCATION AGENCY (LEA)

4.1 LEA Responsibilities

1. All aspects of the inspection and management plan are carried out in accordance with the Rule.

2. Custodial and maintenance staff receives proper training as required by all federal and state regulations.

3. Workers and building occupants or their legal guardians are informed at least once each school year about all asbestos-related activities that are planned or are in progress.

4. Short-term workers who may come in contact with asbestos are informed about the locations of ACM and assumed ACM.

5. Required warning labels are posted in routine maintenance areas according to 454 CMR 28.12

6. Parent, teacher, and employee organizations are notified yearly of the availability of the Plan. The School maintains a copy of the Plan at the School for an inspection per 454 CMR 28.12(9)(a).

7. Per 454 CMR 28.13(1), the LEA shall designate a person to ensure that requirements under this section are properly implemented and ensure that the designated person receives adequate training as described in 454 CMR 28.05(4)(b).

8. Consider whether any conflict of interest may arise from the interrelationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities under 454 CMR 28.10 (4)(a) 3 and 29 CFR Part 1926.1101(k)(7) m.

4.2 Confirmation of Designated Person

LEA	Manchester-Essex Regional School District
School	Essex Elementary School
Address	12 Story St Manchester, MA
Telephone	978-768-7324
Designated Person	Mr. Jason Waldron
Title	Facilities Manager
Address	36 Lincoln Street, Manchester, MA 01944
Telephone	Office: 978-526-2055 x 3115 and Cell 978-500-3163
Qualifications:	
Training	MIIA/DLS
Training Facility	College of the Holy Cross
Town, State	Worcester, MA
Certificate Number	N/A
Hours of Training	4 Hours
Date, of Course,	March 7, 2017

4.3 Recommendation to LEA

There is an increasing number of regulations regarding the handling, removal, transportation, and disposal of asbestos-containing materials. The LEA must be kept informed of and perform all response actions and other asbestos-related activities in accordance with all federal, state, and local regulations regarding asbestos. In addition to AHERA 40 CFR Part 763 Subpart E, these regulations include, but are not limited to, 454 CMR 28.00 (Massachusetts DLS); 29 CFR 1926.1101 and 29 CFR 1910.134 (OSHA); 40 CFR Part 763, Subpart G (EPA Worker Protection); 40 CFR Part 61, Subpart M (NESHAPS); 310 CMR 7.15 (Massachusetts DEP); 49 CFR Part 100-177 (DOT); and all amendments and mandatory appendices and regulations cited within these regulations.

The regulations are meant to protect the health and safety of those working with and around asbestos and building occupants. Given the LEA's responsibility to protect both human health and the environment of the school building's occupants, and the high potential liability associated with asbestos remediation projects, the LEA must ensure that the interests of the building's occupants are protected.

All response actions must be designed and conducted by persons accredited and licensed to conduct such activities. Design specifications should be sufficiently explicit to avoid conflicts or confusion that may arise concerning the scope of work and required procedures. It is recommended that the LEA contract a Massachusetts-certified and licensed Asbestos Abatement Project Monitor to help ensure that projects are carried out safely, thoroughly, and in compliance with all applicable laws and regulations. Areas adjacent to the project should be sufficiently monitored throughout the project to provide clear documentation of

project integrity. Final inspection and air clearance must be achieved as required in Section 763.90(i) of the Rule before any response action may be considered successfully completed.

The LEA must consider any conflict of interest that may potentially arise when retaining accredited designers and contractors to perform asbestos-related activities. Generally, it is recommended that the LEA choose separate accredited entities: one for project design (including project oversight, visual clearance inspection, and air monitoring); and another to conduct the asbestos project according to the design. Appendix A of the Rule states that "air sampling operations must be performed by qualified individuals completely independent of the abatement contractor."

5. PUBLIC NOTIFICATION

5.1 Occupant Notification

In accordance with 454 CMR 28.13 3, the LEA will notify in writing, at least once yearly, all relevant occupants of the School of all asbestos-related activities that take place at the School. Relevant occupants include but are not limited to building occupants or their legal guardians; staff, including teaching, administrative, custodial, maintenance, and all other personnel; all parent, teacher, employee, and administrative organizations; and/or any similar organizations at the School which serve similar functions.

Asbestos activities include but are not limited to inspections, response actions, including removal, encapsulation, enclosure, repair, and post-response action activities, including periodic surveillance and re-inspection. In addition, 454 CMR 28.13 requires the LEA to inform occupants at least once per year that the AHERA Management Plan exists and is available for review in the School's Administration Office.

In accordance with the aforementioned 454 CMR 28.13, the LEA must maintain a dated copy of all such notifications. The list of relevant groups to be notified will be added to and updated as necessary and should also be kept on file.

5.2 Plan for Notification

In accordance with 454 CMR 28.13 3, all school building occupants will be informed by written notification about all asbestos-related activities at least once every school year.

Building occupants to be notified include, but are not limited to, all students, their legal guardians, and all staff members and their committees, representatives, and organizations.

As of September 2022, building occupants at the School include the following:

- Students
- Legal guardians of students
- Staff (including teaching, custodian, maintenance,
- Administrative and all other personnel)

The LEA may choose various methods of notification to building occupants. The method of notification, such as written notification via posted notices at the School or through publications such as a legal notice in the local newspaper, must be documented, and details of the new notification methods used must be included in the Management Plan. Copies of the annual public notice must be included in the Management Plan.

5.3 ACM Locations

According to 454 CMR 28.13 4, the LEA must ensure that all short-term workers who may come in contact with asbestos in the School (e.g., telephone, plumbing, HVAC, electrical workers, etc.) are provided information regarding the locations of identified or assumed ACM. In addition, as required by 454 CMR 28.13. 2, all members of the School's maintenance and custodial staff must be informed of the locations of ACM identified throughout each school building in which they work.

5.4 Asbestos Activities

Prior to the start of asbestos abatement and/or associated remediation projects, proper notifications must be made by the appropriate entities to all applicable federal, state, and local agencies and authorities. The local Health, Building, and Fire Departments are often good places to begin researching local regulations and notification requirements. Notifications may include but are not limited to the following.

5.5 National Emissions Standards for Hazardous Air Pollutants (NESHAPS)

NESHAPS requires notification whenever asbestos is being removed according to the quantities involved, as follows:

5.5.1 Demolition

Ten (10) days' notice for any asbestos abatement project. Notification must include friable and potentially friable ACM.

5.5.2 Renovation

Ten (10) days' notice for any asbestos abatement project. Notification must include friable and potentially friable ACM.

NESHAPS notifications are submitted to the EPA Region I Office per 40 CFR Part 61, Subpart M.

5.6 Massachusetts Department of Labor Standards (DLS)

The Massachusetts Department of Labor Standards (DLS) must be given proper notice when any asbestos abatement project or an associated project involving more than three linear or three-square feet is planned. The Commissioner of the DLS must be notified at least ten days prior to the project start date (postmark or hand delivery), or in the case of an emergency, within one working day after the project start date (DLS 454 CMR 28.00).

5.7 Massachusetts Department of Environmental Protection (DEP)

The Massachusetts DEP requires proper notification and ten days prior notice (one-day prior notice in the event of an emergency) before the start date of all asbestos removal projects (310 CMR 6.00, 7.00, and/or 8.00).

*Contact the agencies denoted above or refer to the appropriate regulations for further information requiring proper notification procedures and guidelines.

6. ASBESTOS-CONTAINING MATERIALS RESPONSE ACTIONS

6.1 Response Action Determination Summary

Response Action Determinations were made using the EPA recommended method to determine the risk to human health associated with exposure to asbestos within a given ACM category. Appropriate response actions that are consistent with applicable regulations and protect human health and the environment are then recommended in order to best respond to and/or control ACM.

6.2 Response Action Descriptions

The following is a brief and general description of the Response Actions recommended in the Plan. The Client indicates that the following response actions will only be undertaken by a licensed contractor in accordance with all applicable federal, state, and local regulations governing the handling and disposal of asbestos. Refer to the Table at the end of Part V for a complete list of ACMS and recommended response actions.

6.2.1 Removal

Removal means the complete removal and disposal of designated asbestos-containing material of any kind. If ACM debris is present, the area must be isolated, and the debris cleaned up immediately.

6.2.2 Repair

Repair means restoring a damaged area to its original intact condition. This includes making the damaged area airtight to prevent the release of fibers into the air. If ACM debris is present, the area must be isolated, and the Designated Person and Atlas contacted immediately. A DLS licensed contractor will conduct all related work. Record all repaired ACM in the O&M Program.

6.2.3 Encapsulation

Encapsulation means the application of a material with a bonding or sealing property to prevent the release of airborne fibers. If ACM debris is present, the area must be isolated, and the Designated Person and Atlas contacted immediately. A DLS licensed contractor will conduct all related work. Record encapsulated ACM in the O&M Program.

6.2.4 Enclosure

Enclosure means creating an airtight structure around an affected area to prevent the release of airborne fibers and significantly reduce the possibility of future physical disturbance or damage to the ACM. Any damaged ACM must be repaired prior to the enclosure. If ACM debris is present, the area must be isolated, and the Designated Person and Atlas contacted immediately. A DLS licensed contractor will conduct all related work. Record the enclosed area in the O&M Program.

6.2.5 Operation & Maintenance

An O&M program describes a structured plan of action to maintain ACM in a condition that protects the health and safety of the occupants in a building and provides for remedial action in the event that ACM is disturbed. In an occurrence of damage to ACM, the custodial or maintenance staff will restrict entry into the area by physically isolating the area and notify the Designated Person and Atlas for further direction.

6.3 AHERA Material/Condition Assessment Key for Functional Spaces As found in the School Report

1. Damaged or significantly damaged TSI.
2. Damaged friable surfacing material.
3. Significantly damaged friable surfacing material.
4. Damaged or significantly damaged friable miscellaneous material.
5. ACM with potential for damage.
6. ACM with potential for significant damage.
7. Any remaining friable known or suspect ACM.
8. Damaged or significantly damaged non-friable ACM. Note that this category is not listed in the AHERA regulations but is provided for reference in this report.

6.4 Method of Response Action Determination for Surfacing and Miscellaneous ACM

1. Friable Surfacing or Miscellaneous ACM with Significant Damage

   Response Action 1: Remove

   Immediately isolate the functional space and restrict access unless the licensed management planner determines that isolation is not necessary to protect human health and the environment; and

   Remove the material in the functional space or, depending upon whether the licensed management planner determines that enclosure or encapsulation would be sufficient to protect human health and the environment, enclose or encapsulate.

2. Friable Surfacing or Miscellaneous ACM with Damage and High Potential for Disturbance

   Response Action 1: Remove

   Immediately isolate the area and restrict access if necessary to avoid imminent and substantial endangerment to human health or the environment,

Institute preventive measures appropriate to eliminate the reasonable likelihood that the ACM or its covering will become significantly damaged, deteriorated, or delaminated,

Remove the material as soon as possible if appropriate preventive measures cannot be effectively implemented.

3. Friable Surfacing or Miscellaneous ACM with Damage and Moderate Potential for Disturbance

   Response Action 4: Enclose

   Institute preventive measures. Repair ACM to return to airtight, intact condition, and enclose with an impermeable encasement to prevent physical disturbance. Continue with O&M.

4. Friable Surfacing or Miscellaneous ACM with Damage and Low Potential for Disturbance

   Response Action 3: Encapsulate

   Institute preventive measures. Repair damaged material to return to intact condition and encapsulate to reduce the possibility of fiber release. Continue with O&M.

5. Friable Surfacing or Miscellaneous ACM with No Damage and High Potential for Damage

   Response Action 4: Enclose

   Institute preventive measures. Enclose material to reduce the effects of future disturbance. Continue with O&M.

6. Friable Surfacing or Miscellaneous ACM with No Damage and Moderate Potential for Damage

   Response Action 3: Encapsulate

   Institute preventive measures. Encapsulate material to reduce the possibility of fiber release. Continue with O&M.

7. Friable Surfacing or Miscellaneous ACM with No Damage and Low or no Potential for Damage

   Response Action 5: O&M Program

   Continue with O&M until condition factors change, requiring an additional response.

8. Non-Friable Surfacing or Miscellaneous ACM

   Response Action 5: O&M Program

   Continue with O&M until condition factors change, requiring an additional response.

6.5 Method of Response Action Determination for Thermal System Insulation (TSI) ACM

1. Damaged or significantly damaged thermal system ACM

   Response Action, Isolate the area and restrict access.

   1 Repair the damaged area, or
   2 Remove the damaged material if it is not feasible, due to technological factors, to repair the damage, and
   3 Maintain all thermal system insulation ACM and its covering in an intact state and undamaged condition.

2. Damaged Thermal System Insulation with High Potential for Disturbance

   1 Response Action 1: Remove - Institute preventive measures and remove material as soon as possible.

3. Damaged Thermal System Insulation with Moderate Potential for Disturbance

   1 Response Action 4: Enclosure - Institute preventive measures.
   2 Repair insulation to airtight condition and enclose with an impermeable encasement to protect against further physical damage.
   3 Continue with O&M.

4. Damaged Thermal System Insulation with Low Potential for Disturbance

   1 Response Action 2: Repair - Repair to airtight condition and take preventive measures necessary to eliminate any potential disturbance.
   2 Continue with O&M.

5. Undamaged Thermal System Insulation with High Potential for Disturbance

   1 Response Action 1: Remove - Institute preventive measures. Remove to prevent the high possibility of disturbance to the ACM.

6. Undamaged Thermal System Insulation with Moderate Potential for Disturbance

   1 Response Action 4: Enclose - Institute preventive measures. Enclose the ACM within an airtight barrier to prevent potential disturbance of ACM.
   2 Continue with O&M.

7. Undamaged Thermal System Insulation with Low or No Potential for Disturbance

   1 Response Action 5: O&M - Continue with O&M

Table 1 – Summary Table of Asbestos-Containing Materials
Essex Elementary
12 Story St Manchester Massachusetts

Location	Material	Quantity Reported in 2013 AHERA Inspection	Quantity Observed in 2019 3-Year Re-inspection	Quantity Observed in 2023 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
Principal's Office	12" x 12" Brown Floor Tile	300 SF	150 SF	150 SF	Non-Friable	5	Under Carpeting	Maintain the material in good condition in accordance with the O&M Plan
Secretary's Office	12" x 12" Brown Floor Tile	300 SF	150 SF	150 SF	Non-Friable	5	Under Carpeting	Maintain the material in good condition in accordance with the O&M Plan
Guidance Office (ELL)	9" x 9" Floor Tile	550 SF	470 SF	470 SF	Non-Friable	6	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Student Support Room	9" x 9" Floor Tile	550 SF	470 SF	470 SF	Non-Friable	6	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 18	Joint Compound and Associated Gypsum Wall Board	Not Identified	1,000 SF	1,000 SF	Friable	6	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 19	Joint Compound and Associated Gypsum Wall Board	Not Identified	1,000 SF	1,000 SF	Friable	6	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Kitchen Storage Room	12" Pipe Insulation	20 LF	20 LF	20 LF	Friable	6	Good Condition/Damaged ACBM Repaired	ACM debris is cleaned up and the damaged pipe insulation is repaired. No records were available of this work. LEA should include details of this response action in records, per AHERA requirements.
Older Section of School, Hallway	Purple Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Older Section of School, Classroom # 19	Purple Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Classroom # 1	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan

Location	Material	Quantity Reported in 2013 AHERA Inspection	Quantity Observed in 2019 3-Year Re-inspection	Quantity Observed in 2023 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
1st Floor - Classroom # 2	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Classroom # 3	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Classroom # 4	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Classroom # 5	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Classroom # 6	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Classroom # 7	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Classroom # 8	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Classroom # 9	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Classroom # 11	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Classroom # 13	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Classroom # 14	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Classroom # 15	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Classroom # 16	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan

Location	Material	Quantity Reported in 2013 AHERA Inspection	Quantity Observed in 2019 3-Year Re-inspection	Quantity Observed in 2023 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
Basement Floor Rec Room	Black Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 18	Gray Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 20	Gray Sink Sealant	Not Identified	1 Sink	1 Sink	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Exit Door #1	Interior Door Frame Caulking	Not Identified	17 LF on 1 Door Frame	17 LF on 1 Door Frame	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Basement - Exit Door # 6 (Art Room)	Interior Door Frame Caulking	Not Identified	17 LF on 1 Door Frame	17 LF on 1 Door Frame	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor - Exit Door # 9 (Gymnasium)	Interior Door Frame Caulking	Not Identified	17 LF on 1 Door Frame	17 LF on 1 Door Frame	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor – Classroom # 7	Interior Door Frame Caulking	Not Identified	17 LF on 1 Door Frame	17 LF on 1 Door Frame	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor – Classroom # 8	Interior Door Frame Caulking	Not Identified	17 LF on 1 Door Frame	17 LF on 1 Door Frame	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor – Classroom # 15	Interior Door Frame Caulking	Not Identified	17 LF on 1 Door Frame	17 LF on 1 Door Frame	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor – Classroom # 16	Interior Door Frame Caulking	Not Identified	17 LF on 1 Door Frame	17 LF on 1 Door Frame	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Basement Floor – Boiler Room	Fire Door	1 Door (Assumed)	1 Door (Assumed)	1 Door (Assumed)	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
1st Floor – Old Section Hallways	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	3,500 SF	3,500 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan

Location	Material	Quantity Reported in 2013 AHERA Inspection	Quantity Observed in 2019 3-Year Re-inspection	Quantity Observed in 2023 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
Classroom # 1	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 2	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 3	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 4	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 5	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 6	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 7	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 8	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan

Location	Material	Quantity Reported in 2013 AHERA Inspection	Quantity Observed in 2019 3-Year Re-inspection	Quantity Observed in 2023 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
Classroom # 9	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 10	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 11	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 12A	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	350 SF	350 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 12B	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	350 SF	350 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 13	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 14	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan

Location	Material	Quantity Reported in 2013 AHERA Inspection	Quantity Observed in 2019 3-Year Re-inspection	Quantity Observed in 2023 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
Classroom # 15	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 16	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 17	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 18	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 19	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 20	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Classroom # 30	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Nurses Office	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	700 SF	700 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan

Location	Material	Quantity Reported in 2013 AHERA Inspection	Quantity Observed in 2019 3-Year Re-inspection	Quantity Observed in 2023 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
Psych Office/Special Education	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	400 SF	400 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Book Room	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	200 SF	200 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Student Support Room	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	400 SF	400 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Library	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	2,000 SF	2,000 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Foreign Language Room (#29)	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	150 SF	150 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Counselor's Room	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	300 SF	300 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Library Office	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	200 SF	200 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Gym Office	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	100 SF	100 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan

Location	Material	Quantity Reported in 2013 AHERA Inspection	Quantity Observed in 2019 3-Year Re-inspection	Quantity Observed in 2023 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
Speech Room (#30)	Black Mastic and Associated Non-ACM Floor Tile	Not Identified	200 SF	200 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan

Material Condition/Assessment Code Definitions: According to the 454 CMR 28.13(5)(c) Assessment, the following categories are provided to assess the ACBM, suspected ACBM, or assumed ACBM in the school building: (1) Damaged or significantly damaged thermal system ACM, (2) Damaged friable surfacing ACM, (3) Significantly damaged friable surfacing ACM, (4) Damaged or significantly damaged friable miscellaneous ACM, (5) ACM with potential for damage, (6) ACBM with potential for significant damage, (7) Any remaining friable ACM or friable suspected ACM. The materials listed above may exist in additional locations within the school building that was inaccessible during this inspection. They should be assumed asbestos-containing wherever they are encountered throughout the building.

7. RESPONSE ACTION DETERMINATION SUMMARY

7.1 RESPONSE ACTION DETERMINATION SUMMARY

In compliance with the AHERA Rule, the LEA must establish and implement an Operation & Maintenance (O&M) and Repair Program for each School that contains ACM. The purpose of an O & M program and its required periodic surveillance and re-inspection is to monitor and control the condition and location of any remaining ACM in the School and to reassess the potential for hazards to human health and the environment that it poses.

The following summary of 454 CMR 28.13(1) highlights the LEA's responsibilities with respect to all ACM that remains in the School.

7.2 LEA Responsibilities

1. Establish and implement an Operation & Maintenance (O & M) and repair program for all material identified or assumed to be ACM, including both friable ACM and non-friable ACM with the potential to become friable due to activities performed.

2. Implement the initial cleaning of any areas containing friable ACM or assumed friable ACM present after the inspection has been completed and before response actions.

3. Implement the following procedural techniques for all O&M activities that involve the disturbance of friable ACM:

    a. Restrict entry into the area by persons other than those necessary to perform the maintenance project, either by physically isolating the area or by scheduling.

    b. Post signs to prevent entry by unauthorized persons.

    c. Shut off or temporarily modify the air handling system and restrict other sources of air movement.

    d. Use work practices or other controls, such as wet methods, protective clothing, HEPA vacuums, mini-enclosures, and glovebags, as necessary to inhibit the dispersal of released fibers.

    e. Clean all fixtures or other components in the immediate work area.

    f. Place asbestos debris and contaminated cleaning materials in a sealed, leak-tight container.

5. Make sure that all response actions involving more than three linear or square feet of ACM will be designed by a Massachusetts-accredited designer and performed by Massachusetts-accredited contractors and consultants. The Commonwealth of Massachusetts requires that proper notifications be made as necessary to the Department of Labor Standards (DLS), the Department of Environmental Protection (DEP), and/or the U.S. EPA (per NESHAPS).

6. Ensure that the following procedures are adhered to in the event of a minor fiber release episode or the falling or dislodging of three linear or square feet or less of friable ACM:

a. Massachusetts accredited contractors will repair the area of damaged ACM with materials such as asbestos-free spackling, plaster, cement, or insulation, seal with latex paint or other encapsulants, or immediately have the appropriate response action implemented as required by 454 CMR 28.02.

7. Make certain that the following procedures in 454 CMR 28.16 (6) (d) are adhered to in the event of a major fiber release episode or the falling or dislodging of more than three linear or square feet of friable ACM:

   a. Restrict entry into the area and post signs to prevent entry by persons other than those necessary to perform the response action.

   b. Shut off or temporarily modify the air-handling system to prevent the distribution of fibers to other areas in the building.

   c. The response action for any major fiber release episode must be designed by persons accredited to conduct response actions.

8. Post warning labels immediately adjacent to all ACM or assumed ACM located in routine maintenance areas as described in 454 CMR 28.13(11).

9. Make certain the designated person and custodial and maintenance staff are properly trained in accordance with the Rule and all other applicable federal, state, and local regulations. Staff members and the building's maintenance staff will not disturb ACM. Outside contractors (plumbers, electricians, installers, etc.) who will be required by the Client to handle or disturb ACM are required by the Massachusetts DLS to be trained by a state-certified training provider regarding proper handling procedures for asbestos.

10. Once the Plan is in effect, the LEA must implement periodic surveillance of all remaining ACM in the facility for changing conditions and hazard assessment every six months after the Plan is in effect. Staff members who have completed the aforementioned sixteen-hour training can perform this.

11. Make certain that re-inspection of all remaining ACM is conducted by an accredited asbestos inspector every three years while ACM remains in the School in accordance with 454 CMR 28.13 (3)

12. Make certain that all short-term workers (generally outside contractors) are provided with information regarding the locations of ACM and assumed ACM, per 454 CMR 28.13 (3).

7.3 Training Requirements and Worker Protection

In compliance with 454 CMR 28.13(8), all maintenance and custodial staff must receive at least two hours of asbestos awareness training before implementing the O & M Program described in this Plan. the Essex Elementary School maintenance personnel training certificates are attached in Section 10.0.

New staff personnel must similarly be trained within sixty days of commencement of employment. personnel who will conduct activities that may result in the disturbance of ACM must receive an additional fourteen hours of training, as required by the Rule. As described in 454 CMR 28.13(8), awareness training must include information regarding: the forms and uses of asbestos; the health effects associated with asbestos exposure; the locations of ACM identified throughout the School; how to recognize damage, deterioration,

and delamination of ACM; the name and telephone number of the person designated by the LEA; and the availability and location of the Plan.

As described in 454 CMNR 28.04 (1), all LEA employees who perform O & M and repair activities involving ACM and who are not covered by OSHA 29 CFR 1926.1101 or are approved by Section 19 of the Occupational Safety and Health Act are extended worker protection provided by the EPA at 40 CFR 763.121. According to the EPA's "AHERA Fact Sheet," the LEA may choose to institute the provisions of Appendix B of the Rule in the case of small-scale, short-duration projects rather than comply with the full EPA Worker Protection Rule.

7.4 Periodic Surveillance & Re- Inspection

The LEA must conduct a periodic surveillance in each building every six months after the Plan is in effect. An assigned person trained in accordance with 454 CMR 28.05(4)(c) or (f) shall visually inspect all areas that are identified in the Plan as ACM or assumed ACM, record the date of the surveillance, his or her name, any changes in the condition of the materials, and submit to the Designated Person a copy of a such record to be included in the Plan, in accordance with 454 CMR 28.05(4)(c) or (f).

At least once every three years after the Plan is in effect, the School must conduct a re-inspection of all friable and non-friable, assumed, and identified ACM. The re-inspection must be conducted by a Massachusetts accredited inspector and performed in accordance with 454 CMR 28.05(4)(c) or (f).

Once the Plan has been approved by the Governor's Designee, the Plan is considered to be "in effect" so that the first periodic surveillance will have to occur before the expiration of six months from the "effective date." Likewise, the first re-inspection will have to take place within three years of the effective date.

It is recommended that the effective date and appropriate periodic surveillance and re-inspection dates be entered into the Plan in tabular form and posted to serve as a frequent schedule reminder.

7.5 Warning Signs

In accordance with 29 CFR Part 1926.1101(k)(7), the LEA is responsible for prominently placing warning signs immediately adjacent to all identified or assumed friable and non-friable ACM located in all routine maintenance areas in the School.

The warning signs must be readily visible and easy to read, with large print and bright color (normally black print on bright yellow background), and read as follows:

CAUTION:
ASBESTOS. HAZARDOUS.
DO NOT DISTURB WITHOUT PROPER
TRAINING AND EQUIPMENT

7.6 Preventive Measures

Preventive measures include any action or actions taken in order to eliminate or reduce the possibility of disturbing ACM. All preventive measures must be appropriately recorded according to 454 CMR 28.13 (7). Examples of precautions to take include the following:

1. Do not cut, sand, drill, break, nail into, or otherwise disturb ACM or create dust.

2. Avoid contact damage to any ACM. Remove any adjacent items that may contact ACM.

3. Keep suspended ceiling tiles in place wherever any ACM exists above them. Do not remove or displace ceiling tiles without taking the proper precautionary measures outlined in 'ACM Above Ceilings' in Part VII below.

4. Do not hang fixtures, wires, etc., from ACM.

5. Prevent water damage to ACM.

6. Do not disturb asbestos-containing materials when replacing lights, etc.

7. Do not allow doors or dividers to rub against ACM.

8. Isolate, redirect, or eliminate direct airflow onto any friable or damaged ACM.

Note: Always take proper precautions when working around ACM. Report any damaged ACM to the Designated Person and Atlas **Immediately.**

7.7 Cleaning

7.7.1 Initial Cleaning

Areas of the school where identified and assumed friable ACM and damaged or significantly damaged Thermal System Insulation ACM are present are required according to Section 763.91(c)(1) of the Rule to be cleaned at least once after the completion of the inspection and before the initiation of any response actions other than O & M.

7.7.2 Additional Cleaning

In addition to initial cleaning and that which is required after any fiber release episode, the LEA is required to perform additional cleaning according to Section 763.91(c)(2) of the Rule. According to Section 763.91(c)(1) of the Rule, additional cleaning recommendations include, but are not limited to, cleaning all proximate surfaces of the areas previously identified:

a. Areas containing ACM where a suspect film or dust occurs.

b. Anytime any friable or non-friable ACM becomes damaged or significantly damaged.

c. Anytime the LEA's Designated Person determines cleaning is necessary to protect the health and environment of the building occupants.
It is important that all cleaning be completed prior to the initiation of other response actions that may be necessary. The initial cleaning will prevent or greatly reduce the possibility of further contamination within an affected area as well as surrounding areas, and reduce the possibility of exposure to school workers and all other building occupants.

7.8 Custodial and Maintenance Procedures:

Personnel conducting custodial or maintenance work shall take extreme care not to disturb or damage ACM. If damage occurs or is discovered the Report of Damaged Asbestos Containing Material (Appendix D) should be completed and sent to the Asbestos Program Manager.

7.8.1 Resilient Flooring Maintenance:

All vinyl and asphalt-based flooring materials (e.g., tiles, sheet flooring) shall be maintained in accordance with these instructions unless the Asbestos Program Manager demonstrates that the flooring does not contain asbestos. The following work practices apply to the handling of asbestos flooring material:

- Sanding of asbestos flooring material is prohibited.
- Stripping of finishes shall be conducted using *low abrasion* pads at machine speeds less than 300 revolutions per minute (rpm) and using wet methods.
- Burnishing or dry buffing may only be performed on asbestos flooring that has sufficient finish so that the pad cannot contact the asbestos flooring material.

  Low speed spray buffing is strongly recommended over the high speed burnishing process. Burnishing has a very strong potential to disturb or release asbestos fibers for reasons beyond the control of the machine operator. Uneven floor surfaces and insufficient thickness of floor finish can cause fiber releases in potentially high concentrations.

7.8.2 Dry or Spray Buffing of Resilient Flooring

Do not buff damaged flooring. Any loose or damaged flooring should be repaired or replaced before buffing is started. This procedure assumes that the floor has adequate coats of polish, and that the flooring itself will not be damaged or contacted by the buffing equipment. If any flooring damage occurs during buffing, stop work and notify DOE or the Asbestos Program Manager.

- Using scraper and water, remove all foreign matter from the finished surface (gum, tar, stickers, etc.).
- Spot or damp mop to remove stains and spills. Mix chemical cleaner or restorer with water and apply according to manufacturer’s recommendations. Spot or damp mop to remove stains and spills. If dry buffing will be performed, apply restorer chemical as required.
- Allow floor to dry thoroughly.
- Spray or dry buff as appropriate:
- To spray-buff, spray small area with spray-buff solution and buff using manufacturer's recommended pad or brush at recommended RPM. Repeat procedure until entire area is spray-buffed.

- To dry buff, buff or dry burnish with manufacturer's recommended pad or brush at recommended RPM.

7.8.3 Cleaning/Polishing of Resilient Flooring

Do not polish loose or damaged resilient flooring. Any damage should be repaired before cleaning begins using the applicable work practice(s). Stop work if any damage occurs and notify the Asbestos Program Manager.

- Mix scrubbing chemical with water as recommended by manufacturer and apply liberal amount (do not flood) using mop. Allow to soak for amount of time recommended by manufacturer. Keep floor adequately wet by reapplying cleaning solution if drying occurs. Work small areas at a time.
- Using floor scrubbing machine, manufacturer's recommended pads and operating speed, clean floor to remove embedded dirt and surface marks.
- Remove spent scrubbing solution with wet vacuum or mop.
- Rinse area using clean mop and clean rinse water. Remove water with wet vacuum or mop. Damp mop area to clean up any remaining water or streaks.

7.8.4 Stripping of Floor Wax from Resilient Flooring

Do not strip damaged flooring. Any loose or damaged flooring should be repaired or replaced before stripping is started. Wet stripping, if performed properly, should not cause damage to resilient flooring. If any flooring damage occurs during stripping, stop work and notify DOE or the Asbestos Program Manager. Do not dry strip, scrape, sand, or grind resilient asbestos flooring to remove any blemishes or imperfections.

- After proper mixing of stripping chemical, adequately wet floor by mop applying liberal amounts of the solution. Allow chemical to soak for amount of time recommended by manufacturer. If areas become dry, reapply solution to keep floor adequately wet.
- After wax or finish has softened, strip flooring using least abrasive pad and low speed setting (300 RPM maximum). Keep floor adequately wet during machine operation. Do not over strip. Stop stripping when the old wax or finish is removed. Work small areas at a time.
- Remove dirty stripping solution with wet vacuum or "strip" mop.
- With "rinse" mop, apply liberal amount of clean water to area stripped and remove water with wet vacuum or mop. Repeat rinse procedures.
- If some spots of wax or finish remain, re-strip those areas.
- When applying new wax or finish, do so according to manufacturer's recommendations.

7.9 ACM Waste

Waste generated from asbestos projects must be properly stored and disposed. A minimum of a half-face negative pressure respirator and disposable clothing, with a hood and booties, are required when handling asbestos-containing materials. The following procedures must be implemented when handling asbestos-containing waste:

1. All waste must be placed in either sealed barrels or two six-mil polyethylene disposal bags. All waste containers must have two labels as required by both OSHA and the U.S. Department of Transportation (DOT). The labels are worded as follows:

OSHA Label:

Danger
Contains Asbestos Fibers
May Cause Cancer
Causes Damage to Lungs
Do Not Breathe Dust
Avoid Creating Dust

DOT Label:

RQ Hazardous
Substance,
Solid, NOS
ORM-E, NA 9188
(Asbestos)

2. Waste must be adequately wet. Once the debris is in the barrel or disposal bag, sufficient water must be added so that there is a noticeable amount.

3. Disposal bags must be sealed to reduce airspace and make them leak-tight. Twisting and sealing with duct tape is one method to prevent leaks at the opening of the bag. All waste must be double-bagged and sealed. In the case of a glove bag, the use of one labeled bag around the glove bag is considered double bagging. If the second bag is used to dispose of other contaminated waste and water, a third labeled bag must then be properly sealed around both.

4. Place the bags into a drum or other rigid container equipped with secure or locking ring lids and label with the same information described above.

5. The drums or container must be secured in a temporary storage area previously identified at your facility. This should be an area with limited access and preferably with a locked entry door.

6. Record the date and amount of waste placed in the temporary storage area. A log sheet should be established for this purpose.

7. Keep the temporary storage area clean by using good work practices. If any bags of waste break, clean the area using the 'Asbestos Debris Cleanup Procedures' in Part VII, and in compliance with all applicable regulations.

8. Before the temporary storage area is full or the expiration of the maximum allowable storage date, make arrangements to have the asbestos waste picked up and delivered to an approved asbestos waste disposal site.

9. Make advance arrangements with the waste disposal facility to ensure that your waste will be accepted.

10. Arrange to have the asbestos waste delivered safely to the previously identified disposal facility.

11. Receipts from both the transporter and landfill for each shipment of waste must be kept on file. Record all dates, destinations, and responsible persons involved in

transporting the waste from the temporary storage area to the disposal facility previously identified in the Plan. For further information concerning storage, transportation, and disposal of asbestos-containing waste, contact the Massachusetts DEP.

8. SAFE WORK PRACTICES & PROCEDURES FOR ASBESTOS-CONTAINING MATERIALS

8.1 Introduction

The following safe work practices and procedures are minimum requirements and/or recommended guidelines for working with or around asbestos-containing materials. School personnel may perform Work involving three linear or square feet or less of ACM and small-scale or short-duration projects, provided they have received the required sixteen-hour asbestos O&M training.

All school employees who perform small-scale or short-duration projects must be provided with appropriate personal protective equipment. This equipment includes, at a minimum, half-face negative-pressure respirators equipped with High Efficiency Particulate Air (HEPA) filters and full-body Tyvek disposable coveralls or their equivalent. The following procedures will be performed only after first donning this minimum personal protective equipment.

Activities that will disturb greater than three linear or three-square feet of ACM must be designed and performed by persons or companies licensed in Massachusetts to perform such activities. All asbestos activities must be performed in compliance with all applicable federal, state, and local regulations. Notifications to appropriate agencies are necessary. Isolation of the affected area is usually required. All asbestos work must also be performed in such a manner as to minimize the release of asbestos fibers and protect the health and environment of all building occupants.

8.2 Equipment

In addition to protective equipment such as disposable clothing and respirators, the following equipment may be necessary to perform work involving asbestos.

1. **DUCT TAPE**

   Heavy-gauge tape is used to seal glove bags and secure adjacent polyethylene sheets.

2. **POLYETHYLENE OR PLASTIC SHEETING**

   Plastic sheeting (6-mil thick) is used to seal off an area where an asbestos project is taking place to prevent contamination of other areas also used to seal the waste.

3. **SURFACTANT**

   A chemical wetting agent added to water improves water's ability to penetrate asbestos-containing material.

4. **DISPOSAL BAGS**

   Six-mil-thick bags are used to dispose of asbestos-containing materials. All bags must be properly labeled according to OSHA and DOT regulations.

5. **RETRACTABLE UTILITY KNIFE**

   They are used to cut asbestos-containing materials or equipment during removal. Always use **retractable** utility knives so as not to risk puncturing glove bags.

6. GLOVE-BAG

A pre-manufactured polyethylene bag is generally used as a containment around asbestos-containing insulation on pipes or valves so that the insulation may be removed without releasing asbestos fibers into the ambient air. The glove bag consists of a 6- to 12-mil-thick polyethylene bag fitted with long-sleeve gloves, a tool pouch, and an opening for a HEPA vacuum hose and garden sprayer wand. The size, quality, style, and cost vary depending on the manufacturer.

7. WARNING SIGNS

Warning signs are posted at the entrance to the work area and a sufficient distance to allow all building occupants adequate forewarning of the occurrence of an asbestos-associated project. The purpose of warning signs is to keep unauthorized personnel away from the work area. The OSHA warning sign is worded as follows:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE
CLOTHING IS REQUIRED IN THIS AREA

8. HEPA VACUUM CLEANER

A High-Efficiency Particulate Air (HEPA) filtered vacuum cleaner capable of trapping and retaining 99.97% of all particles larger than 0.3 microns. The HEPA vacuum cleaner has an extensive filtering system consisting of primary, secondary, and HEPA filters that trap fine particles.

9. RE-WETTABLE FIBERGLASS CLOTH

A canvas-like material impregnated with glue. The cloth is saturated with water, molded over an asbestos-containing pipe and boiler insulation, and hardens as it dries. When completely dry, it is sealed with latex paint. Because the cloth contains fiberglass, it is best to wear gloves when handling this material.

10. GARDEN SPRAYER

A garden sprayer is filled with amended water. It is used to wet asbestos-containing material or lock down fibers remaining on the substrate from which it has been removed. When performing the glove-bag technique, a garden sprayer with a 2-3 gallon capacity is sufficient. It is best to have a hose at least six feet long. If the hose is not sufficiently long, it can be replaced or extended with flexible tubing.

11. ENCAPSULANT

A substance applied to asbestos-containing materials that control the release of asbestos fibers. Encapsulant is applied over re-wettable fiberglass cloth after the cloth has dried. Latex paint is suitable for this purpose. Be sure the encapsulant chosen has a fire rating appropriate to the area where it is used.

12. SPRAY BOTTLE

A spray bottle filled with water is used to wet any suspect debris.

13. SMOKE TUBES AND ASPIRATOR BULB

Used to test glove bags for leaks and respirator fit testing.

14. RE-SEALABLE STORAGE BAGS

If repairs to pipe insulation are completed using the glove-bag technique, the patching material (i.e., re-wettable fiberglass cloth) must remain free of asbestos contamination. Placing the material inside a storage bag will prevent contamination.

15. RAGS, NYLON BRISTLE SCRUB BRUSHES (OR SCRUB PADS)

These items are used to clean the surface of a pipe or valve once asbestos-containing insulation has been removed. The scrub brush or pad is particularly useful when removing debris from threading. These items cannot be decontaminated and must be discarded as asbestos waste.

16. PATCHING COMPOUND (OR CEMENT)

It is used to fill in cracks or holes in pipe or boiler insulation.

17. STAPLE GUN AND STAPLES

They are used to secure polyethylene sheeting and glove bags temporarily.

18. BUCKET

Preferably plastic and washable. Do not use wooden buckets. It is used to catch asbestos debris and to wash equipment following use.

8.3 Pipe Insulation Repair

Pipe insulation, pipe fitting insulation, boiler insulation, or other forms of thermal system insulation are present at The Vogel School. If needed, pipe insulation can often be easily repaired using a patching compound and re-wettable fiberglass cloth. Follow all applicable regulations, including Massachusetts DLS 454 CMR 28.10(5), and proceed as follows.

1. Isolate and seal off the work area, as required in 454 CMR 28.10(4)(a)7. If the repair is to pipe insulation, a glove bag may be used instead.

2. Use duct tape to seal a piece of six-mil polyethylene sheeting to the floor in the immediate work area. If floor debris is present, the first vacuum all visible debris using a HEPA vacuum.

3. Thoroughly wet the damaged area with a light mist of amended water using a spray bottle.

4. Remove any loose debris on the damaged insulation using the HEPA vacuum.

5. Prepare patching compound according to the manufacturer's instructions. Patch the hole or crack.

6. Wet a piece of re-wettable fiberglass cloth thoroughly and place it over the damaged area. Cover all exposed insulation.

7. Properly clean and carefully peel the polyethylene sheeting off the floor, rolling the sheet so that the contaminated side is inward. Place the sheet into a six-mil polyethylene disposal bag.

8. Place all cleanable tools in a re-sealable storage bag and take the bag to a sink to clean the tools.

9. Remove the disposable suit and place it in an asbestos disposal bag. Double-bag all waste and dispose of it according to all applicable regulations.

10. Remove, clean, and store the respirator.

11. When the re-wettable fiberglass cloth has dried, paint with latex (which has an appropriate fire rating) to ensure an airtight seal.

8.4 Asbestos-Containing Ceiling Tiles

Asbestos-containing ceiling tiles or non-asbestos-containing ceiling tiles that physically enclose other ACM (e.g., spray-on fireproofing) require special treatment. Preventive measures must be taken to ensure that the underlying area is not contaminated. Any movement of these tiles can result in the release of asbestos fibers. Any work that will result in disturbance of these tiles must be done after occupied school hours and only by workers that have received proper asbestos training. Plastic sheeting must be placed on the floor to contain falling debris. See the following Section, 'ACM Above Ceilings,' for proper procedural techniques.

After ceiling tile activities are complete, the plastic sheeting must be HEPA-vacuumed and wet-wiped until all visible debris has been removed. Suits and other presumed contaminated equipment and debris must be cleaned or adequately sealed and disposed of according to all applicable regulations.

8.5 ACM Above Suspended Ceilings (e.g., Spray-on Fireproofing)

Based on the information provided to Atlas, no asbestos-containing spray-on fireproofing was located at Manchester Memorial Elementary School

8.6 Non-friable ACM

Asbestos-containing or assumed asbestos-containing materials, such as floor tile, are non-friable in their undamaged state. However, routine maintenance and renovation activities can disturb non-friable ACM and cause it to become friable. When non-friable material is removed, friable asbestos-containing dust and fibers may be released. For this reason, any activities that may break these non-friable materials must be undertaken with care, including applying control methods and preventive measures.

Control methods to minimize the possibility of creating asbestos dust include using water mist to significantly reduce the release of dust and fibers and isolate the area when disturbing non-friable ACM. Precautions must be taken so as not to allow non-friable materials to become damaged and damaged, thereby causing fibers to be released. Cutting, sanding, abrading, or drilling will promote

fiber release from non-friable ACM. As a further safety measure, personal protective clothing should be worn when disturbing these materials.

Asbestos-containing or assumed asbestos-containing floor tiles are non-friable in their undamaged state. Small-scale (less than three square feet) repair of these floor tiles may be performed, but the control methods described above must be applied. At no time should any amount of floor tiles be sanded, drilled, damaged, or otherwise damaged. Large-scale repair and/or removal of floor tiles will require plans designed by a Massachusetts-licensed designer. In this event, a simplified containment system may be constructed for the ACM locations.
Note: Refer to 'Preventive Measures in Part VII above and Appendix B of the Rule for additional information regarding appropriate work practices.

8.7 Glove-Bag Technique

The glove-bag technique is primarily used to remove or repair asbestos-insulated pipes or valves. This procedure requires two people. Follow all applicable regulations and proceed as follows.

1. MATERIALS NEEDED

a. Glove-bag
b. Two garden sprayers
c. Surfactant
d. Duct tape
e. Disposal bags
f. Retractable utility knife
g. Scrub brush or scrub pad, rags
h. Re-wettable fiberglass cloth
i. Re-sealable storage bags
j. Heavy-duty hand stapler and staples
k. Polyethylene sheeting
l. Asbestos warning signs
m. Smoke tubes
n. Aspirator bulb
o. HEPA vacuum cleaner
p. Bucket of water
q. Disposable clothing
r. Half-face negative pressure respirator
s. Bridging encapsulant
t. Spray bottle

2. TECHNIQUE

Preparation Activities

a. All persons not immediately involved in glove-bag activities must be excluded from the work area. Sufficient physical barriers must be installed to limit access to the work area for the duration of the glove-bag operation.

b. All employees who perform glove-bag operations must be provided with appropriate personal protective equipment, at a minimum, half-face negative pressure respirators equipped with HEPA filters and full-body disposable Tyvek suits or equivalent.

c. All moveable objects must be removed from the work area. Any reusable items that may previously have been contaminated with asbestos must be HEPA-

vacuumed and/or wet-wiped. Non-moveable objects may be sealed with six-mil polyethylene sheeting and duct tape.

d. Check the integrity of the pipe insulation. If the insulation is loose, damaged, or if it is believed that cutting into the insulation will worsen its condition, do not proceed. Old, deteriorated pipe insulation may become loose during the repair or removal process, generating airborne asbestos fibers.

e. Gather all necessary tools and supplies. Use the garden sprayers to mix the surfactant, water, and encapsulant separately according to the manufacturers' guidelines.

f. Cut two pieces of re-wettable fiberglass cloth to cap the ends of the insulation. The inner diameter should be one-half inch smaller than the diameter of the pipe itself (not the insulation). The outer diameter of the cap should be about three inches longer than the diameter of the pipe insulation. Cut a slit through one side of the cap. Cut additional pieces of cloth in strips to be used as a patch if necessary. Place pieces in the re-sealable storage bag.

g. Seal off the work area and post asbestos warning signs, as required by DLS 454 CMR 28.10(4) & (7).

h. Put on the negative pressure respirator and perform negative and positive pressure checks. Put on disposable clothing.

i. Adhere six-mil polyethylene sheeting to the floor in the immediate work area with duct tape.

j. Place two layers of duct tape around the pipe at each end where the glove bag will be attached. Determine the distance by holding the glove bag up to the pipe to determine the length. The duct tape serves two purposes: (1) it provides a good surface on which to seal the ends of the glove bag, and (2) it minimizes the possibility of releasing fibers when the tape is removed.

k. With the retractable utility knife, cut from the top of the glove bag down the side seams to create incisions approximately twelve inches long.

l. Run duct tape horizontally along one of the top flaps for reinforcement.

m. Place the utility knife, rags, nylon scrub brush or scrub pad, and re-wettable fiberglass cloth into a re-sealable storage bag and place them in the tool pouch of the glove bag.

n. Place the glove bag around the section of pipe to be worked on and staple the top with staples approximately one inch apart.

o. Fold the stapled section over and tape it horizontally to the glove bag with short duct tape.

p. Lift the glove bag so that the bottoms of the side incisions are flush against the bottom of the pipe insulation. There should be adequate room at the top of the glove bag to reach over the top of the pipe. If the glove bag is not lifted and taped, there may be insufficient room to cut the top of the pipe insulation. Seal all seams, holes, cracks, etc., securely with duct tape.

q. Poke a hole at the top of the glove bag large enough to allow the end of the smoke tube to be inserted.

r. Pre-cut a few pieces of duct tape and set them aside to seal the holes and any leaks. If a hole is not provided, tape a portion of the bag below the gloves and cut a cross-slit. Insert the HEPA vacuum hose and reseal the bag around the hose securely with duct tape.

s. Holding the smoke tube into a wastebasket, carefully snip off both ends of the smoke tube using a pair of scissors. Eye protection should be worn to protect against stray pieces of glass. Place one end of the smoke tube into the aspirator bulb and insert the other into the glove bag.

t. Squeeze the aspirator bulb until there is adequate smoke. Do not allow too much smoke to enter the bag.

u. Take out the smoke tube, patch the hole and squeeze the bag. Seal any leaks with duct tape. Place the smoke tube in a bucket of water for 5-10 minutes and discard.

v. Insert the wand of the garden sprayer into the same hole used for the smoke tube. Tape the wand securely with duct tape.

Removal and/or Repair Activities

a. If an aluminum jacket is present on the insulation, remove it with tin snips and wire cutters. Fold the sharp edges inward to prevent cutting the waste disposal bag and place gently in the bottom of the bag. Be careful not to cut yourself on the sharp edges. The insulation should now be exposed.

b. Wet the asbestos pipe insulation thoroughly and begin cutting with the retractable utility knife. Water should be sprayed on the cutting area and sides of the bag throughout the process to reduce dust levels in the glove bag. Use a HEPA vacuum to filter air, if necessary. As the material is cut off gently, place the insulation in the bottom of the bag. Wet the material on the bottom of the bag as well as any remaining debris on the pipe.

c. Clean all debris off the pipe with water, scrub brush, and rags. Clean excess debris from the exposed ends remaining on the pipe.

d. Wet the cloth end pieces made from the re-wettable fiberglass cloth and apply them to exposed ends of asbestos.

e. Enclose all visible insulation with patch strips as necessary. Any asbestos that has been exposed as a result of the glove-bag operation must be properly repaired, encapsulated, or enclosed prior to removal of the glove-bag.

Disposal and Cleanup Activities

a. Spray the entire inside of the bag and clean off the retractable utility knife and all cleanable equipment and tools that will be used in the future. The rags and scrub brush should be left in the bag and discarded with the rest of the waste since they cannot be adequately cleaned.

b. With the HEPA vacuum running, carefully remove the clean surfactant sprayer and quickly replace it with an encapsulant sprayer. Use an encapsulant to lock down invisible fibers and respray the entire bag.

c. Grab the cleaned tools with one glove and invert the glove to the outside of the bag. Tie off the glove with string or duct tape in two areas and cut the glove between the two sealed areas. Place the section of the glove containing the tools in the water bucket. Open this glove underwater and re-clean all tools in the water. Remove any gross chunks of debris and place them in a pre-labeled asbestos disposal bag. Dispose of the inverted glove in the disposal bag.

d. Twist the glove-bag several times at the midsection (below the water sprayer hole) and seal it. This will isolate the contained debris in the bottom of the bag while the glove bag is removed from the pipe.

e. With the HEPA vacuum running, carefully remove the encapsulant wand from the bag and tape the hole promptly and securely.

f. With the HEPA vacuum on the low flow setting, gently collapse the glove bag. Carefully remove the vacuum nozzle and seal off the hole with duct tape.

g. Finish twisting the bag to form an airtight constriction. Firmly secure the constriction with duct tape.

h. Slip the disposal bag around the glove bag (still attached to the pipe). Slowly cut open the top of the glove bag and carefully fold it down into the disposal bag. Do not remove the duct tape attached to the pipe.

i. Remove the air from the disposal bag, twist the top of the outer bag, gooseneck the tie and seal securely with duct tape. It is recommended that the disposal bag be double-bagged. Make sure the outside bag is appropriately labeled. All waste must be disposed of properly. Carefully place the bag in a sealed, labeled, leak-tight container for temporary storage until disposal. Dispose of ACM as described in 'ACM Waste' in Part VII.

j. Finish cleaning the tools in the water bucket and carefully pour wash water into the disposal bag, rinse the bucket with a sprayer, and dispose of this water in the disposal bag. Properly clean the floor and, if necessary, polyethylene sheeting, using either HEPA vacuum or wet methods, and fold the polyethylene sheeting inward and place it in a disposal bag. Remove the disposable suits and put them in the disposal bag.

k. Remove the respirator, clean, and store.

l. After re-wettable fiberglass cloth has dried, paint with latex to ensure ACM is sealed airtight.

Additional glove-bag techniques and requirements are described in Appendix B of the Rule, Appendix G of OSHA 29 CFR 1926.1101, and DLS 454 CMR 28.10(5).

8.8 Mini-Enclosure Operations

1. Persons not immediately involved in asbestos-related activities are to be excluded from the work area. Use physical barriers where necessary to limit access to the work area for the duration of the work.

2. Construct airtight barriers to prevent the release of asbestos fibers. Where feasible, glove-bags are permitted in place of barriers to remove insulation on pipes and ducts.

3. Adequately wet the asbestos before disturbing it. Removed asbestos and asbestos-contaminated items will be containerized in two six-mil polyethylene bags or double-wrapped in six-mil polyethylene sheeting. If the material has sharp edges, double-wrap or bag it and then place the material in metal, fiber, or plastic drums that can be sealed.

4. Properly repair, enclose, or encapsulate friable asbestos exposed during asbestos work.

5. HEPA-vacuum and wet-wipe until there is no visible debris or dust.

6. Asbestos-containing waste must be containerized, transported, and disposed of at an approved asbestos landfill in accordance with all applicable regulations.

8.9 Asbestos-Debris Clean up Procedures

Any debris suspected of containing asbestos found on the floor, tops of ceiling tiles, or other building structures should be cleaned up immediately. Asbestos debris is extremely friable. Remember, any suspected debris equal to or greater than three linear or square feet must be cleaned up by an accredited and licensed asbestos abatement contractor according to a plan designed by an accredited and licensed project designer.

1. WHEN ASBESTOS-CONTAINING DEBRIS IS DRY OR DAMP AND SMALL IN SIZE

a. Isolate and seal the work area and post warning signs, as required by DLS 454 CMR 29.10.

b. Thoroughly wet mop, using a bucket of water, rags, and/or mops, all of the structures and items on which the debris has fallen. Be sure all visible debris is removed.

c. Vacuum the floor using a HEPA vacuum. Again, be sure all visible debris is removed.

d. When the area is dry, inspect for any visible asbestos debris. Sometimes wet asbestos debris becomes hidden during the cleanup. If any visible asbestos material is found, repeat the wet-mop or HEPA-vacuuming procedure until no visible asbestos debris is observed.

e. Dispose of the protective clothing, mop heads, and rags into a six-mil polyethylene disposable bag. Pour the water from the bucket into the disposal bag also. Twist the top of the polyethylene bag and seal it with duct tape. Double-bag the waste material with another six-mil polyethylene bag. Dispose of the bagged asbestos waste according to all applicable regulations.

f. Remove the respirator, clean it, and place it in a re-sealable storage bag.

g. Clean the bucket in a sink, if available, and thoroughly rinse the sink used.

h. Remove critical barriers and the posted warning signs.

2. WHEN ASBESTOS DEBRIS IS TOO WET OR TOO LARGE TO BE VACUUMED

a. Isolate and seal the work area and post warning signs as required by DLS 454 CMR 28.10.

b. Thoroughly wet the asbestos material and the surrounding area to a distance of six inches with the garden sprayer. Use a light mist of water when wetting the area and the material, as a heavy stream of water could dislodge and disperse asbestos fibers.

c. If the material is intact and too large to be easily handled with a shovel, pick up the wet material and place it in a six-mil polyethylene disposable bag.

d. Scoop up smaller debris with a shovel, dustpan, or garden trowel and place it in a six-mil polyethylene bag. Use another washable item, such as another garden trowel or ice scraper, to push the material into the shovel, dustpan, or trowel. **DO NOT USE A BROOM OR BRUSH!** A broom or brush cannot be decontaminated, increasing the possibility of dispersing asbestos fibers into the air.

e. Wet mop the entire area and items that the asbestos material contacted, using a bucket of water, rags, and mops. If the floor is carpeted, vacuum the carpet with a HEPA-filtered vacuum cleaner. If the carpet is wet, or the debris is wet, the carpet must be steam-cleaned. A HEPA-filtered vacuum cleaner cannot be used to pick up water or wet material unless the vacuum is designed to do so.

f. Wash the items used in the cleanup, including hands, shovel, ice scraper, etc., by holding items over the six-mil disposal bag and washing them thoroughly with the garden sprayer. Pour the bucket of contaminated water into the disposal bag.

g. Place the protective clothing, mop heads, and rags in a six-mil polyethylene disposable bag and dispose of it as contaminated waste. Twist the top of the polyethylene bag and seal it with duct tape. Double-bag the waste material with another six-mil polyethylene bag.

h. Place the respirator in a re-sealable storage bag and take it to a sink to clean.

i. Clean the respirator, re-clean the bucket, and thoroughly rinse the sink. Store the respirator after cleaning.

j. Remove the barriers and posted warning signs.

8.10 Asbestos Emergency Procedures

An asbestos emergency is one in which there is an unexpected change in the condition of asbestos-containing material that results in the release of asbestos fibers. This is called an asbestos fiber release episode. Fiber release episodes have the potential to contaminate the area and expose the building occupants to asbestos fibers.

The following procedures should be followed in the event of an emergency:

1. Remove occupants from the immediate area and contact the appropriate building supervisor and the School's Designated Person.

1. Isolate the area as described in DLS 454 CMR 28.10.

3. Trained personnel who perform the work should wear the appropriate disposable clothing and respiratory protection.

4. Vents and ducts leading into or out of the emergency area should be shut down and sealed with six-mil polyethylene sheeting and duct tape according to DLS 454 CMR 28.10 (8).

5. If the asbestos debris or material is less than three linear or square feet, continue following the "Asbestos Debris Cleanup Procedures" described above. If the asbestos material is greater than or equal to three square or linear feet, **DO NOT TOUCH OR REMOVE THE ASBESTOS**. Contact a Massachusetts-licensed asbestos abatement contractor and a Massachusetts-accredited project designer.

8.11 HEPA Vacuum

The HEPA vacuum cleaner is the **ONLY** vacuum cleaner designed to clean asbestos debris. Using a household or shop vacuum will contaminate the vacuum cleaner itself and expose the user and the area to high levels of airborne asbestos dust.

It is crucial that personnel read and follow the manufacturer's directions for the proper use and maintenance of the HEPA vacuum. Some HEPA vacuum cleaners cannot pick up wet materials. Consult the manufacturer's directions.

CLEANING AND MAINTENANCE

When the inside of the vacuum cleaner needs to be accessed, whether to change a filter, a bag, or a part, the following procedures must be followed.

1. Gather the necessary equipment required by this section, including:

    a. Half-face negative pressure respirator
    b. Re-sealable storage bag or similar substitute
    c. Disposable clothing
    d. Bucket of water
    e. Sponges or rags
    f. Disposal bags
    g. Duct tape

2. Take the HEPA vacuum cleaner to a location away from non-authorized personnel.

3. Put on the half-face negative pressure respirator and disposable clothing.

4. Perform the necessary maintenance or repair according to the manufacturer's instructions. Place any contaminated, used, or worn parts, bags, and filters in the six-mil polyethylene disposal bag.

5. With a damp rag or sponge, clean visible debris from the interior and exterior of the vacuum cleaner.

6. Pour the bucket of water into the disposal bag. Thoroughly rinse the bucket and pour the rinse water into the disposal bag.

7. Place the sponge or rag in the six-mil polyethylene disposal bag, disposable clothing, and other contaminated items.

8. Seal the six-mil bag securely with duct tape, making sure there are no leaks in the bag. Place the used and sealed disposal bag into a second labeled six-mil polyethylene bag. Twist the top of the bag and seal it with duct tape.

9. Remove, clean, and store the respirator.

10. Store and dispose of the asbestos waste properly.

9. RECORDKEEPING

9.1 Summary

Pursuant to requirements specified in the Rule, the LEA is responsible for maintaining adequate records for all the asbestos activities listed below in two locations: (1) the Local Education Agency office; and (2) the School Administration's offices. Refer to 454 CMR 28.13(10) for the specific items required to be recorded for each activity.

It is recommended that the sample forms included in this section be used to guide the LEA in developing its forms. If the sample forms are chosen to be used, the LEA must ensure they provide a record of all the information required by the Rule and all other applicable regulations. The guidance forms included within this section in no way supersede or replace records that may be necessary to comply with any applicable asbestos regulations. The LEA must remain informed, ensure compliance with all new and existing regulations, and update their recording methods accordingly. This is especially important as long as any ACM remains in the School and building occupants may come in contact with or otherwise handle asbestos-containing materials. It is also recommended that the LEA maintain updated copies of the blank forms it chooses to use in this Recordkeeping section.

The following asbestos activities, projects, and occurrences, and the entities involved in such projects, are to be recorded as required in 454 CMR 28.13(10). The activities to be recorded include, but are not limited to:

1. Preventive Measures
2. Response Actions
3. Contractors or Personnel Involved
4. Air Monitoring and Results
5. Personnel Training
6. Periodic Surveillance
7. Cleaning
8. Operation and Maintenance (O&M) activities only by a MADLS Licensed Contractor
9. Major Asbestos Activities
10. Fiber Release Episodes

Additional records required by OSHA (particularly if negative pressure respirators are used) include those required for but are not limited to, medical surveillance and respiratory protection.

9.2 Sample Record Forms

In order to maintain all proper records required, it is essential to establish an organized format for record keeping. The following record forms and recommended formats are provided as guidance for creating and maintaining adequate records. The information requested in the forms should only be viewed as minimum requirements as stated in the Rule. It is important to be sure that additional records be kept as necessary to fully comply with all applicable regulations.

Additional recordkeeping forms, such as medical surveillance or respiratory protection forms, may be recorded and continued as necessary. Keep a blank copy of the record forms used in the Recordkeeping section and revise as necessary. Copy several blank forms. Keep these blanks and completed forms in the Records section.

Project records may be compiled copied as necessary in the case of repeat records, such as Worker Training and grouped together, project by project, in order of occurrence.

FORM A

PERIODIC SURVEILLANCE & RE-INSPECTION SIGNOFF TABLE

SIX-YEAR PLAN

Essex Elementary

Form No. A-_____

Surveillance Date	Latest Date	Inspector Name	Project Date	Record Form No's
Reinspection Date:				

(Periodic Surveillance every 6 months thereafter. Re-inspection every 3 years thereafter.)

FORM B

ACTIVITY/PROJECT RECORD

Essex Elementary

Project No. _____ Form No. B-_____

Measure or Action: _____

_____

If Periodic Surveillance or Re-inspection, Record Form No(s). _____

Start Date: _____ Completion Date: _____

ACM Type: Check Appropriate Material Type; see appropriate ACM Table or Summary)

F - Friable				
NF – Non-Friable	F/S	_____	F/M	_____
S - Surfacing	NF/S	_____	NF/M	_____
T - Thermal	A/F/S	_____	A /F/M	_____
M - Miscellaneous	A/NF/S	_____	A/NF/M	_____
A - Other ACM	A/T	_____	NF/O	_____

ACM Description: _____ Homogeneous Area: _____

Specific Area Location(s): _____

ACM Location in Area(s): _____

HVAC Supply: Passive Direct Air Movement: High Moderate Low

Air System: Shut Down Isolated Not Present

Was Area Isolated? Yes No Proper Signs Posted? Yes No

Project Description and Methods: _____

_____

_____

_____

Why was action taken? _____

_____

_____

Was Project Resultant of a Major Fiber Release Episode (> 3 feet)? Yes No

Was Project Resultant of a Minor Fiber Release Episode (< 3 feet)? Yes No

FORM B

ACTIVITY/PROJECT RECORD (CONTINUED)

Essex Elementary

Was any ACM Removed? Yes No Total Amount _____

If YES: Storage Record Form No. _____

Disposal Record Form No. _____

If less than or equal to 3 linear or square feet then:

School Worker Record Form No. _____

Worker Training Record Form No(s). _____

Contractor Record Form No(s). _____

If greater than 3 linear or square feet then:

Design Consultant Record Form No(s). _____

Air Monitoring Consultant Record Form No(s). _____

Laboratory Consultant Record Form No(s). _____

Contractor Record Form No(s). _____

Does ACM remain in location? Yes No Amount _____

If YES: Describe additional Preventive Measures: _____

_____

_____

* Continue with Operations and Maintenance Program.

If NO: Be sure to update asbestos location blueprint, diagrams, and/or written description and adjust periodic surveillance forms.

Date of Notification to: DLS _____ DEP _____ EPA _____

Inspection Form No(s). _____

Name of Competent or Designated Person: _____

School Worker Record Form No. _____

Signature: _____ Date: _____

FORM C

SCHOOL WORKER RECORD

Essex Elementary

Project No. _____ Form No. C-_____ Project Date(s) _____

Designated Person _____

Respiratory Protection Workers Names	Dates of Activity	Worker Training Record Form No's	Record Form

FORM D

DESIGN CONSULTANT RECORD

Essex Elementary

Form No. D-_____

Project No: _____ Project Form No.: _____

Consultant Company Name: _____

Address: _____

_____

_____

Telephone: _____

Specification Location: _____

Project Designer Name: _____

State of Accreditation: _____

Accreditation Number: _____

Completion Date Project Designed: _____

Project Designer Signature: _____

FORM E

ABATEMENT CONTRACTOR RECORD

Essex Elementary

Form No. E-_____

Project No. _____ Project Form No. _____

Project Date(s): _____

Designated Person: _____

Contractor Name: _____

Address: _____

_____

Telephone: _____

Contractor's State of Accreditation: _____

Accreditation Number: _____

Worker Name	Date on Site	Date of Accreditation	Accreditation #	Day Supervisor/ Foreman

FORM F

AIR MONITORING CONSULTANT RECORD

Essex Elementary

Form No. F-_____

Project No. _____ Project Form No. _____

Designated Person: _____

Consultant Company Name: _____

Address: _____

_____

Telephone: _____

Air Sample Collection Date: _____

Air Sample Collector's Name: _____

State of Accreditation: _____

Accreditation Number: _____

Collectors Signature: _____

Sample ID	Description	Type In, out, Blk, Pnl, Area	Location / Date & Time Collected	Results

FORM G

LABORATORY RECORD

Essex Elementary

Form No. G-_____

Project No. _____ Project Record Form No. _____

Project Date(s): _____

Designated Person: _____

Consultant Company Name: _____

Address: _____

_____

Telephone: _____

State of Accreditation: _____

Accreditation Number: _____

Check if applicable:

_____ This laboratory is accredited by the National Institute for Standards and Technology to conduct air sample analysis using Transmission Electron Microscopy (TEM).

_____ This laboratory is enrolled in the EPA-sponsored Proficiency Analytical Testing Program for Phase Contrast Microscopy (PCM).

Sample #	Result of Analysis	Method of Analysis	Date of Analysis	Name of Analyst	Signature

FORM H

DISPOSAL RECORD

Essex Elementary

Form No. H-_____

Project No. _____ Project Record Form No. _____

Project Date(s): _____

Designated Person: _____

Site Name: _____

Address: _____

_____

Telephone: _____

How Material is Containerized: _____

Material Quantity: _____

Date Material Transported for Disposal: _____

Transporter Name: _____

Address: _____

_____

Telephone: _____

FORM I

STORAGE RECORD

Essex Elementary

Form No. I-_____

Project No. _____ Project Record Form No. _____

Project Date(s): _____

Designated Person: _____

Storage Site: _____

Address: _____

_____

Telephone: _____

Storage Area at Site: _____

Material Quantity: _____

Area Sealed? _____ How: _____

_____

Area Secured? _____ How: _____

_____

Date Material Transported
for Disposal _____

FORM J

WORKER TRAINING RECORD

Essex Elementary

_____ Check if Designated Person

Form No. J-_____

Individual's Name

Individual's Identification No.

Permanent Street Address

Emergency Contact Person

Permanent City, State, Zip Code

Emergency Contact Phone No.

Home Phone No.

Attending Physician

Job Title

Attending Physician's Phone No.

Course Date	Location	Course Title	Training Center Name	Hours	Cert #

THIS INDIVIDUAL IS QUALIFIED TO PERFORM THE FOLLOWING TYPE(S) OF ASBESTOS-RELATED WORK

1) Restricted to maintenance work which **does not** involve the disturbance of asbestos-containing building materials.

Signature

Title

Date

FORM K

GLOVE BAG REMOVAL RECORD

Essex Elementary

Form No. K-_____

Date Performed: _____

Designated Person: _____

Performed by: _____

_____

_____

Contractor MA Certification No.: _____

DEP Notification No.: _____

Work Performed: _____

_____

_____

Worker Name: _____

Worker Massachusetts Certification No.: _____

Waste Landfill: _____

Waste Transporter: _____

10. DOCUMENTATION

10.1 Inspection Reports

10.2 6-Month Surveillance

10.3 Additional Training

10.4 Additional Notifications

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

FIBER RELEASE EPISODE
GIUDANCE FOR THE DESIGNATED PERSON

A **fiber release episode**, as defined by the Department of Labor Standards (DLS) at 454 CMR 28.02 and AHERA 40 CFR 763.83, means any uncontrolled or unintentional disturbance of asbestos containing material (ACM) resulting in a visible emission.

The use of best practices when responding to a fiber release episode will ensure that building occupants are protected and that the fiber release episode is promptly and effectively remediated. The minimum requirements for responding to a fiber release episode are set forth in 454 CMR 28.13(7)(e)1 and 2. The Designated Person should assess the situation, implement initial steps to contain the release, and contact their asbestos consultant to assist with a prompt and effective response action.

A **minor** fiber release involves the disturbance of three or fewer square or linear feet of ACM. A **major** fiber release involves the disturbance of greater than three square or linear feet of asbestos. The response action for any **major** fiber release episode requires a project design specifying means and methods, and must be conducted by a licensed asbestos contractor. The Local Education Agency (LEA) must notify DLS of any major fiber release within 24 hours of its occurrence, and if necessary, file written notification to the state [454 CMR 28.13(7)(e)2.d].

The initial steps that the Designated Person must take to protect building occupants include:

1. Isolating the area. Restrict access to the area by the general public. Foot traffic through the area can spread the extent of contamination to clean areas of the building, and expose building occupants to asbestos fibers.
2. Post warning signs at all access points to the area. Signs should be large and readily visible. Signs should indicate: Restricted Area. Asbestos Hazard. No entry without proper training and equipment.
3. Shut down or temporarily modify the air handling system to prevent the distribution of airborne asbestos fibers to unaffected areas of the building.
4. Notify DLS within 24 hours of the release. Submit the standardized reporting form to DLS at Zachariah.Costa@mass.gov.
5. Contact the asbestos consultant to evaluate the situation, develop a project design for a major fiber release, and assist the Designated Person in developing a remediation strategy. The strategy may include bulk sampling, air sampling and/or wipe sampling.
6. Contact the asbestos contractor to clean visible debris, and remove or repair damaged or exposed ACM as a result of a major fiber release.

Keep a record of the event in the AHERA management plan: date & location, description of episode, what interim control measures were used, the project design, contractor information and any air testing reports.

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

FIBER RELEASE EPISODE NOTIFICATION FORM

Date(s) episode occurred:_____ Time of Day:_____

Was the building occupied Yes No

Name of School:_____

School Address:_____

Location where the episode occurred (include room number or clear designation of the area):_____

_____

Amount of ACM involved:_____ Type of ACM:_____

Describe what happened to create the fiber release episode:

_____

_____

_____

_____

What Preventive measures were used to protect building occupants:

- ☐ Isolate the area-Restrict entry (poly on doors, hard barriers)
- ☐ Post warning signs
- ☐ Modify HVAC to affected area
- ☐ Air testing performed
- ☐ Asbestos Consultant contacted for evaluation
- ☐ Project Design prepared--greater than 3 linear/square feet

Name of Consultant:_____

Name of asbestos contractor_____

Date corrective action was started/will start: _____

Submit this form within 24 hours of event pursuant to 454 CMR 28.13(7)(e)2.d.
to: Zachariah.Costa@mass.gov

Note: retain a copy of this notice in your AHERA management plan.

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

AHERA RESPONSE ACTION RECORDS CHECKLIST

Local Education Agency (LEA): _____

LEA Designated Person: _____

Name of School: _____

Address: _____

Description of Response Action/Project Design:

- ☐ Methods used
- ☐ Location of response action
- ☐ Start date
- ☐ Completion date

Project Designer

- ☐ Name
- ☐ Certification number

Contractors and Workers Conducting Asbestos Activity

- ☐ Name
- ☐ Address
- ☐ Certification number
- ☐ Name and location of storage/disposal site (attach waste shipment records)

Clearance Documentation

- ☐ Date a visual inspection was conducted
- ☐ Name of person performing the visual inspection
- ☐ Air samples were collected at completion of response action using aggressive methods
- ☐ Name and signature of person collecting air samples
- ☐ Certification number of project monitor collecting samples
- ☐ Date of collection
- ☐ Locations where samples were collected
- ☐ Air samples were analyzed by an accredited laboratory
- ☐ Laboratory name
- ☐ Laboratory certification (NVLAP, AIHA, or Massachusetts certification number)
- ☐ Method of analysis
    - o Phase Contrast Microscopy (PCM)
      (Chain of custody must show 5 samples per area plus one blank for each batch submitted)
    - o Transmission Electron Microscopy (TEM)
      (Chain of custody must show 13 samples submitted per area for each batch-includes 3 blanks)
- ☐ Name and signature of analysts
- ☐ Results of analysis (attach lab report)

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

AHERA RESPONSE ACTION RECORDS CHECKLIST

Attachments:

- ☐ Project Design
- ☐ Sign in logs from Asbestos Contractor for each day of the project
- ☐ Daily logs from project monitor/consulting firm
- ☐ Chain of custody for any air samples collected
- ☐ Laboratory reports for final air clearance
- ☐ Waste shipment record

Update to Asbestos Management Plan After Completing a Response Action

- ☐ Copies of all Response Action Records in both copies of the school's Management Plan, at the LEA administrative office and at the school.
- ☐ Detailed description of the locations of any Asbestos-Containing Building Material (ACM) or suspect ACM which remains in the school once the Response Actions are undertaken.
- ☐ Revisions to the Operations and Maintenance Program if the Response Action results in the removal of asbestos that had required special cleaning, maintenance, or precautions.
- ☐ A re-evaluation of resources needed to manage in place the Asbestos-Containing Material (ACM) that remains in the building.

This checklist is provided as a courtesy by the Massachusetts Department of Labor Standards, to assist a Local Education Agency (LEA) with ensuring that the LEA's records are complete following an AHERA Response Action. This AHERA Response Action Checklist is ***not*** *intended to provide a detailed overview of the AHERA regulations and should not be used as a substitute for such review.*

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

OPERATIONS AND MAINTENANCE
SPECIAL CLEANING ACTIVITIES

DATE COMPLETED: _____ **ROOMS:** _____

DESCRIPTION OF METHOD(S) USED DURING THIS O&M ACTIVITY:

- ☐ HEPA vacuum
- ☐ Wet mop
- ☐ Wet Swiffer
- ☐ Wet rags
- ☐ Other _____

Horizontal Surfaces cleaned:

- ☐ Floors
- ☐ Desks/Chairs
- ☐ Tops of filing cabinets
- ☐ Tops of univents
- ☐ Windowsills
- ☐ Chalk trays
- ☐ _____
- ☐ _____

Waste Disposal:

- ☐ Cleaning rags/cloths bagged while wet
- ☐ HEPA vacuum emptied
- ☐ Waste bags goosenecked with duct tape
- ☐ Waste bags labeled

Cleaning completed by: _____

Date of ACWM collected: _____

Notes:

- Review O&M Plan for specific methods, locations and frequency of cleaning in your school.
- All special cleaning equipment shall be designated only for this cleaning.
- Dirty cleaning rags, etc. shall be picked up monthly by a Massachusetts licensed asbestos contractor. Contractor shall provide a Waste Shipment Record to the LEA.
- Maintain a copy of this form in the AHERA management plan in the O&M activities section.

10.5 Asbestos Activities

194

1. Identification

Product Identity: **2 Multi-Shine**

Recommended Use: Water Based Glass & Surface Cleaner

Producer / Distributor

Multi-Clean
600 Cardigan Road
Shoreview, MN 55126

Telephone Number for Information: 651-481-1900

Emergency Telephone Number: 800-255-3924

2. Hazard Identification

Classification:

Health Class	Physical Class	Environment Class
Mild Skin Irritation Category 3 Eye Irritant Category 2		Acute Aquatic Toxicity Category 3

Label

Symbols

Signal Word Warning

Hazard Statements:

Causes eye and mild skin irritation

Precautionary Statements:

If Skin Irritation Occurs: Get medical advice/attention
Wash hands thoroughly after handling.
If In Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention

3. Composition/Information on Ingredients

Ingredient	CAS Number	Percent by Weight
Surfactants	Proprietary	20 - 30
Water	7732-18-5	60 - 100

4. First-Aid Measures:

Ingestion: If Swallowed: Drink two glasses of water and call a physician immediately.

Eye Contact: Flush eyes with running water for at least 15 minutes. If irritation persists, obtain medical attention.

Skin Contact: Flush thoroughly with cool water. Remove and wash contaminated clothing before reuse.

Inhalation: Move to fresh air.

5. Fire Fighting Measures:

Suitable Extinguishing Media: Not Applicable

Special Fire Fighting Procedures: Not Applicable

Unusual Fire and Explosion Hazards None are known

6. Accidental Release Measures:

Dike and contain spill with inert material (sand, earth, etc.). Collect spill with a mop, absorbent material (example: floor-dry) or vacuum. Thoroughly rinse affected area with water.

7. Handling and Storage:

Handling: Keep from freezing. Keep out of reach of children.

Storage: Normal care for storage.

8. Exposure Controls / Personal Protection:

Exposure Limits

Ingredients	CAS Number	Osha PEL	ACGIH TLV
None Listed	XXXX	XXX	XXX

Exposure Controls

Engineering Controls: Normal good ventilation is sufficient

Personal Protective Equipment:

Eye Protection: Approved Safety Goggles or Glasses

Skin Protection: Chemical Resistant Rubber Gloves

Respiratory Protection: Not required, Avoid breathing spray mist

9. Physical and Chemical Properties:

Physical State: Liquid

Appearance: Blue

Odor: No Fragrance Added

Solubility: Complete

Evaporation Rate: NA

Vapor Pressure (MM HG): NA

Vapor Density (Air = 1): > 1

pH: 10.5 - 11.5 (Conc.); 10 - 11 (In-Use)

Specific Gravity (H2O = 1): 1.005

Flammability: None

Flash Point: None

Boiling Point: > 212° F (100°C)

%volatile: > 95%

10. Stability and Reactivity:

Chemical Stability: Stable

Possibility of Hazardous Reactions: None are known

Incompatability (Materials to Avoid): Oxidizing Material

Hazardous Decomposition or By-products: None

Hazardous Polymerization: Will not Occur

Conditions to Avoid: None are known

11. Toxicological Information:

Signs and Symptoms of Overexposure: Causes irritation on direct contact

Acute Effects:

Eye Contact: Causes irritation on contact

Skin Contact: Causes mild irritation on prolonged or repeated contact

Inhalation: Breathing mists may be harmful

Ingestion: May be harmful if swallowed

Target Organ Effects: None Known

Chronic Effects: None Known

Acute Toxicity Values:

Oral LD $_{50}$ > 5000 mg/kg

Dermal LD $_{50}$ > 5000 mg/kg

Inhalation (Vapor) LC $_{50}$ > 50 mg/l

12. Ecological Information:

Persistence and Degradability: Product is Readily Biodegradable

Bio Accumulative Potential: Not Available

Mobility in Soil: Not Available

Aquatic Toxicity: Harmful to Aquatic Life

13. Disposal Considerations:

Material that cannot be used during normal use should be disposed of in accordance with all applicable local, state and federal regulations. Waste from normal cleaning procedures may be disposed of in a sanitary sewer depending on the materials and/or contaminants being cleaned as well as local, state and federal sewer regulations.

14. Transportation Information:

UN Number: None

Shipping Name: Cleaning Compound, Liquid

Transport Hazard Class: None

Packing Group: None

Marine Pollutant: NO

15. Regulatory Information:

TSCA Status: All ingredients listed

Clean Water Act: None of the chemicals in this product are listed under the CWA

Clean Air Act: None of the chemicals in this product are listed under the CAA

CERCLA Reportable Quantity: None

SARA Title III Information:

Section 302 Extremely Hazardous Chemicals: None Listed

Section 311 / 312 Hazard Category: Immediate Health, Chronic Health

Section 313 Toxic Chemicals None Listed

State Regulations: Notice State of California; Warning; This product may contain chemicals known to the state of California to cause cancer or reproductive defects as trace impurities in the standard industrial materials used in the manufacture of this product.

International Regulations: None

California Cleaning Product Right to Know Act of 2017 (SB 258)

Raw Material	CAS No	Function	List
Water	7732-18-5	Diluent	Not Applicable
Surfactant	Withheld	Cleaning agent	Not Applicable
Colorant	Withheld	Dye	Not Applicable

16. Other Information:

Prepared By: Jeremy Waldner

Telephone Number: 651-481-1900

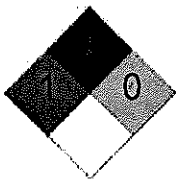
Revision Date: 1/1/2020

Supersedes: 1/16/2018

This SDS applies to the following Part Numbers

908722
908727
951322PL

The information contained herein is based on data considered accurate; however no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. The company assumes no responsibility for personal injury or property damage to vendees, users, or third parties caused by the material. Such vendees or users assume all risks associated with the use of the material.





371

1. Identification

Product Identity: **Neutra-Zyme**

Recommended Use: Bio-Enzymatic Neutral Cleaner (Fragrance Added)

Producer / Distributor

Multi-Clean
600 Cardigan Road
Shoreview, MN 55126

Telephone Number for Information: 651-481-1900

Emergency Telephone Number: 800-255-3924

2. Hazard Identification

Classification:

Health Class | **Physical Class** | **Environment Class**

Product Classified as Non-Hazardous

Label

Symbols

Signal Word

Hazard Statements:

Product Classified as Non-Hazardous

Precautionary Statements:

Read label before use.
Keep out of reach of children.

3. Composition/Information on Ingredients

Ingredient	CAS Number	Percent by Weight
Nonionic Surfactant	Proprietary	5 - 10
Fragrance Oil	Proprietary	0.5 - 1.5
Bacterial Spore Blend	Proprietary	1 - 5
Water	7732-18-5	60 - 100

4. First-Aid Measures:

Ingestion: Clean mouth with water and drink afterwards plenty of water.

Eye Contact: Flush eyes with running water for at least 15 minutes. If irritation persists, obtain medical attention

Skin Contact: If irritation develops, discontinue Use. Rinse with cool water.

Inhalation: Move to fresh air.

5. Fire Fighting Measures:

Suitable Extinguishing Media: Not Applicable

Special Fire Fighting Procedures: Not Applicable

Unusual Fire and Explosion Hazards Not Applicable

6. Accidental Release Measures:

Dike and contain spill with inert material (sand, earth, etc.). Collect spill with a mop, absorbent material (example: floor-dry) or vacuum. Thoroughly rinse affected area with water.

7. Handling and Storage:

Handling: Keep from freezing. Keep out of reach of children.

Storage: Normal care for storage.

8. Exposure Controls / Personal Protection:

Exposure Limits

Ingredients	CAS Number	Osha PEL	ACGIH TLV
None listed	XXXX	XXX	XXX

Exposure Controls

Engineering Controls: Normal good ventilation is sufficient

Personal Protective Equipment:

Eye Protection: Approved Safety Goggles or Glasses

Skin Protection: Not Required

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

9. Physical and Chemical Properties:

Physical State: Liquid
Appearance: Green
Odor: Fresh Mint
Solubility: Complete
Evaporation Rate: NA
Vapor Pressure (MM HG): NA
Vapor Density (Air = 1): NA

pH: 6 - 7 (concentrate), 6 - 7 (in use)
Specific Gravity (H2O = 1): 1.00
Flammability: None
Flash Point: None
Boiling Point: 212° F (100°C)
%volatile: > 85%

10. Stability and Reactivity:

Chemical Stability: Stable
Possibility of Hazardous Reactions: None are known
Incompatability (Materials to Avoid): None are known
Hazardous Decomposition or By-products: None
Hazardous Polymerization: Will not Occur
Conditions to Avoid: None are known

11. Toxicological Information:

Signs and Symptoms of Overexposure: May cause irritation to Eyes on direct contact

Acute Effects:

Eye Contact: Contact with eyes may cause irritation.
Skin Contact: Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Inhalation: Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion: May cause gastro intestinal irritation.

Target Organ Effects: None Known
Chronic Effects: None Known
Acute Toxicity Values:

Oral LD_{50} Product Considered Non-Toxic
Dermal LD_{50} Product Considered Non-Toxic
Inhalation (Vapor) LC_{50} Vapors Considered Non-T

12. Ecological Information:

Persistence and Degradability: Not Available
Bio Accumulative Potential: Not Available
Mobility in Soil: Not Available
Aquatic Toxicity: Not Available

13. Disposal Considerations:

Material that cannot be used during normal use should be disposed of in accordance with all applicable local, state and federal regulations. Waste from normal cleaning procedures may be disposed of in a sanitary sewer depending on the materials and/or contaminants being cleaned as well as local, state and federal sewer regulations.

14. Transportation Information:

UN Number: None
Shipping Name: Cleaning Compound, Liquid
Transport Hazard Class: None
Packing Group: None
Marine Pollutant: NO

15. Regulatory Information:

TSCA Status: All ingredients listed

Clean Water Act: None of the chemicals in this product are listed under the CWA

Clean Air Act: None of the chemicals in this product are listed under the CAA

CERCLA Reportable Quantity: None

SARA Title III Information:

Section 302 Extremely Hazardous Chemicals: None Listed

Section 311 / 312 Hazard Category: None

Section 313 Toxic Chemicals: None Listed

State Regulations: None

International Regulations: None

16. Other Information:

Prepared By: Eric Scholl

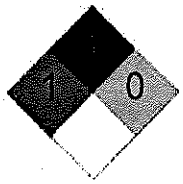
Telephone Number: 651-481-1900

Revision Date: 4/28/2016

Supersedes: 6/7/2013

This SDS applies to the following Part Numbers

The information contained herein is based on data considered accurate; however no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. The company assumes no responsibility for personal injury or property damage to vendees, users, or third parties caused by the material. Such vendees or users assume all risks associated with the use of the material.





429

1. Identification:

Product Identity: **128 E-Fecticide**

Recommended Use: Disinfectant cleaner

Producer / Distributor

Multi-Clean
600 Cardigan Road
Shoreview, MN 55126

Telephone Number for Information: 651-481-1900

Emergency Telephone Number: 800-255-3924

2. Hazard Identification

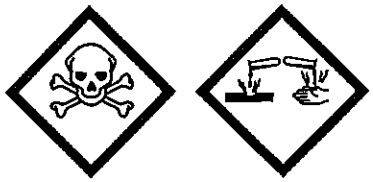
GHS Classification:

Product as Sold

Acute Oral Toxicity Category 4
Acute Dermal Toxicity Category 3
Skin Corrosion Category 1B
Serious Eye Damage Category 1
Short-term Aquatic Hazard Category 1
Long-term Aquatic Hazard Category 2

Label

Symbols



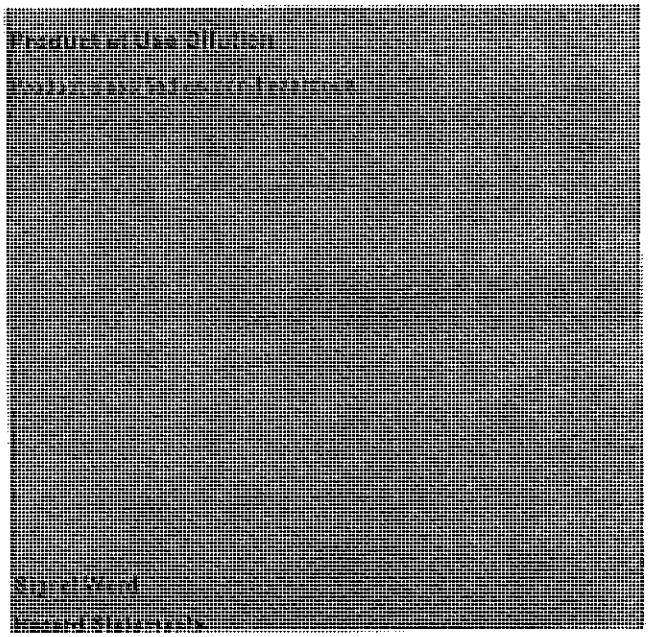
Signal Word Danger

Hazard Statements:

H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements:

Prevention: P260 Do not breathe mist or vapours.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ faca protection.
Response: P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/ doctor.
P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.
P391 Collect spillage.
Storage: P402 + P404 Store in a dry place. Store in a closed container.
P405 Store locked up.
P410 + P403 Protect from sunlight. Store in a well-ventilated place.
Disposal: P501 Dispose of contents/container in accordance with local regulations.



Product Classified as Non-Hazardous



3. Composition/Information on Ingredients

Ingredient	CAS Number	Percent by Weight: Product as Sold	Product at Use Dilution
Dimethyldioctylammonium Chloride	5538-94-3	10 - 12	
Quaternary Ammonium Compounds, Benzyl-C12-18-alkyldimethyl, chlorides	68391-01-5	6 - 8	
Quaternary ammonium compounds, coco alkyltrimethyl, chlorides	81789-18-2	4 - 6	

4. First-Aid Measures:

Product as Sold

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CONTROL CENTER AND SEEK MEDICAL ATTENTION

Ingestion: IF SWALLOWED: Call a poison control center or doctor immediately. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor.

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing at least 15 minutes.

Skin Contact: IF ON SKIN: Immediately take off all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse.

5. Fire Fighting Measures:

	Product as Sold	Product at Use Dilution
Suitable Extinguishing Media:	Water - Foam - Dry Chemical	Not Applicable
Special Fire Fighting Procedures:	Not Applicable	Not Applicable
Unusual Fire and Explosion Hazards	Products of combustion are toxic	None Known

6. Accidental Release Measures:

Contain spillage, and then collect with non-combustible ab-sorbent material, (e.g. sand, earth, diatomaceous earth, ver-miculite) and place in container for disposal according to local / national regulations. Do not flush into surface water or sanitary sewer system.

7. Handling and Storage:

Product as Sold

Handling: Read label before use. Avoid Contact with skin and eyes. Do not breath spray mist. Use only in well ventilated areas. Wash hands thoroughly after handling. Do not eat, drink, or smoke when using this product. Keep out of reach of children. Do not reuse empty container.

Storage: Store locked up. Store in a well ventilated place. Store only in original containers. Do not contaminate food or water by storage or disposal.

8. Exposure Controls / Personal Protection:

Exposure Limits:

Ingredients / Product as Sold	CAS Number	Osha PEL	ACGIH TLV
Ethyl Alcohol	64-17-5	1000 ppm	1000 ppm

	Product AS SOLD	Product at Use Dilution
Exposure Controls:		
Engineering Controls:	Normal good ventilation is sufficient. If exposure levels are exceeded, use local ventillation.	
Personal Protective Equipment:		
Eye Protection:	Approved Safety Goggles or Glasses	
Skin Protection:	Chemical Resistant Rubber Gloves	
Respiratory Protection:	In the case of vapor formation use an approved respirator	

9. Physical and Chemical Properties:

Product as Sold

Physical State: Liquid
Specific Gravity (H2O = 1): 0.98
Solubility: Complete
Flammability: None
Flash Point: None
Boiling Point: > 212° F (100°C)

Appearance: Green
Vapor Pressure (MM HG): Not Available
Vapor Density (Air = 1): Not Available
Auto Ign Temp Not Available
Decomposition Temp Not Available
Freezing Point 32 F

Odor: Fresh Floral
Viscosity <5 centipoise
pH: 7 - 8.5
%volatile: > 75%
LEL / UEL Not Available
Evaporation Rate: Not Available

10. Stability and Reactivity:

Product as Sold

Chemical Stability: Stable
Possibility of Hazardous Reactions: Thermal decomposition may produce toxic vapors/fumes of amines or other organic materials
Incompatability (Materials to Avoid): Other Cleaners or Deodorants
Hazardous Decomposition or By-products: Oxides of carbon and Nitrogen
Hazardous Polymerization: Will not Occur
Conditions to Avoid: None are known

11. Toxicological Information:

Product as Sold

Signs and Symptoms of Overexposure: Causes severe skin burns and eye damage

Acute Effects:
Eye Contact: Causes serious eye damage.
Skin Contact: Causes severe skin burns. Toxic in contact with skin
Inhalation: Toxic if inhaled. Avoid breathing mist and vapor.

Ingestion: Harmful if swallowed
Target Organ Effects: None Known
Chronic Effects: None Known

Acute Toxicity Values:	Product AS SOLD
Oral LD_{50}	LD50 (Rat, male and female): 1,140 mg/kg
Dermal LD_{50}	LD50 (Rat, male and female): > 250 mg/kg
Inhalation (Vapor) LC_{50}	LC50 (Rat, male and female): 0.59 mg/l Test atmosphere: vapour Acute toxicity estimate: 40 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method

[redacted]

12. Ecological Information:

	Product as Sold	Product at Use Dilution
Persistence and Degradability:	Not Applicable	Product is Readily Biodegradable
Bio Accumulative Potential:	Not Applicable	Not Available
Mobility in Soil:	Not Applicable	Not Available
Aquatic Toxicity:	Not Applicable	Not Available

13. Disposal Considerations:

Product as Sold

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional office for guidance.

Product at Use Dilution

Material that cannot be used during normal use should be disposed of in accordance with all applicable local, state and federal regulations. Waste from normal cleaning procedures may be disposed of in a sanitary sewer depending on the materials and/or contaminants being cleaned as well as local, state and federal sewer regulations.

14. Transportation Information:

	Product as Sold
UN Number:	UN1903
Shipping Name:	Disinfectant, Liquid, Corrosive,N.O.S.(Quaternary Ammonium) Limited Quantity for 1 G container or less.
Transport Hazard Class:	8
Packing Group:	III
Marine Pollutant:	NO

[redacted]

15. Regulatory Information:

TSCA Status: All ingredients listed

Clean Water Act: Edetic Acid (60-00-4) is listed in the Clean Water Act as a Hazardous Substance.

Clean Air Act: None of the chemicals in this product are listed under the CAA

CERCLA Reportable Quantity: Edetic Acid (60-00-4), > 5000 lbs.

SARA Title III Information:

Section 302 Extremely Hazardous Chemicals: None Listed

Section 311 / 312 Hazard Category: Immediate Health

Section 313 Toxic Chemicals None Listed

State Regulations: None

International Regulations: None

California Cleaning Product Right to Know Act of 2017 (SB 258)

Raw Material	CAS No	Function	List
Water	7732-18-5	Diluent	Not Applicable
Quaternary Ammonium Compounds	5538-94-3, 68391-01-5, 61789-18-2	Disinfectant	Not Applicable
Ethylenediamine Tetraacetate	64-02-8	Chelator	Not Applicable
Fragrance	Withheld	Fragrance	Not Applicable
Ethylenediamine Tetraacetic Acid	60-00-4	Chelator	Not Applicable

Colorant	Withheld	Dye	Not Applicable

16. Other Information:

Prepared By: Multi-Clean Regulatory

Telephone Number: 651-481-1900

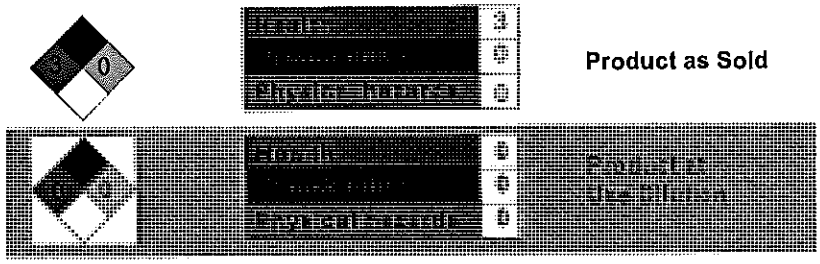
Revision Date: 1/28/2025

Supersedes: 11/9/2022

This SDS applies to the following Part Numbers:

902492
902493
902495
902497
902494

The information contained herein is based on data considered accurate; however no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. The company assumes no responsibility for personal injury or property damage to vendees, users, or third parties caused by the material. Such vendees or users assume all risks associated with the use of the material.



Product as Sold

Safety Data Sheet

1 – PRODUCT IDENTIFICATION

PRODUCT NAME: ..... Ultra Line Stripper
PRODUCT TYPE: ..... Alkaline liquid cleaning compound
PRODUCT NUMBER: ..... UL1100XXX (Last 3 characters vary with the packaging)
CONTROL NUMBER: UL1100XXX

COMPANY: ..... **Simoniz USA, Inc.**
201 Boston Turnpike
Bolton, CT 06043
1-800-227-5536
www.simoniz.com

EMERGENCY PHONE: ..... (800) 255-3924 (CHEM-TEL)

2 – HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE/MIXTURE: ....Skin Corrosion (1) Serious Eye Damage (1) Specific Target Organ Toxicity, Single Exposure; Respiratory Tract Irritation (3) Acute Toxicity, Oral (4)

SYMBOLS: .....



SIGNAL WORD: ..... DANGER!
HAZARD STATEMENT: ..... Causes severe skin burns and eye damage. May cause respiratory irritation. Harmful if swallowed.

PRECAUTIONARY STATEMENTS:

PREVENTION: ..... Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Do not touch eyes. Wear protective gloves / protective clothing / eye protection / face protection. Avoid breathing dust / fume / gas / mist / vapors / spray. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product.

RESPONSE: ..... IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical help. IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help immediately. Specific treatment (see First AID section). IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get emergency medical help.

STORAGE: ..... Store locked up. Store in a well-ventilated place. Keep container tightly closed.

DISPOSAL: ..... Dispose of container and contents in accordance with local regulations.

3 – COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	C.A.S. NUMBER
Water	7732-18-5
2-Butoxy Ethanol	111-76-2
2-Aminoethanol	141-43-5
Potassium Hydroxide	1310-58-3
Sodium Xylenesulfonate	1300-72-7
Alcohols, C_{9-11}, ethoxylated	68439-46-3

Percentages of ingredients are being withheld as trade secret information. This information will be disclosed as necessary to authorized individuals

4 – FIRST-AID MEASURES

BREATHING (INHALATION): Maintain adequate ventilation in work area. If signs of discomfort or irritation occur, remove to fresh air. If symptoms persist or burns occur, get immediate medical attention!

SWALLOWING (INGESTION): DO NOT INDUCE VOMITING! Drink a large quantity of water or milk. Do not attempt to give liquids to an unconscious person. Get immediate medical attention!

EYES: Flush eyes with a large quantity of fresh water for at least 15 minutes. Apply ice compresses and get immediate emergency medical attention by an eye specialist! It may be necessary to bring person to a hospital emergency room.

SKIN (DERMAL): Flush from skin and clothing with large quantity of fresh water for at least 15 minutes. If burns occur or irritation persists, get immediate medical attention! Wash contaminated clothing before reuse.

5 – FIRE-FIGHTING MEASURES

FLASHPOINT: This product is non-flammable.

EXTINGUISHING MEDIA: Use extinguishing media suitable for materials already burning.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters working in areas where this product is present should be equipped with an approved, fully enclosed SCBA.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Do NOT use water on undiluted product.

6 – ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES: Dike to prevent spillage into streams or sewer systems. Consult local, state and federal authorities.

WASTE DISPOSAL: As recommended by local, state and federal authorities.

7 – HANDLING and STORAGE

STORAGE: ..... Store in a cool, well-ventilated area. Avoid overheating or freezing. Keep container tightly closed. Store locked up. Do NOT store this product in an unmarked container.

HANDLING: ..... Wear eye and hand protection if product is likely to splash. Do NOT transfer this product to an unmarked container. Spilled material is slippery. Keep away from children!

8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION: Not usually needed in well-ventilated areas. If needed, use a NIOSH approved respirator.

PROTECTIVE CLOTHING: ..... Nitrile or PVC gloves, and chemical splash goggles.

ADDITIONAL MEASURES: ..... Under normal use according to label instructions, special protection should not be necessary. Wear eye and hand protection if product is likely to splash. Keep away from children!

INGREDIENT	C.A.S. NUMBER	OSHA PEL*
Water	7732-18-5	No limits established
2-Butoxy Ethanol	111-76-2	50 ppm, 240 mg/m^3
2-Aminoethanol	141-43-5	3 ppm, 6 mg/m^3
Potassium Hydroxide	1310-58-3	NIOSH: 2 mg/m^3 (C)
Sodium Xylenesulfonate	1300-72-7	No limits established
Alcohols, $C_{9\text{-}11}$, ethoxylated	68439-46-3	No limits established

*When OSHA 8-hour TWA; STEL; and Ceiling PEL values are not established, NIOSH REL and ACGIH TLV© values will be shown and indicated as such.

9 – PHYSICAL / CHEMICAL PROPERITES

APPEARANCE & ODOR: ..... Purple transparent liquid, rose scented.
ODOR THRESHOLD: ..... N/A
pH: ..... Greater than 13.4
MELTING POINT: ..... N/A
FREEZING POINT: ..... N/A
BOILING POINT: ..... 210 degrees F.
BOILING POINT RANGE: ..... N/A
FLASHPOINT: ..... This product is non-flammable.
EVAPORATION RATE: ..... N/A
FLAMMABILITY (solid/gas): ..... N/A
EXPLOSION LIMITS: ..... N/A
VAPOR PRESSURE: ..... N/A
VAPOR DENSITY (AIR=1): ..... Greater than 1.
SPECIFIC GRAVITY: 1.01
SOLUBILITY IN WATER: ..... Completely soluble.
PARTITION COEFFICIENT: ..... N/A
AUTO-IGNITION TEMPERATURE: ..... N/A
DECOMPOSITION TEMPERATURE: ..... N/A
VISCOSITY: ..... Water thin

10 – STABILITY and REACTIVITY

STABILITY: ..... Stable under normal conditions.
HAZARDOUS DECOMP.: ..... This product not known to polymerize.
INCOMPATIBILITY: ..... Do not mix with caustic material or other detergents.

11 – TOXICOLOGICAL INFORMATION

ROUTE(S) OF ENTRY: ..... Absorption through skin and eyes. Ingestion. Inhalation.
LISTED CARCINOGEN: ..... None over 0.1%.
MEDICAL CONDITION AGGRAVATED: ..... May aggravate pre-existing dermatitis, and asthama or other respiratory disorders.
INHALATION: ..... Undiluted product can cause irritation and burns to mouth, nose, throat and respiratory tract if inhaled. Prolonged or significant exposure to fumes may result in asthama-like symptoms.
INGESTION: ..... Undiluted product can be harmful to health if ingested, and can cause irritation, burns and other serious damage to mouth, esophagus and stomach if swallowed.
EYES: ..... Undiluted product can cause serious irritation, redness, burns, blindness or other permanent damage if not immediately flushed from eyes.
SKIN (DERMAL): ..... Undiluted product can cause severe irritation, redness and burns to the exposed area if not immediately flushed from skin.
ACUTE TOXICITY* (ORAL): ..... 1,831.72 mg/kg
ACUTE TOXICITY* (DERMAL): ..... >5,000 mg/kg
ACUTE TOXCITY* (INHALATION): ..... >20,000 ppm V (Gas), >20 mg/l (Vapor), >5 mg/l (Dust)

*Determined using the additivity formula for mixtures (GHS Purple Book, 3.1.3.6)

12 – ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND DISTRIBUTION: N/A

13 – DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: ..... As recommended by local, state and federal authorities.

14 – TRANSPORTATION INFORMATION

DOT:
PROPER SHIPPING NAME: ..... Compounds, cleaning liquid (contains Ethanolamine, Potassium hydroxide)
HAZARD CLASS: 8
UN/NA NUMBER: ..... NA 1760
PACKAGING GROUP : II

IMDG CODE:
PROPER SHIPPING NAME:..... CORROSIVE LIQUID, N.O.S. (ETHANOLAMINE, POTASSIUM HYDROXIDE)
HAZARD CLASS:..... 8
UN/NA NUMBER:..... UN 1760
PACKAGING GROUP :..... II

15 – REGULATIONS

California Proposition 65:..... ⚠ **WARNING:** This product can expose you to chemicals including Diethanolamine, which are known to the State of California to cause cancer, and Ethylene Oxide, which are known to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

INGREDIENT	C.A.S. NUMBER	Listed Date
Ethylene Oxide	100-41-4	07/01/1987 (Cancer) 08/07/2009 (Developmental Toxicity & Male Reproductive Toxicity) 02/27/1987 (Female Reproductive Toxicity)
Diethanolamine	111-42-2	06/22/2012 (Cancer)
Nitrilotriacetic Acid, Trisodium Salt Monohydrate	18662-53-8	04/01/1989 (Cancer)
Ethylbenzene	100-41-4	06/11/2004 (Cancer)

Contents of this SDS comply with the OSHA Hazard Communication Standard 29CFR 1910.1200

16 – OTHER INFORMATION

NFPA HEALTH:..... 3
NFPA FLAMMABILITY:..... 1
NFPA REACTIVITY:..... 1
NFPA OTHER:..... Alkali

ADDITIONAL:..... The information contained in this SDS is based on the data available to us from sources we believe to be reliable. No warranty or guaranty expressed or implied is made regarding the accuracy of this data or the results obtained from the reliance on this data. The manufacturer assumes no responsibility for injury from the use of this product. Be safe–read this product safety information and pass it on to all persons who may be exposed to this product. Federal law requires it. This product and/or all of its components are either included on or exempt from the TSCA Inventory of Chemical Substances.

REVISION DATE:..... 12/11/2023

Safety Data Sheet

1 – PRODUCT IDENTIFICATION

PRODUCT NAME: ..... Wet Look Plus
PRODUCT TYPE: ..... Liquid Acrylic Floor Finish
PRODUCT NUMBER: ..... CS0750XXX (Last 3 characters vary with the packaging)
CONTROL NUMBER: CS0750XXX
PRODUCT TYPE: ..... Liquid Acrylic Floor Finish

COMPANY: ..... **Simoniz USA, Inc.**
201 Boston Turnpike
Bolton, CT 06043
1-800-227-5536
www.simoniz.com
EMERGENCY PHONE: ..... (800) 255-3924 (CHEM-TEL)

2 – HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE/MIXTURE: ..... Skin Irritation (2) Eye Irritation (2B) Skin Sensitizer (1B)

SYMBOLS: .....



SIGNAL WORD: ..... WARNING!
HAZARD STATEMENT: ..... Causes skin irritation. Causes eye irritation. May cause an allergic skin reaction.
PRECAUTIONARY STATEMENTS:
PREVENTION: ..... Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapours/spray. Contaminated work clothing should not be allowed out of the workplace.
RESPONSE: ..... IF ON SKIN: Wash with plenty of water and soap. Specific treatment (see First AID Section on this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If skin irritation or a rash occurs: Get medical advice/attention.
STORAGE: ..... Store in a dry place. Store in a closed container.
DISPOSAL: ..... Dispose of container and contents in accordance with local regulations.

3 – COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	C.A.S. NUMBER
Water	7732-18-5
Acrylate Copolymer	Trade Secret
Diethylene Glycol Ethyl Ether	111-90-0
Tributoxy Ethyl Phosphate	78-51-3

Percentages of ingredients are being withheld as trade secret information. This information will be disclosed as necessary to authorized individuals

4 – FIRST-AID MEASURES

BREATHING (INHALATION): ... If victim shows signs of discomfort or irritation, remove to fresh air. If symptoms persist, get immediate medical attention.

SWALLOWING (INGESTION): . DO NOT INDUCE VOMITING! Drink a large quantity of water or milk. Do not attempt to give liquids to an unconscious person. Get immediate medical attention!

EYES: ..... Flush eyes with a large quantity of fresh water for at least 15 minutes. If irritation persists, consult a physician..

SKIN (DERMAL): ..... Flush from skin and clothing with large amounts of fresh water. If irritation persists, consult physician. Wash contaminated clothing before wearing.

5 – FIRE-FIGHTING MEASURES

FLASHPOINT:..... This product is non-flammable.

EXTINGUISHING MEDIA:..... This product is non-flammable. Use extinguishing media suitable for materials already burning.

SPECIAL FIRE FIGHTING PROCEDURES: .....Firefighters working in areas where this product is present should be equipped with an approved, fully enclosed SCBA.

UNUSUAL FIRE AND EXPLOSION HAZARDS:.....None known.

6 – ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES: ..... Dike to prevent spillage into streams or sewer systems. Consult local, state and federal authorities.

WASTE DISPOSAL: ..... As recommended by local, state and federal authorities.

7 – HANDLING and STORAGE

STORAGE:..... Store in a cool, well ventilated area. Avoid overheating or freezing.

HANDLING:..... Do not place this product in an unmarked container. Avoid eye contact. Spilled material is slippery.

8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION: Not usually needed. Vapors not normally harmful.
PROTECTIVE CLOTHING:..... Special protection not usually needed. Wear eye protection if product is likely to splash.
ADDITIONAL MEASURES: ..... Do not place this product in an unmarked container. Avoid eye contact. Spilled material is slippery.

INGREDIENT	C.A.S. NUMBER	PEL
Water	7732-18-5	No limits established
Acrylate Copolymer	Trade Secret	No limits established
Diethylene Glycol Ethyl Ether	111-90-0	No limits established
Tributoxy Ethyl Phosphate	78-51-3	0.5mg/m3 TWA

9 – PHYSICAL / CHEMICAL PROPERITES

APPEARANCE & ODOR: ..... White opaque liquid. No significant odor.
ODOR THRESHOLD: ..... N/A
pH:..... 8.0-9.0
MELTING POINT: ..... 210 degrees F.
FREEZING POINT: ..... N/A
BOILING POINT:..... 210 degrees F.
BOILING POINT RANGE:..... N/A
FLASHPOINT:..... This product is non-flammable.
EVAPORATION RATE:..... N/A
FLAMMABILITY (solid/gas):.... N/A
EXPLOSION LIMITS:..... N/A
VAPOR PRESSURE: ..... N/A
VAPOR DENSITY (AIR=1):..... Greater than 1.
SPECIFIC GRAVITY: 1.02
SOLUBILITY IN WATER: ..... Completely soluble.
PARTITION COEFFICIENT: ..... N/A
AUTO-IGNITION TEMPERATURE:.....N/A
DECOMPOSITION TEMPERATURE: .....N/A
VISCOSITY: ..... Water thin

10 – STABILITY and REACTIVITY

STABILITY:..... Stable under normal conditions.
HAZARDOUS DECOMP.:..... This product not known to polymerize.
INCOMPATIBILITY:..... Do not mix with other chemicals.

11 – TOXICOLOGICAL INFORMATION

ROUTE(S) OF ENTRY:..... Ingestion. Not likely to be inhaled in dangerous amounts.
LISTED CARCINOGEN: ..... None over 0.1%. Not listed by IARC, NTP or OSHA.
MEDICAL CONDITION AGGRAVATED:.....May aggravate pre-existing dermatitis.
INHALATION:..... Not likely to be inhaled in hazardous amounts. Maintain adequate ventilation in the work area.
INGESTION:..... This material can cause irritation to the stomach and esophagus if ingested.
EYES: ..... May cause eye irritation.
SKIN (DERMAL): ..... Not likely to irritate. Prolonged exposure to undiluted product may cause irritation.
ACUTE TOXICITY* (ORAL):..... .....>5000 mg/kg
ACUTE TOXICITY* (DERMAL):.. .....>5000 mg/kg
ACUTE TOXCITY* (INHALATION):.....>20,000 ppm V (Gas), >20 mg/l (Vapor), >5 mg/l (Dust)

*Determined using the additivity formula for mixtures (GHS Purple Book, 3.1.3.6)

12 – ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND DISTRIBUTION: N/A

13 –DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: ..... As recommended by local, state and federal authorities.

14 – TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:..... Not D.O.T. regulated.
HAZARD CLASS:.....
UN/NA NUMBER: .....
PACKAGING GROUP :.....

15 - REGULATIONS

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29CFR 1910.1200

16 – OTHER INFORMATION

NFPA HEALTH: 1
NFPA FLAMMABILITY:..... 0
NFPA REACTIVITY:..... 0
NFPA OTHER: ..... None

ADDITIONAL:..... The information contained in this SDS is based on the data available to us from sources we believe to be reliable. No warranty or guaranty expressed or implied is made regarding the accuracy of this data or the results obtained from the reliance on this data. The manufacturer assumes no responsibility for injury from the use of this product. Be safe- read this product safety information and pass it on to all persons who may be exposed to this product. Federal law requires it. This product and/or all of its components are either included on or exempt from the TSCA Inventory of Chemical Substances.

REVISION DATE:..... 07/01/2022

Diversey
A SOLENIS COMPANY

FINAL STEP® 512 Sanitizer

Revision: 2024-07-31

Version: 03.0

1. IDENTIFICATION

Product name: FINAL STEP® 512 Sanitizer
SDS #: MS0800593
Recommended use:
- Industrial/Institutional
- Sanitizer
- This product is intended to be diluted prior to use

Uses advised against: Uses other than those identified are not recommended

Manufacturer, importer, supplier:
US Headquarters
Diversey, Inc.
1300 Altura Rd., Suite 125
Fort Mill, SC 29708
Phone: 1-888-352-2249
SDS Internet Address: https://sds.diversey.com

Emergency telephone number: 1-800-851-7145; 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

Classification for the undiluted product
Skin corrosion, Category 1C
Serious eye damage, Category 1

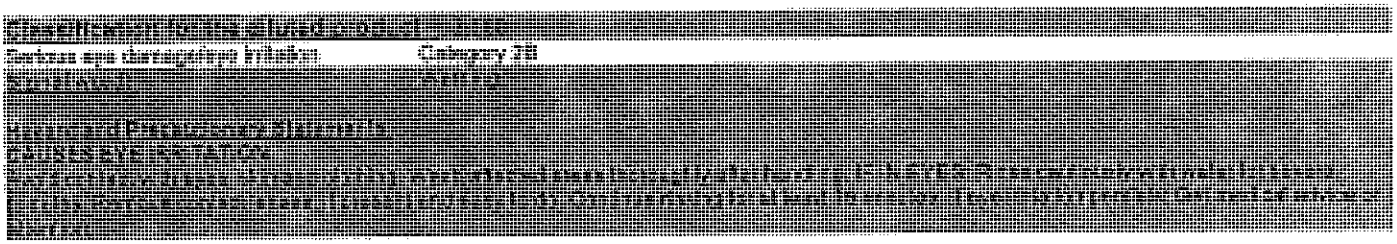


Signal word: Danger.

Hazard Statements
CAUSES SEVERE SKIN BURNS AND SERIOUS EYE DAMAGE.

Precautionary Statements
Causes burns/ serious damage to mouth, throat and stomach. Keep container tightly closed. Avoid contact with eyes, skin and clothing. Wash affected areas thoroughly after handling. Wear protective gloves, protective clothing and eye or face protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water for at least 15 minutes. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call a Poison Center (1-800-851-7145) or physician. Dispose of in accordance with all federal, state and local applicable regulations. SUPPLEMENTAL INFORMATION:. Mix only with water. DO NOT MIX WITH BLEACH OR ANY OTHER PRODUCT OR CHEMICAL. Can react to release chlorine gas.

Health hazards not otherwise classified (HHNOC) - Not applicable
Physical hazards not otherwise classified (PHNOC) - Not applicable



3. COMPOSITION/INFORMATION ON INGREDIENTS

Classified Ingredients

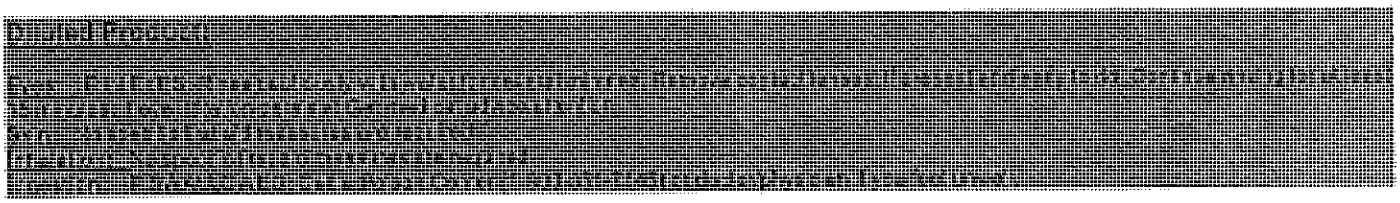
Ingredient(s)	CAS #	Weight %
n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride	68956-79-6	3 - 7%
n-Alkyl (60% C14, 30% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chloride	68391-01-5	3 - 7%
Ethyl alcohol	64-17-5	0.5 - 1.5%
Amines, C12-18-alkyldimethyl	68391-04-8	> 0.1 - < 1%

4. FIRST AID MEASURES

Undiluted Product:

Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes.
Skin: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water for at least 15 minutes. Wash with plenty of water for at least 15 minutes.
Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Ingestion: IF SWALLOWED: Rinse mouth. DO NOT induce vomiting unless directed to do so by medical personnel. Drink a cupful of milk or water.

Most Important Symptoms/Effects: No information available.
Immediate medical attention and special treatment needed Not applicable.
Aggravated Medical Conditions: Individuals with chronic respiratory disorders such as asthma, chronic bronchitis, emphysema, etc., may be more susceptible to irritating effects.



5. FIRE-FIGHTING MEASURES

Specific methods: No special methods required
Suitable extinguishing media: The product is not flammable. Extinguish fire using agent suitable for surrounding fire.
Specific hazards: Corrosive material (See sections 8 and 10).

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Extinguishing media which must not be used for safety reasons: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Put on appropriate personal protective equipment (see Section 8.).
Environmental precautions and clean-up methods: Clean-up methods - large spillage. Material is toxic to fish. Do not discharge into lakes, streams, ponds, or public water unless in accordance with an NPDES permit. Prevent product from entering drains. Water runoff can cause environmental damage. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Do not taste or swallow. Product residue may remain on/in empty containers. All precautions for handling the product must be used in handling the empty container and residue. Avoid breathing vapors or mists. Use only with adequate ventilation. Remove and wash contaminated clothing and footwear before re-use. Mix only with water. DO NOT MIX WITH BLEACH OR ANY OTHER PRODUCT OR CHEMICAL. Can react to release chlorine gas. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage: Keep tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

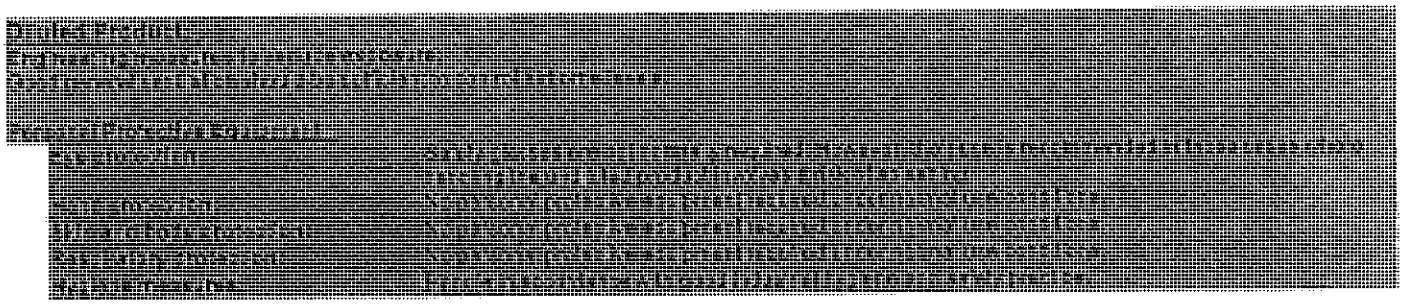
Ingredient(s)	ACGIH	OSHA
Ethyl alcohol	1000 ppm (STEL)	1000 ppm (TWA) 1900 mg/m³ (TWA)

Undiluted Product:

Engineering measures to reduce exposure:
Good general ventilation should be sufficient to control airborne levels.

Personal Protective Equipment
It is the responsibility of the employer to determine the potential risk of exposure to hazardous chemicals for employees in the workplace in order to determine the necessity, selection, and use of personal protective equipment.

Eye protection:	Chemical-splash goggles.
Hand protection:	Chemical-resistant gloves.
Skin and body protection:	Protective footwear. Wear suitable protective clothing.
Respiratory protection:	No special requirements under normal use conditions. If aerosols, mists, or vapors are not adequately controlled by ventilation, use appropriate respiratory protection to avoid over-exposure.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid
Evaporation Rate: No information available
Odor threshold: No information available.
Melting point/freezing point (°C): Not determined
Autoignition temperature: No information available
Solubility in other solvents: No information available
Density: 0.99 Kg/L
Bulk density: No information available
Flash point (°F): > 200 °F > 93 °C
Kinematic viscosity mPa.s
0
VOC: 1.3 % *
Flammability (Solid or Gas): Not applicable
Sustained combustion: The product does not sustain combustion
Explosion limits: - upper: Not determined **- lower:** Not determined

Color: Clear , Red
Odor: Quaternary
Boiling point/range: Not determined
Decomposition temperature: Not determined
Solubility: Completely Soluble
Relative Density (relative to water): 0.99
Vapor density: No information available
Vapor pressure: No information available.
Partition coefficient (n-octanol/water): No information available
Elemental Phosphorus: 0.00 % by wt.

pH: ≈ 7.9
Corrosion to metals: Not corrosive to metals

Dilution pH: ≈ 7
Dilution Flash Point (°F): > 200 °F > 93.4 °C
VOC % by wt. at use dilution: 0.008 %

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Reactivity:	Not Applicable
Stability:	The product is stable
Possibility of hazardous reactions:	None known
Hazardous decomposition products:	None reasonably foreseeable.
Materials to avoid:	Oxidizing agents. Anionic surfactant. Do not mix with chlorinated products (such as bleach).
Conditions to avoid:	None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
Skin contact, Inhalation, Ingestion, Eye contact

Delayed, immediate, or chronic effects and symptoms from short and long-term exposure
Skin contact: Corrosive. Causes severe burns. Symptoms may include burns, blisters, redness and pain (which may be delayed).
Eye contact: Corrosive. Causes serious eye damage. Symptoms may include pain, burning sensation, redness, watering, blurred vision or loss of vision.
Ingestion: Causes burns/ serious damage to mouth, throat and stomach. Symptoms may include stomach pain and nausea.
Inhalation: May cause irritation and corrosive effects to nose, throat and respiratory tract. Symptoms may include coughing and difficulty breathing.
Sensitization: No known effects.
Target Organs (SE): None known
Target Organs (RE):

Numerical measures of toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Persistence and Degradability: No information available.

Bioaccumulation: No information available.

Mobility: No information available.

Other adverse effects No other adverse effects known.

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food, or feed by storage or disposal.

Waste from residues / unused products (undiluted product):
This product, as sold, if discarded or disposed, is not a hazardous waste according to Federal regulations (40 CFR 261). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the waste solution meets RCRA criteria for hazardous waste. Dispose in compliance with all Federal, state, provincial, and local laws and regulations.

Pesticide Storage:
Refer to product label.

Pesticide Disposal:
Refer to product label.

Container Disposal:
Refer to product label.

RCRA Hazard Class (undiluted product): Not Regulated.
RCRA Hazard Class (diluted product): Not Regulated.

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: The information provided below is the full transportation classification for this product. This description does not account for the package size(s) of this product, that may fall under a quantity exception, according to the applicable transportation regulations. When shipping dangerous goods, please consult with your internal, certified hazardous materials specialist to determine if any exceptions can be applied to your shipment.

DOT (Ground) Bill of Lading Description: UN3267, CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., (quaternary ammonium compounds), 8, III

IMDG (Ocean) Bill of Lading Description: UN3267, CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., (quaternary ammonium compounds), 8, III

15. REGULATORY INFORMATION

International Inventories at CAS# Level

TSCA	All components are listed or otherwise exempt
DSL	All components are listed or otherwise exempt

EPA Reg. No. : 70627-63
This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

DANGER: CORROSIVE. Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through the skin. Do not get into eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves and protective clothing when handling. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse. PHYSICAL OR CHEMICAL HAZARDS: Do not use or store near heat or open flame. Do not mix with oxidizers, anionic soaps and detergents. ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic invertebrates. For Institutional Use.

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride	68956-79-6	3 - 7%			
n-Alkyl (60% C14, 30% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chloride	68391-01-5	3 - 7%			
Ethyl alcohol	64-17-5	0.5 - 1.5%			
Amines, C12-18-alkyldimethyl	68391-04-8	> 0.1 - < 1%			

Canadian Regulations

Ingredient(s)	CAS #	NPRI
Ethyl alcohol	64-17-5	X

16. OTHER INFORMATION

NFPA (National Fire Protection Association)
Rating Scale: (Low Hazard) 0 - 4 (Extreme Hazard)

Health 3
Flammability 0
Instability 0
Special Hazards -

[redacted]

Revision: 2024-07-31
Version: 03.0

Reason for revision:	Not applicable
Prepared by:	North American Regulatory Affairs
Additional advice:	• Does not contain an added fragrance

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Diversey
A SOLENIS COMPANY

Safety Data Sheet

According to Regulation (EC) No 1907/2006

Suma Calc D5

Revision: 2025-05-19 **Version:** 05.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Trade name: Suma Calc D5

UFI: 1YRK-219H-500X-YN78

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product use:	Descaling agent. For professional use only.
Uses advised against:	Uses other than those identified are not recommended.

SWED - Sector-specific worker exposure description :
AISE_SWED_PW_8a_1
AISE_SWED_PW_4_1
AISE_SWED_PW_10_1
AISE_SWED_PW_11_1
AISE_SWED_PW_19_1

1.3 Details of the supplier of the safety data sheet
Diversey Europe Operations BV, De Corridor 4, 3621ZB Breukelen (Maarssenbroeksedijk 2, 3542DN Utrecht), The Netherlands

Contact details
Diversey Ltd
Weston Favell Centre, Northampton NN3 8PD, United Kingdom
Tel: 01604 405311, Fax: 01604 406809
Regulatory Email: customerservice.uk@solenis.com

1.4 Emergency telephone number
Seek medical advice (show the label or safety data sheet where possible)
For medical or environmental emergency only:
call 0800 052 0185

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Skin corrosion, Category 1B (H314)
Serious eye damage, Category 1 (H318)
Corrosive to metals, Category 1 (H290)

2.2 Label elements



Signal word: Danger.

Contains phosphoric acid (Phosphoric Acid)

Hazard statements:
H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.

Precautionary statements:
P280 - Wear protective gloves, protective clothing and eye or face protection.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTRE, doctor or physician.

2.3 Other hazards
No other hazards known.

Regulated explosives precursor - Control of Poisons and Explosives Precursors Regulations 2015

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Ingredient(s)	EC number	CAS number	REACH number	Classification	Notes	Weight percent
phosphoric acid	231-633-2	7664-38-2	01-2119485924-24	Skin corrosion, Category 1B (H314) Acute toxicity - Oral, Category 4 (H302) Serious eye damage, Category 1 (H318) Corrosive to metals, Category 1 (H290)		30-50

Specific concentration limits
phosphoric acid:
- Serious eye damage, Category 1 (H318) >= 25% > Eye irritation, Category 2 (H319) >= 10%
- Skin corrosion, Category 1B (H314) >= 25% > Skin irritation, Category 2 (H315) >= 10%

Workplace exposure limit(s), if available, are listed in subsection 8.1.
ATE, if available, are listed in section 11.
[4] Exempted: polymer. See Article 2(9) of Regulation (EC) No 1907/2006.
For the full text of the H and EUH phrases mentioned in this Section, see Section 16..

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: If unconscious place in recovery position and seek medical advice. Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator.

Inhalation: Remove person to fresh air and keep comfortable for breathing. Get medical attention or advice if you feel unwell.

Skin contact: Wash skin with plenty of lukewarm, gently flowing water for at least 30 minutes. Take off immediately all contaminated clothing and wash it before reuse. Immediately call a POISON CENTRE, doctor or physician.

Eye contact: Hold eyelids apart and flush eyes with plenty of lukewarm water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE, doctor or physician.

Ingestion: Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Keep at rest. Immediately call a POISON CENTRE, doctor or physician.

Self-protection of first aider: Consider personal protective equipment as indicated in subsection 8.2.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: No known effects or symptoms in normal use.

Skin contact: Causes severe burns.

Eye contact: Causes severe or permanent damage.

Ingestion: Ingestion will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.

4.3 Indication of any immediate medical attention and special treatment needed
No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture
No special hazards known.

5.3 Advice for firefighters
As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear suitable protective clothing. Wear eye/face protection. Wear suitable gloves.

6.2 Environmental precautions
Dilute with plenty of water. Do not allow to enter drainage system, surface or ground water.

6.3 Methods and material for containment and cleaning up
Dyke to collect large liquid spills. Use neutralising agent. Absorb with liquid-binding material (sand, diatomite, universal binders). Do not place spilled materials back into the original container. Collect in closed and suitable containers for disposal.

6.4 Reference to other sections
For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Measures to prevent fire and explosions:
No special precautions required.
Measures required to protect the environment:
For environmental exposure controls see subsection 8.2.
Advice on general occupational hygiene:
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless advised by Diversey. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Avoid contact with skin and eyes. Do not breathe spray. Use only with adequate ventilation. See chapter 8.2, Exposure controls / Personal protection.

7.2 Conditions for safe storage, including any incompatibilities
Store in accordance with local and national regulations. Store in a closed container. Keep only in original packaging.
For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

7.3 Specific end use(s)
No specific advice for end use available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Workplace exposure limits

Air limit values, if available:

Ingredient(s)	UK - Long term value(s)	UK - Short term value(s)
phosphoric acid	1 mg/m³	2 mg/m³

Biological limit values, if available:

Recommended monitoring procedures, if available:

Additional exposure limits under the conditions of use, if available:

DNEL/DMEL and PNEC values
Human exposure
DNEL/DMEL oral exposure - Consumer (mg/kg bw)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
phosphoric acid	-	-	-	0.1

DNEL/DMEL dermal exposure - Worker

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
phosphoric acid	No data available	-	No data available	-

DNEL/DMEL dermal exposure - Consumer

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
phosphoric acid	No data available	-	No data available	-

DNEL/DMEL inhalatory exposure - Worker (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
phosphoric acid	-	-	2.92	1

DNEL/DMEL Inhalatory exposure - Consumer (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
phosphoric acid	-	-	0.73	-

Environmental exposure

Environmental exposure - PNEC

Ingredient(s)	Surface water, fresh (mg/l)	Surface water, marine (mg/l)	Intermittent (mg/l)	Sewage treatment plant (mg/l)
phosphoric acid	-	-	-	-

Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m³)
phosphoric acid	-	-	-	-

8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet.
If available, please refer to the product information sheet for application and handling instructions.
Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:

Appropriate engineering controls: If the product is diluted by using specific dosing systems with no risk of splashes or direct skin contact, the personal protection equipment as described in this section is not required.

Appropriate organisational controls: Avoid direct contact and/or splashes where possible. Train personnel.

REACH use scenarios considered for the undiluted product:

	SWED - Sector-specific worker exposure description	LCS	PROC	Duration (min)	ERC
Manual transfer and dilution	AISE_SWED_PW_8a_1	PW	PROC 8a	60	ERC8a

Personal protective equipment

Eye / face protection: Safety glasses or goggles (EN 16321). The use of a full-face shield or other full-face protection is strongly recommended when handling open containers or if splashes may occur.

Hand protection: Chemical-resistant protective gloves (EN 374). Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier. Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.
Suggested gloves for prolonged contact: Material: butyl rubber Penetration time: ≥ 480 min Material thickness: ≥ 0.7 mm
Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time: ≥ 30 min Material thickness: ≥ 0.4 mm
In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.

Body protection: Wear chemical-resistant clothing and boots in case direct dermal exposure and/or splashes may occur (EN 14605).

Respiratory protection: If exposure to liquid particles or splashes cannot be avoided use: half mask (EN 140) or full-face mask (EN 136) with particle filter P2 (EN 143) Consider specific local use conditions. In consultation with the supplier of respiratory protection equipment a different type providing similar protection may be chosen. Specific applications tools may be available to limit exposure. Please refer to the product information sheet for the possibilities. Apply technical measures to comply with the occupational exposure limits, if available.

Environmental exposure controls: Should not reach sewage water or drainage ditch undiluted or unneutralised.

Recommended safety measures for handling the diluted product:

Recommended maximum concentration (% w/w): 20

Appropriate engineering controls: Provide a good standard of general ventilation.

Appropriate organisational controls: Users are advised to consider national Occupational Exposure Limits or other equivalent values, if available.

REACH use scenarios considered for the diluted product:

	SWED	LCS	PROC	Duration (min)	ERC
Machine application Manual application by brushing, wiping or mopping	AISE_SWED_PW_10_1	PW	PROC 10	480	ERC8a
Spray application	AISE_SWED_PW_11_1	PW	PROC 11	60	ERC8a

Manual application	AISE_SWED_PW_19_1	PW	PROC 19	480	ERC8a
Automatic application in a dedicated system	AISE_SWED_PW_4_1	PW	PROC 4	480	ERC8a

Personal protective equipment
Eye / face protection: No special requirements under normal use conditions.
Hand protection: Rinse and dry hands after use. For prolonged contact protection for the skin may be necessary.
Body protection: No special requirements under normal use conditions.
Respiratory protection: Trigger spray bottle application: No special requirements under normal use conditions. Apply technical measures to comply with the occupational exposure limits, if available.

Environmental exposure controls: No special requirements under normal use conditions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
Information in this section refers to the product, unless it is specifically stated that substance data is listed

Method / remark

Physical state: Liquid
Colour: Clear , Colourless
Odour: Product specific
Odour threshold: Not applicable
Melting point/freezing point (°C): Not determined — Not relevant to classification of this product
Initial boiling point and boiling range (°C): Not determined — See substance data

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
phosphoric acid	158	Method not given	1013

Method / remark

Flammability (solid, gas): Not applicable to liquids
Flammability (liquid): Not flammable.
Flash point (°C): Not determined
Sustained combustion: Not applicable.
(UN Manual of Tests and Criteria, section 32, L.2)
Lower and upper explosion limit/flammability limit (%): Not determined

Substance data, flammability or explosive limits, if available:

Method / remark

Autoignition temperature: Not determined
Decomposition temperature: Not applicable.
pH: =< 2 (neat) — ISO 4316
Dilution pH: < 2 (20 %) — ISO 4316
Kinematic viscosity: Not determined
Solubility in / Miscibility with water: Fully miscible

Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
phosphoric acid	Soluble		

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

Method / remark

Vapour pressure: Not determined — See substance data

Substance data, vapour pressure

Ingredient(s)	Value (Pa)	Method	Temperature (°C)
phosphoric acid	4	Method not given	20

Method / remark

Relative density: ≈ 1.20 (20 °C) — OECD 109 (EU A.3)
Relative vapour density: No data available. — Not relevant to classification of this product
Particle characteristics: No data available. — Not applicable to liquids.

9.2 Other information
9.2.1 Information with regard to physical hazard classes
Explosive properties: Not explosive.
Oxidising properties: Not oxidising.

Corrosion to metals: Corrosive

9.2.2 Other safety characteristics
Acid reserve: ≈ -13.8 (g NaOH / 100g; pH=4)

SECTION 10: Stability and reactivity

10.1 Reactivity
No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability
Stable under normal storage and use conditions.

10.3 Possibility of hazardous reactions
No hazardous reactions known under normal storage and use conditions.

10.4 Conditions to avoid
None known under normal storage and use conditions.

10.5 Incompatible materials
May be corrosive to metals. Reacts with alkali. Keep away from products containing chlorine-based bleaching agents or sulphites.

10.6 Hazardous decomposition products
None known under normal storage and use conditions.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Mixture data: .

Relevant calculated ATE(s):
ATE - Oral (mg/kg): >2000

Substance data, where relevant and available, are listed below:.

Acute toxicity
Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE Oral (mg/kg)
phosphoric acid	LD_{50}	> 300-5000	Rat	OECD 423 (EU B.1 tris)		2600

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE Dermal (mg/kg)
phosphoric acid	LD_{50}	2740	Rabbit	Method not given		Not established

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
phosphoric acid	LC_{50}	850	Rat	Method not given	2

Acute inhalative toxicity, continued

Ingredient(s)	ATE - Inhalation, dust (mg/l)	ATE - Inhalation, mist (mg/l)	ATE - Inhalation, vapour (mg/l)	ATE - Inhalation, gas (mg/l)
phosphoric acid	Not established	Not established	Not established	Not established

Irritation and corrosivity
Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
phosphoric acid	Corrosive	Rabbit	OECD 404 (EU B.4)	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
phosphoric acid	Severe damage	Rabbit	Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
phosphoric acid	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
phosphoric acid	Not sensitising	Human	Human experience	

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
phosphoric acid	No data available			

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
phosphoric acid	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13) OECD 473 OECD 476 (Mouse lymphoma)	No data available	

Carcinogenicity

Ingredient(s)	Effect
phosphoric acid	No data available

Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
phosphoric acid	NOAEL	Developmental toxicity	410	Rat	OECD 422, oral	10 day(s)	No evidence for reproductive toxicity No evidence for developmental toxicity

Repeated dose toxicity

Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
phosphoric acid	NOAEL	250	Rat	OECD 422, oral		

Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
phosphoric acid		No data available				

Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
phosphoric acid		No data available				

Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
phosphoric acid			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
phosphoric acid	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
phosphoric acid	No data available

Aspiration hazard

Substances with an aspiration hazard (H304), if any, are listed in section 3.

Potential adverse health effects and symptoms
Effects and symptoms related to the product, if any, are listed in subsection 4.2.

11.2 Information on other hazards
11.2.1 Endocrine disrupting properties
Endocrine disrupting properties - Human data, if available:

11.2.2 Other information
No other relevant information available.

SECTION 12: Ecological information

12.1 Toxicity

No data is available on the mixture .

Substance data, where relevant and available, are listed below:

Aquatic short-term toxicity
Aquatic short-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
phosphoric acid	LC_{50}	138	*Gambusia affinis*	Method not given	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
phosphoric acid	EC_{50}	> 100	*Daphnia magna Straus*	OECD 202 (EU C.2)	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
phosphoric acid	EC_{50}	> 100	*Desmodesmus subspicatus*	OECD 201 (EU C.3)	72

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
phosphoric acid		No data available			

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
phosphoric acid	EC_{50}	270	*Activated sludge*	Method not given	

Aquatic long-term toxicity
Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
phosphoric acid		No data available				

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
phosphoric acid		No data available				

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw sediment)	Species	Method	Exposure time (days)	Effects observed
phosphoric acid		No data available				

Terrestrial toxicity
Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure	Effects observed

		(mg/kg dw soil)			time (days)	
phosphoric acid		No data available				

Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
phosphoric acid		No data available				

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
phosphoric acid		No data available				

Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
phosphoric acid		No data available				

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
phosphoric acid		No data available				

12.2 Persistence and degradability

Abiotic degradation

Abiotic degradation - photodegradation in air, if available:

Ingredient(s)	Half-life time	Method	Evaluation	Remark
phosphoric acid	No data available			

Abiotic degradation - hydrolysis, if available:

Ingredient(s)	Half-life time in fresh water	Method	Evaluation	Remark
phosphoric acid	No data available			

Abiotic degradation - other processes, if available:

Ingredient(s)	Type	Half-life time	Method	Evaluation	Remark
phosphoric acid		No data available			

Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT 50	Method	Evaluation
phosphoric acid					Not applicable (inorganic substance)

Ready biodegradability - anaerobic and marine conditions, if available:

Ingredient(s)	Medium & Type	Analytical method	DT 50	Method	Evaluation
phosphoric acid					No data available

Degradation in relevant environmental compartments, if available:

Ingredient(s)	Medium & Type	Analytical method	DT 50	Method	Evaluation
phosphoric acid					No data available

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
phosphoric acid	No data available		No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark

phosphoric acid	No data available			No bioaccumulation expected	

12.4 Mobility in soil
Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log Koc	Desorption coefficient Log Koc(des)	Method	Soil/sediment type	Evaluation
phosphoric acid	No data available				Potential for mobility in soil, soluble in water

12.5 Results of PBT and vPvB assessment
Substances that fulfill the criteria for PBT/vPvB, if any, are listed in section 3.

12.6 Endocrine disrupting properties
Endocrine disrupting properties - Environmental effects, if available:

12.7 Other adverse effects
No other adverse effects known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused products: The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

European Waste Catalogue: 20 01 14* - acids.

Empty packaging Recommendation: Dispose of observing national or local regulations.

Suitable cleaning agents: Water, if necessary with cleaning agent.

SECTION 14: Transport information



Land transport (ADR/RID), Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)

14.1 UN number or ID number: 1805

14.2 UN proper shipping name:
Phosphoric acid, solution

14.3 Transport hazard class(es):
Transport hazard class (and subsidiary risks): 8

14.4 Packing group: III

14.5 Environmental hazards:
Environmentally hazardous: No
Marine pollutant: No

14.6 Special precautions for user: None known.

14.7 Maritime transport in bulk according to IMO instruments: The product is not transported in bulk tankers.

Other relevant information:

ADR
Classification code: C1
Tunnel restriction code: (E)
Hazard identification number: 80

IMO/IMDG
EmS: F-A, S-B

The product has been classified, labelled and packaged in accordance with the requirements of ADR and the provisions of the IMDG Code
Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations :
- Control of Poisons and Explosives Precursors Regulations 2015
- Regulation (EC) 1907/2006 - REACH (UK amended)
- Regulation (EC) 1272/2008 - CLP (UK amended)
- Regulation (EC) 648/2004 - Detergents regulation (UK amended)
- Delegated Regulation (EU) 2017/2100 and Regulation (EU) 2018/605 (UK amended)
- Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- International Maritime Dangerous Goods (IMDG) Code

Authorisations or restrictions (Regulation (EC) No 1907/2006, Title VII respectively Title VIII): Not applicable.

Ingredients according to Detergents Regulation
non-ionic surfactants < 5 %

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) 648/2004 on detergents (UK amended). Data to support this assertion are held at the disposal of the competent authorities of the UK and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Comah - classification: Not classified

15.2 Chemical safety assessment
A chemical safety assessment has not been carried out on the mixture

SECTION 16: Other Information

The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract

SDS code: MSDS1826 **Version:** 05.0 **Revision:** 2025-05-19

Reason for revision:
This data sheet contains changes from the previous version in section(s):, 1, 9, 16

Classification procedure
The classification of the mixture is in general besed on calculation methods using substance data, as required by Regulation (EC) No 1272/2008. If for certain classifications data on the mixture is available or for example bridging principles or weight of evidence can be used for classification, this will be indicated in the relevant sections of the Safety Data Sheet. See section 9 for physical chemical properties, section 11 for toxicological information and section 12 for ecological information.

Abbreviations and acronyms:
- AISE - The International Association for Soaps, Detergents and Maintenance Products
- ATE - Acute Toxicity Estimate
- DNEL - Derived No Effect Limit
- EC50 - effective concentration, 50%
- ERC - Environmentel release categories
- EUH - CLP Specific hezard statement
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- LCS - Life cycle stage
- LD50 - Lethal Dose, 50% / Median Lethal dose
- NOAEL - No observed adverse effect level
- NOEL - No observed effect level
- OECD - Organisation for Economic Cooperation and Development
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- PROC - Process categories
- REACH number - REACH registration number, without supplier specific part
- vPvB - very Persistent and very Bioaccumulative
- H290 - May be corrosive to metals.
- H302 - Harmful if swallowed.
- H314 - Ceuses severe skin burns and eye damage.
- H318 - Causes serious eye damage.

End of Safety Data Sheet

Diversey
A SOLENIS COMPANY

Suma® Select
Rinse Aid

Revision: 2024-07-31

Version: 03.0

1. IDENTIFICATION

Product name: Suma® Select
Rinse Aid

SDS #: MS0800353

Recommended use:
- Industrial/Institutional
- Warewashing product
- This product is intended to be diluted prior to use

Uses advised against: Uses other than those identified are not recommended

Manufacturer, importer, supplier:
US Headquarters
Diversey, Inc.
1300 Altura Rd., Suite 125
Fort Mill, SC 29708
Phone: 1-888-352-2249
SDS Internet Address: https://sds.diversey.com

Canadian Headquarters
Diversey Canada, Inc.
6150 Kennedy Road Unit 3
Mississauga, Ontario L5T 2J4
Phone: 1-800-668-7171

Emergency telephone number: 1-800-851-7145; 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

Classification for the undiluted product
This product is not classified as hazardous according to OSHA 29CFR 1910.1200 (HazCom 2012-GHS) and Canadian Hazardous Products Regulations (HPR) (WHMIS 2015-GHS).
Not classified

Hazard Statements
None required.
Precautionary Statements
None required.

Health hazards not otherwise classified (HHNOC) - Not applicable
Physical hazards not otherwise classified (PHNOC) - Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Classified Ingredients

Ingredient(s)	CAS #	Weight %
Proprietary	Proprietary	3 - 7%
Alcohols, C6-C10, ethoxylated propoxylated	68987-81-5	3 - 7%
Sodium xylene sulfonate	1300-72-7	0.5 - 1.5%

4. FIRST AID MEASURES

Undiluted Product:

Eyes: Rinse with plenty of water. If irritation occurs and persists, get medical attention.
Skin: Rinse with plenty of water. Wash with plenty of water for at least 15 minutes.
Inhalation: No specific first aid measures are required.
Ingestion: IF SWALLOWED: Call a Poison Center (1-800-851-7145) or doctor/physician if you feel unwell.

Most Important Symptoms/Effects: No information available.
Immediate medical attention and special treatment needed Not applicable.

[redacted]

5. FIRE-FIGHTING MEASURES

Specific methods:	No special methods required
Suitable extinguishing media:	The product is not flammable. Extinguish fire using agent suitable for surrounding fire.
Specific hazards:	None known.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Extinguishing media which must not be used for safety reasons: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Put on appropriate personal protective equipment (see Section 8.).
Environmental precautions and clean-up methods:	Clean-up methods - large spillage. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage: Keep tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

Undiluted Product:

Engineering measures to reduce exposure:
Good general ventilation should be sufficient to control airborne levels.

Personal Protective Equipment
It is the responsibility of the employer to determine the potential risk of exposure to hazardous chemicals for employees in the workplace in order to determine the necessity, selection, and use of personal protective equipment.

Eye protection:	No personal protective equipment required under normal use conditions.
Hand protection:	No personal protective equipment required under normal use conditions.
Skin and body protection:	No personal protective equipment required under normal use conditions.
Respiratory protection:	No personal protective equipment required under normal use conditions. If aerosols, mists, or vapors are not adequately controlled by ventilation, use appropriate respiratory protection to avoid over-exposure.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.

[redacted]

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid
Evaporation Rate: No information available
Odor threshold: No information available.
Melting point/freezing point (°C): Not determined
Autoignition temperature: No information available
Solubility in other solvents: No information available
Density: 1.02 Kg/L
Bulk density: No information available
Flash point (°F): > 200.12 °F > 93.4 °C
Kinematic viscosity No information available
VOC: 0 % *
Flammability (Solid or Gas): Not applicable
Sustained combustion: Not applicable
Explosion limits: - upper: Not determined **- lower:** Not determined

Color: Clear , Blue
Odor: Surfactant
Boiling point/range: Not determined
Decomposition temperature: Not determined
Solubility: Completely Soluble
Relative Density (relative to water): 1.02
Vapor density: No information available
Vapor pressure: No information available.
Partition coefficient (n-octanol/water): No information available
Elemental Phosphorus: 0.00 % by wt.
pH: ≈ 8
Corrosion to metals: Not corrosive to metals

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products; Sections 94508

10. STABILITY AND REACTIVITY

Reactivity:	Not Applicable
Stability:	The product is stable
Possibility of hazardous reactions:	None known
Hazardous decomposition products:	None reasonably foreseeable.
Materials to avoid:	Do not mix with any other product or chemical unless specified in the use directions.
Conditions to avoid:	None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
Skin contact, Inhalation, Eye contact

Delayed, immediate, or chronic effects and symptoms from short and long-term exposure
Skin contact: May be mildly irritating to skin. Symptoms may include redness and/or transient discomfort.
Eye contact: May be mildly irritating to eyes.
Ingestion: No information available.
Inhalation: No information available.
Sensitization: No known effects.
Target Organs (SE): None known
Target Organs (RE):

Numerical measures of toxicity

ATE - Oral (mg/kg):	>2000
ATE - Dermal (mg/kg):	>2000
ATE - Inhalatory, gases (mg/l):	>20000
ATE - Inhalatory, mists (mg/l):	>5
ATE - Inhalatory, vapors (mg/l):	>20

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Persistence and Degradability: No information available.

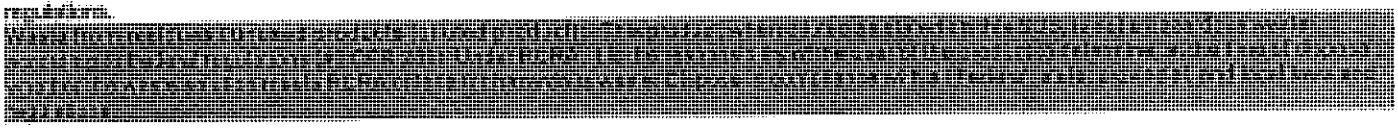
Bioaccumulation: No information available.

Mobility: No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products (undiluted product): This product, as sold, if discarded or disposed, is not a hazardous waste according to Federal regulations (40 CFR 261). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the waste solution meets RCRA criteria for hazardous waste. Dispose in compliance with all Federal, state, provincial, and local laws and regulations.



RCRA Hazard Class (undiluted product): Not Regulated
RCRA Hazard Class (diluted product): Not Regulated
Contaminated Packaging: Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: This product is not regulated for transport.

DOT (Ground) Bill of Lading Description: NOT REGULATED

IMDG (Ocean) Bill of Lading Description: NOT REGULATED

15. REGULATORY INFORMATION

International Inventories at CAS# Level

TSCA	All components are listed or otherwise exempt
DSL	All components are listed or otherwise exempt

WARNING: This product can expose you to chemicals including Ethylene oxide which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

US RIGHT TO KNOW (RTK)

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Water	7732-18-5	-	-	-	-
Polyalkylene glycol	9003-11-6	-	-	-	-
Proprietary	Proprietary	-	-	-	-
Alcohols, C6-C10, ethoxylated propoxylated	68987-81-5	-	-	-	-
Sodium xylene sulfonate	1300-72-7	-	-	-	-

CERCLA/ SARA

Canadian Regulations

16. OTHER INFORMATION

NFPA (National Fire Protection Association)
Rating Scale: (Low Hazard) 0 - 4 (Extreme Hazard)

Health 1
Flammability 0
Instability 0
Special Hazards -

Revision: 2024-07-31
Version: 03.0

Reason for revision:	Not applicable
Prepared by:	North American Regulatory Affairs
Additional advice:	• Does not contain an added fragrance

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Diversey
A SOLENIS COMPANY

Suma® Nova
Mechanical Dish Detergent

Revision: 2024-08-05 **Version:** 02.0

1. IDENTIFICATION

Product name: Suma® Nova
Mechanical Dish Detergent

SDS #: MS0801038

Recommended use:
- Dishmachine Detergent
- This product is intended to be diluted prior to use
- Industrial/Institutional

Uses advised against: Uses other than those identified are not recommended

Manufacturer, Importer, supplier:
US Headquarters
Diversey, Inc.
1300 Altura Rd., Suite 125
Fort Mill, SC 29708
Phone: 1-888-352-2249
SDS Internet Address: https://sds.diversey.com

Canadian Headquarters
Diversey Canada, Inc.
6150 Kennedy Road Unit 3
Mississauga, Ontario L5T 2J4
Phone: 1-800-668-7171

Emergency telephone number: 1-800-851-7145; 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

Classification for the undiluted product
Skin corrosion, Category 1B
Serious eye damage, Category 1
Corrosive to metals, Category 1



Signal word: **Danger.**

Hazard Statements
CAUSES SEVERE SKIN BURNS AND SERIOUS EYE DAMAGE. MAY BE CORROSIVE TO METALS.

Precautionary Statements
Causes burns/ serious damage to mouth, throat and stomach. Keep container tightly closed. Keep only in original container. Avoid contact with eyes, skin and clothing. Wash affected areas thoroughly after handling. Wear protective gloves, protective clothing and eye or face protection. IF SWALLOWED: Rinse mouth. DO NOT induce vomiting unless directed to do so by medical personnel. Drink a cupful of milk or water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water for at least 15 minutes. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call a Poison Center (1-800-851-7145) or physician. Absorb spillage to prevent material damage. Store locked up. Store in corrosive-resistant container with a resistant inner liner. Dispose of in accordance with all federal, state and local applicable regulations. SUPPLEMENTAL INFORMATION:. DO NOT MIX WITH AMMONIA, BLEACH OR OTHER CHLORINATED COMPOUNDS. Mix only with water. Can react to release hazardous gases. May vigorously react with strong alkaline products resulting in spattering and excessive heat.

Health hazards not otherwise classified (HHNOC) - Not applicable
Physical hazards not otherwise classified (PHNOC) - Not applicable

Classification for the diluted product 1:400
This product, when diluted as stated on the label, is not classified as hazardous according to OSHA 29CFR 1910.1200 (HazCom 2012-GHS) and Canadian Hazardous Products Regulations (HPR) (WHMIS 2015-GHS).

Hazard and Precautionary Statements
None required.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Classified Ingredients

Ingredient(s)	CAS #	Weight %
Sodium hydroxide	1310-73-2	7 - 13%
Sodium polyacrylate	9003-04-7	1 - 5%
Trisodium citrate	68-04-2	1 - 5%

4. FIRST AID MEASURES

Undiluted Product:

Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes.
Skin: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water for at least 15 minutes. Wash with plenty of water for at least 15 minutes.
Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Ingestion: IF SWALLOWED: Rinse mouth. DO NOT induce vomiting unless directed to do so by medical personnel. Drink a cupful of milk or water.

Most Important Symptoms/Effects: No information available.
Immediate medical attention and special treatment needed Not applicable.

Diluted Product:

5. FIRE-FIGHTING MEASURES

Specific methods: No special methods required
Suitable extinguishing media: The product is not flammable. Extinguish fire using agent suitable for surrounding fire.
Specific hazards: Corrosive material (See sections 8 and 10).

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Extinguishing media which must not be used for safety reasons: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Put on appropriate personal protective equipment (see Section 8.).
Environmental precautions and clean-up methods: Clean-up methods - large spillage. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling: Can react to release hazardous gases. May vigorously react with acids resulting in spattering and excessive heat. Do not mix with other products or chemicals except as directed on the label. Mix only with water. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Do not taste or swallow. Product residue may remain on/in empty containers. All precautions for handling the product must be used in handling the empty container and residue. Avoid breathing vapors or mists. Use only with adequate ventilation. Remove and wash contaminated clothing and footwear before re-use. Absorb spillage to prevent material damage. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage: Store in corrosive-resistant container with a resistant inner liner.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

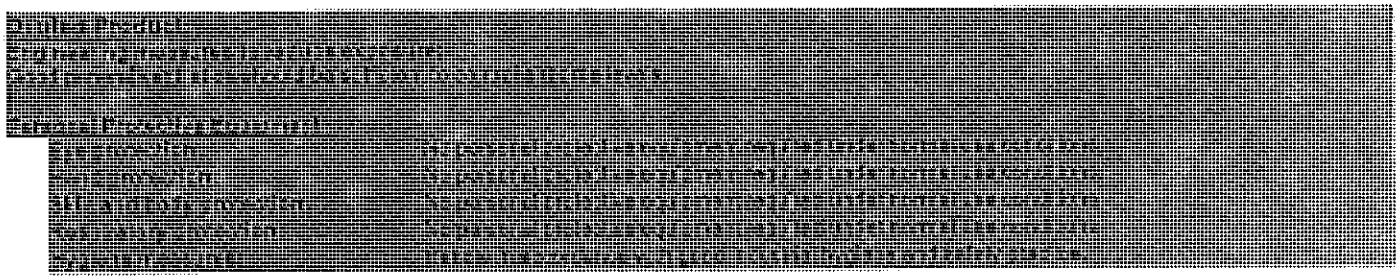
Ingredient(s)	ACGIH	OSHA
Sodium hydroxide	2 mg/m³ (Ceiling)	2 mg/m³ (TWA)

Undiluted Product:

Engineering measures to reduce exposure:
Good general ventilation should be sufficient to control airborne levels.

Personal Protective Equipment
It is the responsibility of the employer to determine the potential risk of exposure to hazardous chemicals for employees in the workplace in order to determine the necessity, selection, and use of personal protective equipment.

Eye protection:	Chemical-splash goggles.
Hand protection:	Chemical-resistant gloves.
Skin and body protection:	Protective footwear. Wear suitable protective clothing.
Respiratory protection:	No personal protective equipment required under normal use conditions. If aerosols, mists, or vapors are not adequately controlled by ventilation, use appropriate respiratory protection to avoid over-exposure.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid
Evaporation Rate: No information available
Odor threshold: No information available.
Melting point/freezing point (°C): Not determined
Autoignition temperature: No information available
Solubility in other solvents: No information available
Density: 1.237 Kg/L
Bulk density: No information available
Flash point (°F): > 200.1 °F > 93.4 °C
Kinematic viscosity mPa.s
10
VOC: 0 % *
Flammability (Solid or Gas): Not applicable
Sustained combustion: Not applicable
Explosion limits: - upper: Not determined **- lower:** Not determined

Color: Clear , Red
Odor: Product specific
Boiling point/range: Not determined
Decomposition temperature: Not determined
Solubility: Completely Soluble
Relative Density (relative to water): 1.24
Vapor density: No information available
Vapor pressure: No information available.
Partition coefficient (n-octanol/water): No information available
Elemental Phosphorus: 0.00 % by wt.

pH: 13.9
Corrosion to metals: Metal corrosive

Dilution pH: 11.5
Dilution Flash Point (°F): > 200.1 °F > 93.4 °C
VOC % by wt. at use dilution: 0 %

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Reactivity:	Not Applicable
Stability:	The product is stable
Possibility of hazardous reactions:	May vigorously react with acids resulting in spattering and excessive heat.
Hazardous decomposition products:	None reasonably foreseeable.
Materials to avoid:	Acids. Strong acids. Do not mix with any other product or chemical unless specified in the use directions.
Conditions to avoid:	None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
Skin contact, Inhalation, Ingestion, Eye contact

Delayed, immediate, or chronic effects and symptoms from short and long-term exposure
Skin contact: Corrosive. Causes severe burns. Symptoms may include burns, blisters, redness and pain (which may be delayed).
Eye contact: Corrosive. Causes serious eye damage. Symptoms may include pain, burning sensation, redness, watering, blurred vision or loss of vision.
Ingestion: Causes burns/ serious damage to mouth, throat and stomach. Symptoms may include stomach pain and nausea.
Inhalation: May cause irritation and corrosive effects to nose, throat and respiratory tract. Symptoms may include coughing and difficulty breathing.
Sensitization: No known effects.
Target Organs (SE): None known
Target Organs (RE):

Numerical measures of toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Persistence and Degradability: No information available.

Bioaccumulation: No information available.

Mobility: No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products (undiluted product): This product, as sold, if discarded or disposed, is a hazardous waste according to Federal regulations (40 CFR 261). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the waste solution meets RCRA criteria for hazardous waste. Dispose in compliance with all Federal, state, provincial, and local laws and



RCRA Hazard Class (undiluted product): D002 Corrosive Waste
RCRA Hazard Class (diluted product): Not Regulated
Contaminated Packaging: Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: The information provided below is the full transportation classification for this product. This description does not account for the package size(s) of this product, that may fall under a quantity exception, according to the applicable transportation regulations. When shipping dangerous goods, please consult with your internal, certified hazardous materials specialist to determine if any exceptions can be applied to your shipment.

DOT (Ground) Bill of Lading Description: UN1824, SODIUM HYDROXIDE SOLUTION, 8, II

IMDG (Ocean) Bill of Lading Description: UN1824, SODIUM HYDROXIDE SOLUTION, 8, II

15. REGULATORY INFORMATION

International Inventories at CAS# Level

TSCA	All components are listed or otherwise exempt
DSL	All components are listed or otherwise exempt

US RIGHT TO KNOW (RTK)

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Water	7732-18-5	-	-	-	-
Sodium hydroxide	1310-73-2	X	X	X	X
Alanine, N,N-bis(carboxymethyl)-, trisodium salt	164462-16-2	-	-	-	-
Sodium polyacrylate	9003-04-7	-	-	-	-
Trisodium citrate	68-04-2	-	-	-	-
2(3H)-benzothiazolethione	149-30-4	-	X	-	-

CERCLA/ SARA

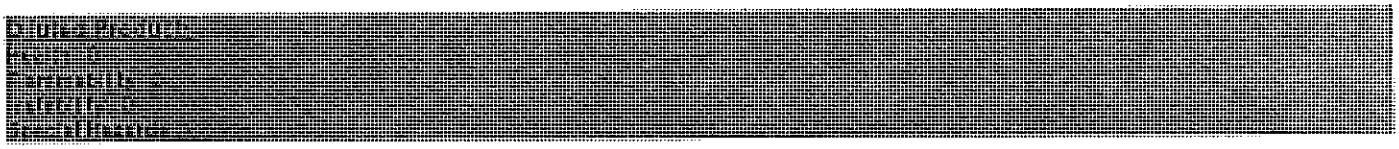
Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Sodium hydroxide	1310-73-2	7 - 13%	1000		

Canadian Regulations

16. OTHER INFORMATION

NFPA (National Fire Protection Association)
Rating Scale: (Low Hazard) 0 - 4 (Extreme Hazard)

Health 3
Flammability 0
Instability 0
Special Hazards -



Revision: 2024-08-05
Version: 02.0

Reason for revision: Not applicable
Prepared by: North American Regulatory Affairs

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Diversey
A SOLENIS COMPANY

Liqu-A-Klor™/MC
Liquid-Bactericide and Sanitizer

Revision: 2024-12-09 **Version:** 06.1

1. IDENTIFICATION

Product name: Liqu-A-Klor™/MC
Liquid-Bactericide and Sanitizer

SDS #: MS0800350

Recommended use:
- Industrial/Institutional
- Chlorine Sanitizer
- This product is intended to be diluted prior to use

Uses advised against: Uses other than those identified are not recommended

Manufacturer, importer, supplier:
US Headquarters
Diversey, Inc.
1300 Altura Rd., Suite 125
Fort Mill, SC 29708
Phone: 1-888-352-2249
SDS Internet Address: https://sds.diversey.com

Canadian Headquarters
Diversey Canada, Inc.
6150 Kennedy Road Unit 3
Mississauga, Ontario L5T 2J4
Phone: 1-800-668-7171

Emergency telephone number: 1-800-851-7145; 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

Classification for the undiluted product
Skin corrosion, Category 1C
Serious eye damage, Category 1
Corrosive to metals, Category 1



Signal word: **Danger.**

Hazard Statements
CAUSES SEVERE SKIN BURNS AND SERIOUS EYE DAMAGE. MAY BE CORROSIVE TO METALS.

Precautionary Statements
Causes burns/ serious damage to mouth, throat and stomach. Keep container tightly closed. Keep only in original container. Do not breathe vapors. Avoid contact with eyes, skin and clothing. Wash affected areas thoroughly after handling. Wear protective gloves, protective clothing and eye or face protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water for at least 15 minutes. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call e Poison Center (1-800-851-7145) or physician. Absorb spillage to prevent material damage. Store in corrosive-resistant container with a resistant inner liner. Dispose of in accordance with all federal, state and local applicable regulations. SUPPLEMENTAL INFORMATION:. DO NOT MIX WITH AMMONIA, BLEACH OR OTHER CHLORINATED COMPOUNDS. Mix only with water. Can react to release hazardous gases. May vigorously react with strong alkaline products resulting in spattering and excessive heat. DO NOT MIX WITH ACIDS, TOILET BOWL CLEANER, AMMONIA OR ANY OTHER CHEMICAL.

Health hazards not otherwise classified (HHNOC) - Not applicable
Physical hazards not otherwise classified (PHNOC) - Not applicable

Classification for the diluted product 1:256
This product, when diluted as stated on the label, is not classified as hazardous according to OSHA 29CFR 1910.1200 (HazCom 2012-GHS) and Canadian Hazardous Products Regulations (HPR) (WHMIS 2015-GHS).

Hazard and Precautionary Statements
None required

3. COMPOSITION/INFORMATION ON INGREDIENTS

Classified Ingredients

Ingredient(s)	CAS #	Weight %
Sodium hypochlorite	7681-52-9	3 - 7%
Sodium chloride	7647-14-5	3 - 7%
Sodium hydroxide	1310-73-2	> 0.1 - < 1%

4. FIRST AID MEASURES

Undiluted Product:

Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes.
Skin: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water for at least 15 minutes. Wash with plenty of water for at least 15 minutes.
Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Ingestion: IF SWALLOWED: Rinse mouth. DO NOT induce vomiting unless directed to do so by medical personnel. Drink a cupful of milk or water.
Notes to physician: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

Most Important Symptoms/Effects: No information available.
Immediate medical attention and special treatment needed Not applicable.
Aggravated Medical Conditions: Individuals with chronic respiratory disorders such as asthma, chronic bronchitis, emphysema, etc., may be more susceptible to irritating effects.

[redacted]

5. FIRE-FIGHTING MEASURES

Specific methods: No special methods required
Suitable extinguishing media: The product is not flammable. Extinguish fire using agent suitable for surrounding fire.
Specific hazards: Corrosive material (See sections 8 and 10).

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Extinguishing media which must not be used for safety reasons: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Put on appropriate personal protective equipment (see Section 8.).
Environmental precautions and clean-up methods: Clean-up methods - large spillage. Material is toxic to fish. Do not discharge into lakes, streams, ponds, or public water unless in accordance with an NPDES permit. Prevent product from entering drains. Water runoff can cause environmental damage. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling: Can react to release hazardous gases. May vigorously react with acids resulting in spattering and excessive heat. Do not mix with other products or chemicals except as directed on the label. Mix only with water. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Do not taste or swallow. Product residue may remain on/in empty containers. All precautions for handling the product must be used in handling the empty container and residue. Avoid breathing vapors or mists. Use only with adequate ventilation. Remove and wash contaminated clothing and footwear before re-use. Absorb spillage to prevent material damage. DO NOT MIX WITH ACIDS, TOILET BOWL CLEANERS,

AMMONIA, OR ANY OTHER CHEMICAL. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage: Store in corrosive-resistant container with a resistant inner liner.
Aerosol Level (if applicable) : Not applicable.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

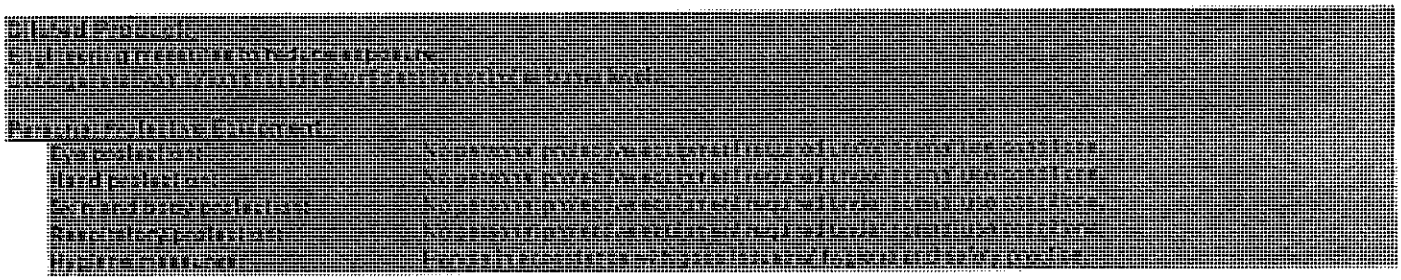
Exposure Guidelines:

Ingredient(s)	ACGIH	OSHA
Sodium hydroxide	2 mg/m³ (Ceiling)	2 mg/m³ (TWA)

Undiluted Product:
Engineering measures to reduce exposure:
Good general ventilation should be sufficient to control airborne levels.

Personal Protective Equipment
It is the responsibility of the employer to determine the potential risk of exposure to hazardous chemicals for employees in the workplace in order to determine the necessity, selection, and use of personal protective equipment.

Eye protection:	Chemical-splash goggles.
Hand protection:	Chemical-resistant gloves.
Skin and body protection:	Protective footwear. Wear suitable protective clothing.
Respiratory protection:	No personal protective equipment required under normal use conditions. If aerosols, mists, or vapors are not adequately controlled by ventilation, use appropriate respiratory protection to avoid over-exposure.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid
Evaporation Rate: No information available
Odor threshold: No information available.
Melting point/freezing point (°C): Not determined
Autoignition temperature: No information available
Solubility in other solvents: No information available
Density: 1.08 Kg/L
Bulk density: No information available
Flash point (°F): > 200.12 °F > 93.4 °C
Kinematic viscosity No information available
VOC: 0 % *
Flammability (Solid or Gas): Not applicable
Sustained combustion: Not applicable
Explosion limits: - upper: Not determined **- lower:** Not determined

Color: Clear , from Yellow to Green
Odor: Chlorine
Boiling point/range: Not determined
Decomposition temperature: Not determined Not applicable
Solubility: Completely Soluble
Relative Density (relative to water): 1.08
Vapor density: No information available
Vapor pressure: No information available.
Partition coefficient (n-octanol/water): No information available
Elemental Phosphorus: 0.00 % by wt.
pH: 12.20
Corrosion to metals: Metal corrosive

Dilution pH: 11.20
Dilution Flash Point (°F): > 200.12 °F > 93.4 °C
VOC % by wt. at use dilution: 0 %

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Reactivity: Not Applicable

Stability:	The product is stable
Possibility of hazardous reactions:	May vigorously react with acids resulting in spattering and excessive heat.
Hazardous decomposition products:	None reasonably foreseeable.
Materials to avoid:	Acids. Strong acids. Do not mix with any other product or chemical unless specified in the use directions. Ammonia.
Conditions to avoid:	None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
Skin contact, Inhalation, Ingestion, Eye contact

Delayed, immediate, or chronic effects and symptoms from short and long-term exposure
Skin contact: Corrosive. Causes severe burns. Symptoms may include burns, blisters, redness and pain (which may be delayed).
Eye contact: Corrosive. Causes serious eye damage. Symptoms may include pain, burning sensation, redness, watering, blurred vision or loss of vision.
Ingestion: Causes burns/ serious damage to mouth, throat and stomach. Symptoms may include stomach pain and nausea.
Inhalation: May cause irritation and corrosive effects to nose, throat and respiratory tract. Symptoms may include coughing and difficulty breathing.
Sensitization: No known effects.
Target Organs (SE): None known
Target Organs (RE):

Numerical measures of toxicity
ATE - Oral (mg/kg): >5000

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Persistence and Degradability: No information available.

Bioaccumulation: No information available.

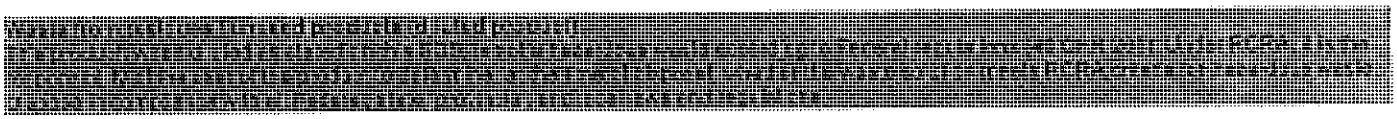
Mobility: No information available.

Other adverse effects No other adverse effects known.

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food, or feed by storage or disposal.

Waste from residues / unused products (undiluted product):
This product, as sold, if discarded or disposed, is a hazardous waste according to Federal regulations (40 CFR 261). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the waste solution meets RCRA criteria for hazardous waste. Dispose in compliance with all Federal, state, provincial, and local laws and regulations.



Pesticide Storage:
Refer to product label.

Pesticide Disposal:
Refer to product label.

Container Disposal:
Refer to product label.

RCRA Hazard Class (undiluted product): D002 Corrosive Waste.
RCRA Hazard Class (diluted product): Not Regulated.

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: The information provided below is the full transportation classification for this product. This description does not account for the package size(s) of this product, that may fall under a quantity exception, according to the applicable transportation regulations. When shipping dangerous goods, please consult with your internal, certified hazardous materials specialist to determine if any exceptions can be applied to your shipment.

DOT (Ground) Bill of Lading Description: UN1791, HYPOCHLORITE SOLUTION, 8, III

IMDG (Ocean) Bill of Lading Description: UN1791, HYPOCHLORITE SOLUTION, 8, III, MARINE POLLUTANT

15. REGULATORY INFORMATION

International Inventories at CAS# Level

TSCA	All components are listed or otherwise exempt
DSL	All components are listed or otherwise exempt

EPA Reg. No. : 875-190
This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

DANGER: CORROSIVE. May cause severe skin and eye irritation or chemical burns to broken skin. Causes eye damage. Do not get in eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves when handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until odors have dissipated. PHYSICAL AND CHEMICAL HAZARDS: STRONG OXIDIZING AGENT. Mix only with water according to label directions. Mixing this product with gross filth such as feces, urine, etc., or with ammonia, acids, detergents or other chemicals may release hazardous gases, which are irritating to eyes, lungs and mucous membranes. ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms.

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Sodium hypochlorite	7681-52-9	3 - 7%	100		
Sodium chloride	7647-14-5	3 - 7%			
Sodium hydroxide	1310-73-2	> 0.1 - < 1%	1000		

Canadian Regulations

16. OTHER INFORMATION

NFPA (National Fire Protection Association)
Rating Scale: (Low Hazard) 0 - 4 (Extreme Hazard)

Health 3
Flammability 0
Instability 0
Special Hazards -

[redacted]

Revision: 2024-12-09
Version: 06.1

Reason for revision:	Not applicable
Prepared by:	North American Regulatory Affairs

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

APPENDIX B

PHOTOGRAPH LOG



The northern exterior of the Essex Elementary School.



Suspected fill and vent pipe observed on the northeastern wall of the Essex Elementary School.



Backup generator observed on the northeastern portion of the subject property.



The eastern portion of the subject property, as viewed looking south.



The eastern portion of the subject property, as viewed looking north.



A cooling unit located on the eastern wall of the Essex Elementary School.



The southern portion of the subject property.



Stormwater drain on the subject property, as observed looking southeast towards Western Ave.



The pond in the southern corner of the subject property.



The southern wall of the Essex Elementary School, as observed looking west.



The temporary classroom on the southwestern corner of the Essex Elementary School.



Trash dumpsters located on the northwestern portion of the subject property.



Grease trap cleanouts located on the northwestern exterior of the subject property.



The interior courtyard of the subject property.



The interior courtyard of the subject property.



Gasoline cannister located within the courtyard greenhouse.



The roof of the Essex Elementary School.



The roof of the Essex Elementary School.



Suspected lead based paint observed on the exterior of the Essex Elementary School.



Suspected asbestos pipe wrap observed inside the Essex Elementary School.



Boiler chemicals observed within the Essex Elementary School.



Paints observed within the Essex Elementary School.



Bedrock observed within the Essex Elementary School crawl space.



Chiller unit and bedrock observed within the Essex Elementary School crawl space.



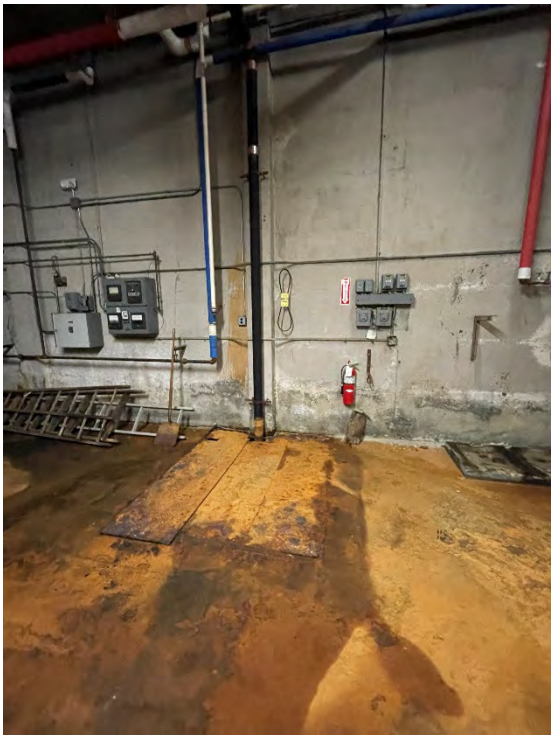
The Essex Elementary School Boiler Room.



Red oily staining observed on the floor of the boiler room. Note the wet floor.



Red oily staining observed on the floor of the boiler room.



Pit filled with groundwater observed in the boiler room.



Slight sheen on the groundwater within the pit in the boiler room.





Suspected location of former fill and vent pipes in boiler room associated with a UST or AST.



Out of use boiler in the boiler room.



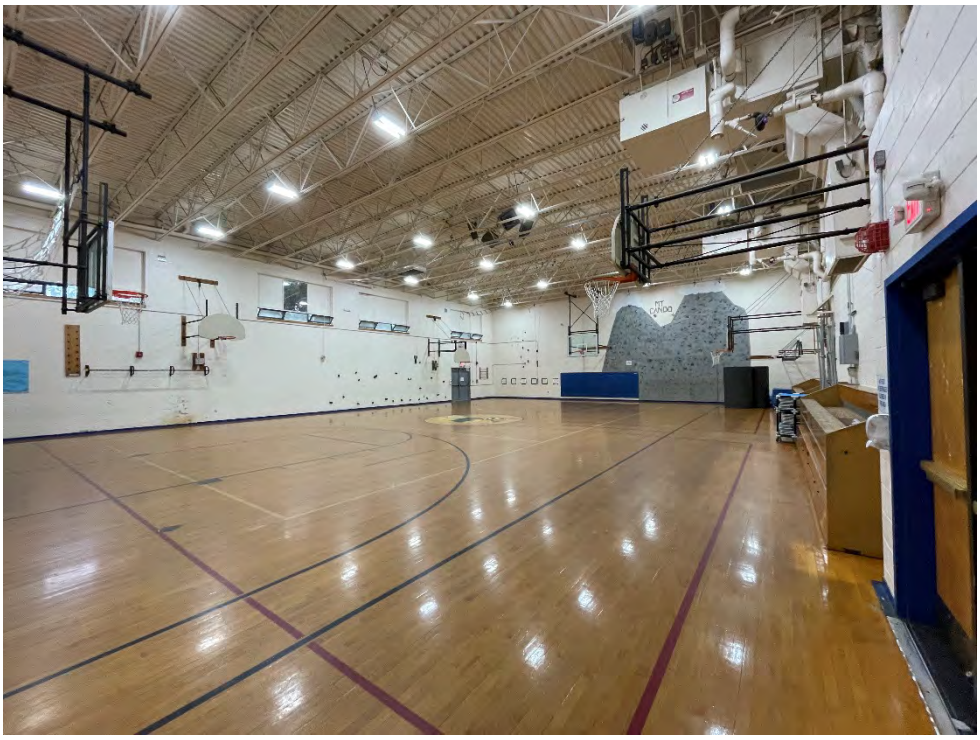
Sump pump observed under the stairs in the boiler room.



Condenser tank observed in the boiler room.



Space heater observed in the lower level of the Essex Elementary School.



The Essex Elementary School gymnasium.



Floor drains observed in the bathroom of the Essex Elementary School gymnasium bathroom.



Grease traps observed in the Essex Elementary School cafeteria.

APPENDIX C

ENVIRONMENTAL SITE ASSESSMENT OWNER QUESTIONNAIRE

Environmental Questionnaire

This questionnaire is to be completed by the site owner or representative with direct knowledge of the property.

Site name:	**Essex Elementary School**
Street	12 Story Street
City, State, Zip	Essex Ma,01929

This questionnaire was completed by:

Name:	Steve Hunt
Title:	Maintenance Supervisor
Organization:	Manchester Essex Regional School District
Address:	36 Lincoln street Manchester Ma
Telephone:	9783251110
Email:	Hunts@mersd.org
Date completed:	9/23/25
Relationship to site:	Maintenance Supervisor for school district

	QUESTION	RESPONSE
1.	Is the *property* or any *adjoining property* used for an industrial use?	Yes No x Unknown ____ Explanation:
2.	To the best of your knowledge, has the *property* or any *adjoining property* been used for an industrial use in the past?	Yes _____ No x Unknown ____ Explanation:
3.	Is the *property* or any *adjoining property* used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard, or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	Yes _____ No x Unknown ____ Explanation:
4.	To the best of your knowledge has the *property* or any *adjoining property* been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	Yes _____ No x Unknown ____ Explanation:
5.	Are there currently, or to the best of your knowledge have there been previously, any damaged or discarded automobile or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gal (19 L) in volume or 50 gal (190 L) in the aggregate, stored on or used at the *property* or at the facility?	Yes _____ No x Unknown ____ Explanation:
6.	Are there currently, or to the best of your knowledge have there been previously, any industrial *drums* (typically 55 gal [208 L]) or sacks of chemicals located on the property or at the facility?	Yes _____ No x Unknown ____ Explanation:

	QUESTION	RESPONSE
7.	Has *fill dirt* been brought onto the property that originated from a contaminated site or that is of an unknown origin?	Yes _____ No x Unknown ____ Explanation:
8.	Are there currently, or to the best of your knowledge have there been previously, any *pits, ponds, or lagoons* located on the *property* in connection with waste treatment or waste disposal?	Yes _____ No x Unknown ____ Explanation:
9.	Is there currently, or to the best of your knowledge have there been previously, any stained soil on the *property*?	Yes _____ No x Unknown ____ Explanation:
10.	Are there currently, or to the best of your knowledge have there been previously, any registered or unregistered storage tanks (above or underground) located on the *property*?	Yes x_____ No Unknown ____ Explanation Septic tank and oil storage tank removed
11.	Are there currently, or to the best of your knowledge have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *property* adjacent to any structure located on the *property*?	Yes _____ No x Unknown ____ Explanation:
12.	Are there currently, or to the best of your knowledge have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors?	Yes x No _____ Unknown ____ Explanation: Regular use of cleaning products in drain lines. Organic stains located in crawl spaces and boiler room from minerals in ground water.
13.	If the *property* is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated contaminated by any government environmental/health agency?	Yes _____ No x Unknown ____ Explanation:
14.	Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user, (a.) Do you know the past uses of the property? (b.) Do you know of other chemical releases that have taken place at the property? (d.) Do you know of any environmental cleanups that have taken place at the property?	Yes x No _____ Unknown ____ Explanation: a.) Prior to the construction of the school building in 1957, the land was purchased in parts starting in 1947 from the previous land owners. There is no available information to suggest it was used for any commercial or industrial purposes.

	QUESTION	RESPONSE
		b, d) I am unaware of any chemical releases or environmental cleanups that have taken place on the property
15.	Does the *owner* or *occupant* of the *property* have any knowledge of *environmental liens* or governmental notification relating to the past or recurrent violations of environmental laws with respect to the *property* or any facility located on the *property*?	Yes _____ No x Unknown ____ Explanation:
16.	Has the *owner* or *occupant* of the *property* been informed of the past or current existence of *hazardous substances* or petroleum *products* or environmental violations with respect to the *property* or any facility located on the *property*?	Yes x No _____ Unknown ____ Explanation: AHERA 3 year inspection report provided by Atlas
17.	Does the *owner* or *occupant* of the property have any knowledge of any environmental site assessment of the *property* or facility that indicated the presence of *hazardous substances* or *petroleum products* on, or contamination of, the *property* or recommended further assessment of the *property*?	Yes x No _____ Unknown ____ Explanation: AHERA 3 year inspection report provided by Atlas
18.	Does the *owner* or *occupant* of the *property* know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *property* by any owner or occupant of the *property*?	Yes _____ No x Unknown ____ Explanation:
19.	Does the *property* discharge wastewater on or adjacent to the *property* other than stormwater into a sanitary sewer system?	Yes _____ No x Unknown ____ Explanation:
20.	To the best of your knowledge, have any *hazardous substances* or *petroleum products*, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the *property*?	Yes _____ No x Unknown ____ Explanation:
21.	Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of PCBs on the *property*?	Yes _____ No Unknown x Explanation: Transformer owned by national grid, located in locked cabinet with no current access available to school staff.
22.	Are there any activity and use limitations, such as engineering controls, land use restrictions, or institutional controls in place at the site and/or have they been filed or recorded in a registry under federal, tribal, state, or local law?	Yes _____ No x Unknown Explanation:
23.	As part of this study, can you provide any of the following? • Previous environmental site assessment reports	If yes, please highlight which and provide Mabbett with a copy of said report.

	QUESTION	RESPONSE
	• Environmental compliance audit reports • Environmental permits (including but not limited to solid waste disposal, hazardous waste disposal, NPDES, underground injection permits) • Registrations for aboveground and underground storage tanks • Registrations for underground injection systems • Material safety data sheets (MSDS) • Community right-to-know plan • Safety plans, preparedness and prevention plans, spill prevention, countermeasure and control plans • Reports regarding hydraulic conditions at the property and surrounding area • Hazardous waste generator notices or reports • Geotechnical studies • Risk assessments • Reports regarding any self-directed or other cleanup activities conducted at the property	Will include copies of chemical MSDS and AHERA 3 year inspection report.

Preparer represents that to the best of the preparer's knowledge the above statements and facts are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

Signature: _____

Date: 9/23/25

APPENDIX D

DATABASE SEARCH REPORT: EDR Radius Map™ Report with GeoCheck®

12 Story Street
12 Story Street
Essex, MA 01929

Inquiry Number: 8109475.2s
September 16, 2025

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	129
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-16
Physical Setting Source Map Findings	A-18
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. **NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA) INFORMATION PROVIDED IN THIS REPORT.** Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2025 by Environmental Data Resources, LLC. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, LLC, or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

12 STORY STREET
ESSEX, MA 01929

COORDINATES

Latitude (North):	42.6321840 - 42° 37' 55.86''
Longitude (West):	70.7899470 - 70° 47' 23.80''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	353231.0
UTM Y (Meters):	4721309.5
Elevation:	75 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	19019791 IPSWICH, MA
Version Date:	2021
South Map:	19019793 MARBLEHEAD NORTH, MA
Version Date:	2021

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20230705
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
12 STORY STREET
ESSEX, MA 01929

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	PUBLIC SCHOOL	12 STORY STREET	MA ASBESTOS		TP
A2	ESSEX ELEMENTARY SCH	12 STOREY STREET	MA ASBESTOS		TP
A3		12 STORY ST	ERNS		TP
A4	ESSEX ELEMENTARY	12 STORY STREET	FINDS		TP
5	NO LOCATION AID	17 STORY ST	MA SHWS, MA RELEASE	Lower	124, 0.023, NNW
6	NO LOCATION AID	60 WESTERN AVE	MA SHWS, MA RELEASE	Higher	164, 0.031, South
7	NO LOCATION AID	ACROSS FROM 3 BROOK	MA SHWS, MA RELEASE	Lower	771, 0.146, ESE
B8	NEAL AUTOMOTIVE	15 WESTERN AVE	MA HW GEN	Higher	977, 0.185, NE
B9	NEAL AUTOMOTIVE	15 WESTERN AVE	RCRA-VSQG, FINDS, ECHO, RI MANIFEST	Higher	977, 0.185, NE
10	ESSEX SANITARY LANDF	OFF LANDING ROAD	ODI	Lower	1408, 0.267, SSE
C11	NO LOCATION AID	MARTIN ST AND SHEPAR	MA SHWS, MA RELEASE	Lower	1703, 0.323, East
D12	BOTHWAY FARM	SOUTHERN AVE	MA SHWS, MA SWF/LF, MA INST CONTROL, MA RELEASE,...	Lower	1747, 0.331, SSE
D13	TRANSFER STATION	30 LANDING ROAD	MA MERCURY	Lower	1747, 0.331, SSE
C14	WHITEY'S GARAGE	16 MARTIN ST	MA SHWS, MA UST, MA RELEASE	Lower	1882, 0.356, East
E15	NO LOCATION AID	8 MAIN ST	MA LUST, MA INST CONTROL, MA RELEASE	Lower	1971, 0.373, ENE
E16	NO LOCATION AID	8 MAIN ST	UST FINDER RELEASE	Lower	1971, 0.373, ENE
E17	ERNIE'S SERVICE STAT	8 MAIN STREET	UST FINDER RELEASE	Lower	1971, 0.373, ENE
E18	ERNIE'S SERVICE STAT	8 MAIN STREET	MA SHWS, MA LUST, MA INST CONTROL, MA RELEASE	Lower	1971, 0.373, ENE
19	ESSEX FIRE STATION	MARTIN ST	MA LUST, MA RELEASE	Lower	2100, 0.398, East
20	NO LOCATION AID	22 JOHN WISE AVE	MA SHWS, MA RELEASE	Lower	2308, 0.437, NE
F21	ESSEX RIVER	ROUTE 133	SEMS-ARCHIVE	Lower	2326, 0.441, East
F22	ESSEX SHIPBUILDING M	66 MAIN ST	MA SHWS, MA INST CONTROL, MA RELEASE	Lower	2449, 0.464, East
F23	ESSEX SHIPBLDG MUSEU	66 MAIN ST	MA SHWS, MA INST CONTROL, MA RELEASE	Lower	2449, 0.464, East
F24	BROWN, DAVID	66 MAIN ST	MA BROWNFIELDS, MA ENF	Lower	2449, 0.464, East
F25	SAM'S CREEK INVESTIG	SAM'S CREEK	US BROWNFIELDS	Lower	2484, 0.470, East
26	ADJACENT TO 42 APPLE	42 APPLE STREET	MA SHWS, MA RELEASE	Lower	2704, 0.512, SSE
27	CONSTRUCTION SITE	91 MAIN STREET ADJ	MA SHWS, MA RELEASE	Lower	3119, 0.591, East
G28	LIBERTY RESEARCH FAC	7 ESSEX PARK DR	MA SHWS, MA RELEASE	Lower	3129, 0.593, SSW
G29	NO LOCATION AID	7 ESSEX PARK RD	MA SHWS, MA RELEASE	Lower	3129, 0.593, SSW
G30	NO LOCATION AID	7 ESSEX PARK RD	MA SHWS, MA RELEASE	Lower	3129, 0.593, SSW
G31	FMR LIBERTY RESEARCH	7 ESSEX PARK RD	MA SHWS, MA RELEASE	Lower	3129, 0.593, SSW
32	NO LOCATION AID	109 MAIN ST	MA SHWS, MA RELEASE	Lower	3491, 0.661, East
H33	RICHDALE CONVENIENCE	156 NORTH MAIN ST	MA SHWS, MA LUST, MA INST CONTROL, MA RELEASE	Lower	4702, 0.891, ESE
H34	RICHDALE CONVENIENCE	156 NORTH MAIN ST	MA SHWS, MA RELEASE	Lower	4702, 0.891, ESE
35	COMMERCIAL PROPERTY	9 SOUTHERN AVE	MA SHWS, MA BROWNFIELDS, MA RELEASE	Lower	4954, 0.938, ESE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
PUBLIC SCHOOL 12 STORY STREET ESSEX, MA	MA ASBESTOS	N/A
ESSEX ELEMENTARY SCH 12 STOREY STREET ESSEX, MA	MA ASBESTOS	N/A
12 STORY ST 12 STORY ST ESSEX (County), MA	ERNS NRC Report #: 891302 Incident Date Time: 2008-11-30 10:00:00	N/A
ESSEX ELEMENTARY 12 STORY STREET ESSEX, MA 01929	FINDS Registry ID:: 110022249388	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing

SEMS ---------- Superfund Enterprise Management System

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROLS ---------- Institutional Controls Sites List

Lists of state and tribal leaking storage tanks

MA LAST ---------- Leaking Aboveground Storage Tank Sites
INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

Lists of state and tribal registered storage tanks

FEMA UST ---------- Underground Storage Tank Listing
MA AST ---------- Aboveground Storage Tank Database
INDIAN UST ---------- Underground Storage Tanks on Indian Land

Lists of state and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
US CDL ---------- National Clandestine Laboratory Register

Local Land Records

MA LIENS ---------- Liens Information Listing
LIENS 2 ---------- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System

MA SPILLS	Historical Spill List
MA SPILLS 90	SPILLS 90 data from FirstSearch
MA SPILLS 80	SPILLS 80 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
MINES MRDS	Mineral Resources Data System
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
FUELS PROGRAM	EPA Fuels Program Registered Listing
PFAS NPL	Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES	Federal Sites PFAS Information
PFAS TSCA	PFAS Manufacture and Imports Information
PFAS TRIS	List of PFAS Added to the TRI
PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR	PFAS Contamination Site Location Listing
PFAS WQP	Ambient Environmental Sampling for PFAS
PFAS PROJECT	NORTHEASTERN UNIVERSITY PFAS PROJECT
PFAS NPDES	Clean Water Act Discharge Monitoring Information
PFAS ECHO	Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAIN	Facilities in Industries that May Be Handling PFAS Listing
PFAS PT 139 AIRPORT	All Certified Part 139 Airports PFAS Information Listing

AQUEOUS FOAM NRC Aqueous Foam Related Incidents Listing
BIOSOLIDS ICIS-NPDES Biosolids Facility Data
UST FINDER UST Finder Database
E MANIFEST Hazardous Waste Electronic Manifest System
MA PFAS PFAS Contaminated Sites Listing
MA AIRS Permitted Facilities Listing
MA DRYCLEANERS Regulated Drycleaning Facilities
MA Financial Assurance Financial Assurance Information Listing
MA GWDP Ground Water Discharge Permits
MA NPDES NPDES Permit Listing
MA TIER 2 Tier 2 Information Listing
MA TSD TSD Facility
MA UIC Underground Injection Control Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historical Auto Stations
EDR Hist Cleaner EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

MA RGA HWS Recovered Government Archive State Hazardous Waste Facilities List
MA RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes

available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

A review of the SEMS-ARCHIVE list, as provided by EDR, and dated 06/26/2025 has revealed that there is 1 SEMS-ARCHIVE site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ESSEX RIVER Site ID: 0102693 EPA Id: MAD985318559	ROUTE 133	E 1/4 - 1/2 (0.441 mi.)	F21	73

Lists of Federal RCRA generators

RCRA-VSQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-VSQG list, as provided by EDR, and dated 06/02/2025 has revealed that there is 1 RCRA-VSQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NEAL AUTOMOTIVE EPA ID:: MAD985266402	***15 WESTERN AVE***	***NE 1/8 - 1/4 (0.185 mi.)***	***B9***	***25***

Lists of state- and tribal hazardous waste facilities

MA SHWS: Contains information on releases of oil and hazardous materials that have been reported to DEP.

A review of the MA SHWS list, as provided by EDR, and dated 06/30/2025 has revealed that there are 20 MA SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NO LOCATION AID Current Status: RAO Release Tracking Number: 3-0015915	***60 WESTERN AVE***	***S 0 - 1/8 (0.031 mi.)***	***6***	***19***

Lower Elevation	Address	Direction / Distance	Map ID	Page
NO LOCATION AID Current Status: RAO	***17 STORY ST***	***NNW 0 - 1/8 (0.023 mi.)***	***5***	***17***

Release Tracking Number: 3-0012521				
NO LOCATION AID	***ACROSS FROM 3 BROOK***	***ESE 1/8 - 1/4 (0.146 mi.)***	***7***	***22***
Current Status: RAO Release Tracking Number: 3-0027443				
NO LOCATION AID	***MARTIN ST AND SHEPAR***	***E 1/4 - 1/2 (0.323 mi.)***	***C11***	***37***
Current Status: URAM Release Tracking Number: 3-0022999				
BOTHWAY FARM	***SOUTHERN AVE***	***SSE 1/4 - 1/2 (0.331 mi.)***	***D12***	***39***
Current Status: RAO Release Tracking Number: 3-0011464				
WHITEY'S GARAGE	***16 MARTIN ST***	***E 1/4 - 1/2 (0.356 mi.)***	***C14***	***46***
Current Status: RAO Release Tracking Number: 3-0021187				
ERNIE'S SERVICE STAT	***8 MAIN STREET***	***ENE 1/4 - 1/2 (0.373 mi.)***	***E18***	***61***
Current Status: PSNC Release Tracking Number: 3-0034160				
NO LOCATION AID	***22 JOHN WISE AVE***	***NE 1/4 - 1/2 (0.437 mi.)***	***20***	***70***
Current Status: RAO Release Tracking Number: 3-0017866				
ESSEX SHIPBUILDING M	***66 MAIN ST***	***E 1/4 - 1/2 (0.464 mi.)***	***F22***	***74***
Current Status: RTNCLOSED Release Tracking Number: 3-0024673				
ESSEX SHIPBLDG MUSEU	***66 MAIN ST***	***E 1/4 - 1/2 (0.464 mi.)***	***F23***	***77***
Current Status: RAO Release Tracking Number: 3-0004552				
ADJACENT TO 42 APPLE	***42 APPLE STREET***	***SSE 1/2 - 1 (0.512 mi.)***	***26***	***84***
Current Status: PSNC Release Tracking Number: 3-0036867				
CONSTRUCTION SITE	***91 MAIN STREET ADJ***	***E 1/2 - 1 (0.591 mi.)***	***27***	***86***
Current Status: PSNC Release Tracking Number: 3-0035511				
LIBERTY RESEARCH FAC	***7 ESSEX PARK DR***	***SSW 1/2 - 1 (0.593 mi.)***	***G28***	***87***
Current Status: TMPS Release Tracking Number: 3-0019187				
NO LOCATION AID	***7 ESSEX PARK RD***	***SSW 1/2 - 1 (0.593 mi.)***	***G29***	***94***
Current Status: TMPS Release Tracking Number: 3-0027639				
NO LOCATION AID	***7 ESSEX PARK RD***	***SSW 1/2 - 1 (0.593 mi.)***	***G30***	***98***
Current Status: TMPS Release Tracking Number: 3-0026038				
FMR LIBERTY RESEARCH	***7 ESSEX PARK RD***	***SSW 1/2 - 1 (0.593 mi.)***	***G31***	***107***
Current Status: TMPS Release Tracking Number: 3-0020280				
NO LOCATION AID	***109 MAIN ST***	***E 1/2 - 1 (0.661 mi.)***	***32***	***110***
Current Status: URAM Release Tracking Number: 3-0025296				
RICHDALE CONVENIENCE	***156 NORTH MAIN ST***	***ESE 1/2 - 1 (0.891 mi.)***	***H33***	***111***
Current Status: RAO Release Tracking Number: 3-0023545				
RICHDALE CONVENIENCE	***156 NORTH MAIN ST***	***ESE 1/2 - 1 (0.891 mi.)***	***H34***	***122***

Current Status: RTNCLOSED
Release Tracking Number: 3-0027206

COMMERCIAL PROPERTY	***9 SOUTHERN AVE***	***ESE 1/2 - 1 (0.938 mi.)***	***35***	***123***

Current Status: TIERII
Release Tracking Number: 3-0003021

Lists of state and tribal landfills and solid waste disposal facilities

MA SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Department of Environmental Protection's Solid Waste Facility Database/Transfer Stations.

A review of the MA SWF/LF list, as provided by EDR, has revealed that there is 1 MA SWF/LF site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BOTHWAY FARM	***SOUTHERN AVE***	***SSE 1/4 - 1/2 (0.331 mi.)***	***D12***	***39***

Database: LF PROFILES, Date of Government Version: 07/01/2015
Database: SWF/LF, Date of Government Version: 06/28/2024
Current Operational Status: Inactive
Current Operational Status: Active
Status: Inactive

Lists of state and tribal leaking storage tanks

MA LUST: Sites within the Releases Database that have a UST listed as its source.

A review of the MA LUST list, as provided by EDR, and dated 06/30/2025 has revealed that there are 3 MA LUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
NO LOCATION AID	***8 MAIN ST***	***ENE 1/4 - 1/2 (0.373 mi.)***	***E15***	***53***

Release Tracking Number / Current Status: 3-0025432 / RAO

ERNIE'S SERVICE STAT	***8 MAIN STREET***	***ENE 1/4 - 1/2 (0.373 mi.)***	***E18***	***61***

Release Tracking Number / Current Status: 3-0034160 / PSNC

ESSEX FIRE STATION	***MARTIN ST***	***E 1/4 - 1/2 (0.398 mi.)***	***19***	***68***

Release Tracking Number / Current Status: 3-0013690 / RAO

State and tribal institutional control / engineering control registries

MA INST CONTROL: Activity and Use Limitations establish limits and conditions on the future use of contaminated property, and therefore allow cleanups to be tailored to these uses.

A review of the MA INST CONTROL list, as provided by EDR, and dated 06/30/2025 has revealed that

there are 5 MA INST CONTROL sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BOTHWAY FARM	***SOUTHERN AVE***	***SSE 1/4 - 1/2 (0.331 mi.)***	***D12***	***39***
Release Tracking Number: 3-0011464				
NO LOCATION AID	***8 MAIN ST***	***ENE 1/4 - 1/2 (0.373 mi.)***	***E15***	***53***
Release Tracking Number: 3-0025432				
ERNIE'S SERVICE STAT	***8 MAIN STREET***	***ENE 1/4 - 1/2 (0.373 mi.)***	***E18***	***61***
Release Tracking Number: 3-0034160				
ESSEX SHIPBUILDING M	***66 MAIN ST***	***E 1/4 - 1/2 (0.464 mi.)***	***F22***	***74***
Release Tracking Number: 3-0024673				
ESSEX SHIPBLDG MUSEU	***66 MAIN ST***	***E 1/4 - 1/2 (0.464 mi.)***	***F23***	***77***
Release Tracking Number: 3-0004552				

Lists of state and tribal brownfield sites

MA BROWNFIELDS: Under Massachusetts law, M.G.L. c. 21E is the statute that governs the cleanup of releases of oil and/or hazardous material to the environment. The Brownfields Act of 1998 amended M.G.L. c. 21E by establishing significant liability relief and financial incentives to spur the redevelopment of brownfields, while ensuring that the Commonwealth's environmental standards are met. Most brownfields are redeveloped with the benefit of liability protections that operate automatically under M.G.L. c. 21E.

A review of the MA BROWNFIELDS list, as provided by EDR, has revealed that there is 1 MA BROWNFIELDS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BROWN, DAVID	***66 MAIN ST***	***E 1/4 - 1/2 (0.464 mi.)***	***F24***	***81***
Database: BROWNFIELDS 2, Date of Government Version: 07/11/2023				
MCP Status: RAO				
RTN: 3-0004552				

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA's listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 09/09/2024 has revealed that there is 1 US BROWNFIELDS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SAM'S CREEK INVESTIG	SAM'S CREEK	E 1/4 - 1/2 (0.470 mi.)	F25	82

EXECUTIVE SUMMARY

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

A review of the ODI list, as provided by EDR, and dated 06/30/1985 has revealed that there is 1 ODI site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ESSEX SANITARY LANDF	OFF LANDING ROAD	SSE 1/4 - 1/2 (0.267 mi.)	10	37

Other Ascertainable Records

UST FINDER RELEASE: US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

A review of the UST FINDER RELEASE list, as provided by EDR, and dated 06/08/2023 has revealed that there are 2 UST FINDER RELEASE sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
NO LOCATION AID	8 MAIN ST	ENE 1/4 - 1/2 (0.373 mi.)	E16	59
ERNIE'S SERVICE STAT	8 MAIN STREET	ENE 1/4 - 1/2 (0.373 mi.)	E17	60

MA HW GEN: Permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities.

A review of the MA HW GEN list, as provided by EDR, and dated 06/04/2025 has revealed that there is 1 MA HW GEN site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NEAL AUTOMOTIVE State Generator Status: VQG-MA EPA Id: MAD985266402	15 WESTERN AVE	NE 1/8 - 1/4 (0.185 mi.)	B8	24

RI MANIFEST: Hazardous waste manifest information

A review of the RI MANIFEST list, as provided by EDR, and dated 12/31/2020 has revealed that there is 1 RI MANIFEST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NEAL AUTOMOTIVE EPA Id: MAD985266402 Manifest Document Number: RIG0251040	***15 WESTERN AVE***	***NE 1/8 - 1/4 (0.185 mi.)***	***B9***	***25***

EXECUTIVE SUMMARY

MA MERCURY: A listing of locations, collecting and recycling for mercury-added products. Mercury is toxic to the human nervous system, as well as fish and animals. Mercury can enter the body either through skin absorption or through inhalation of mercury vapors. At room temperature, small beads of mercury will vaporize.

A review of the MA MERCURY list, as provided by EDR, and dated 04/02/2025 has revealed that there is 1 MA MERCURY site within approximately 0.5 miles of the target property.

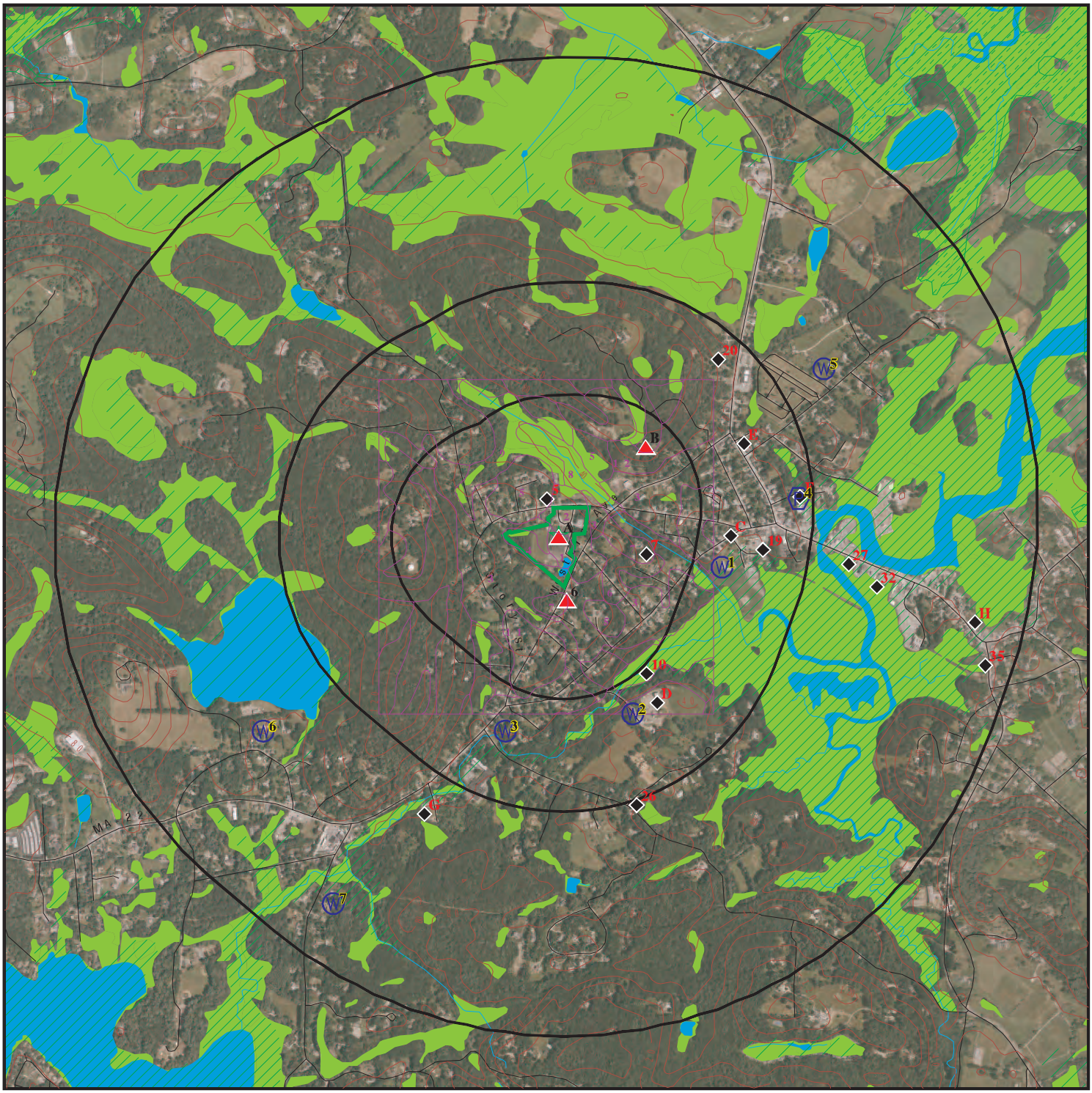
Lower Elevation	Address	Direction / Distance	Map ID	Page
TRANSFER STATION	30 LANDING ROAD	SSE 1/4 - 1/2 (0.331 mi.)	D13	46

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

Site Name	Database(s)
POLE NO 558	MA SHWS, MA RELEASE
NO LOCATION AID	MA SHWS, MA RELEASE
ESSEX DUMP	MA SWF/LF

OVERVIEW MAP - 8109475.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

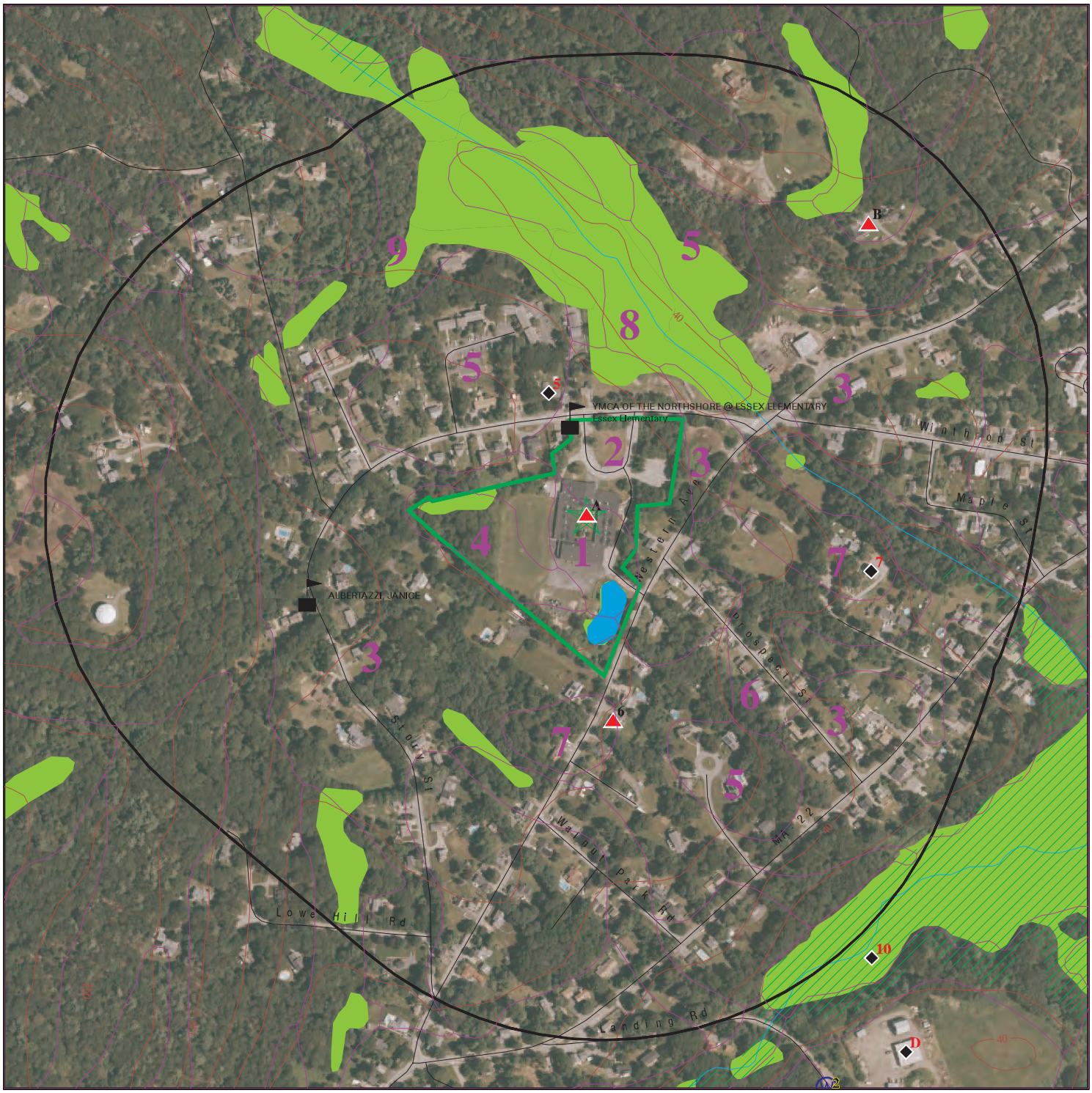
Areas of Critical Environmental Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	12 Story Street	CLIENT:	Mabbett & Assoc.
ADDRESS:	12 Story Street Essex MA 01929	CONTACT:	Cassidy Way
		INQUIRY #:	8109475.2s
LAT/LONG:	42.632184 / 70.789947	DATE:	September 16, 2025 11:48 am

Copyright © 2025 EDR, Inc. © 2015 TomTom Rel. 2015.

DETAIL MAP - 8109475.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Areas of Critical Environmental Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 12 Story Street ADDRESS: 12 Story Street Essex MA 01929 LAT/LONG: 42.632184 / 70.789947	CLIENT: Mabbett & Assoc. CONTACT: Cassidy Way INQUIRY #: 8109475.2s DATE: September 16, 2025 11:50 am

Copyright © 2025 EDR, Inc. © 2015 TomTom Rel. 2015.

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	1	NR	NR	1
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	1	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP	1	NR	NR	NR	NR	NR	1
Lists of state- and tribal hazardous waste facilities								
MA SHWS	1.000		2	1	7	10	NR	20
Lists of state and tribal landfills and solid waste disposal facilities								
MA SWF/LF	0.500		0	0	1	NR	NR	1
Lists of state and tribal leaking storage tanks								
MA LAST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MA LUST	0.500		0	0	3	NR	NR	3
INDIAN LUST	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
MA UST	0.250		0	0	NR	NR	NR	0
MA AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
MA INST CONTROL	0.500		0	0	5	NR	NR	5
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
MA BROWNFIELDS	0.500		0	0	1	NR	NR	1
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	1	NR	NR	1
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	1	NR	NR	1
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
MA LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
MA RELEASE	TP		NR	NR	NR	NR	NR	0
MA SPILLS	TP		NR	NR	NR	NR	NR	0
MA SPILLS 90	TP		NR	NR	NR	NR	NR	0
MA SPILLS 80	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
FINDS	TP	1	NR	NR	NR	NR	NR	1
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS PROJECT	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAIN	0.250		0	0	NR	NR	NR	0
PFAS PT 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	TP		NR	NR	NR	NR	NR	0
UST FINDER	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST FINDER RELEASE	0.500		0	0	2	NR	NR	2
E MANIFEST	0.250		0	0	NR	NR	NR	0
MA PFAS	0.250		0	0	NR	NR	NR	0
MA AIRS	TP		NR	NR	NR	NR	NR	0
MA ASBESTOS	TP	2	NR	NR	NR	NR	NR	2
MA DRYCLEANERS	0.250		0	0	NR	NR	NR	0
MA ENF	TP		NR	NR	NR	NR	NR	0
MA Financial Assurance	TP		NR	NR	NR	NR	NR	0
MA GWDP	TP		NR	NR	NR	NR	NR	0
MA HW GEN	0.250		0	1	NR	NR	NR	1
RI MANIFEST	0.250		0	1	NR	NR	NR	1
MA MERCURY	0.500		0	0	1	NR	NR	1
MA NPDES	TP		NR	NR	NR	NR	NR	0
MA TIER 2	TP		NR	NR	NR	NR	NR	0
MA TSD	0.500		0	0	0	NR	NR	0
MA UIC	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
MA RGA HWS	TP		NR	NR	NR	NR	NR	0
MA RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		4	2	4	23	10	0	43

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **PUBLIC SCHOOL** **MA ASBESTOS** **S119811876**
Target **12 STORY STREET** **N/A**
Property **ESSEX, MA**

Site 1 of 4 in cluster A

Actual: **75 ft.**

ASBESTOS:

Name:	PUBLIC SCHOOL
Address:	12 STORY STREET
City,State,Zip:	ESSEX, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	07/19/2021
End Date:	07/23/2021
Date Entered:	Not reported
Entry Date:	07/26/2021
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	8
Project Description:	OTHER AC CEMENT PIPE
AR Tracking ID:	369519
Super Lic Number:	AS000000
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	2021
Sticker Number:	100350140
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	9785003163
Sub Town:	Not reported
Worksite:	PIPE IN GROUND
Occupied:	-1
Contractor:	AC000000
Contract Type:	WRITTEN
Hours:	7-3
Project Type:	Oth:AC CEMENT PIPE
Abatement Process:	Disp
Location:	OUTDOORS
Decon Process:	AS REQUIRED IN ASBESTOS GUIDANCE DOCUMENT
Disposal Methods:	IN ACCORDANCE WITH ASB CEMENT GUIDANCE DOCUMENT
Facility Usage:	PUBLIC SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	NAW2107113
DLWD Waiver Number:	32495-2021
Small Owner Occ:	-1
Owner Name:	JASON WALDRON
Owner Address:	12 STORY ST
Owner City:	ESSEX
Owner State:	MA
On Site Manager Name:	MATT BERGERON
On Site Manager Phone:	9787740749
Ins Comp:	AIM MUTUAL
Policy Number:	VWC-100-6017343-2021A
EXP Date:	3/30/2022
Facility Size:	47196
Transporter Name:	EKB EQUIPMENT LLC
Transporter Address:	166 EASTERN AVE
Transporter City:	ESSEX
Transporter State:	MA

PUBLIC SCHOOL (Continued) **S119811876**

Final Site:	Not reported
Certified Name:	MATTHEW BERGERON
Cert Sign Date:	07/26/2021
Certified Company:	JASON WALDRON
Certified Phone:	9787740749
Entered_by:	EKBDESK
Name:	PUBLIC SCHOOL
Address:	12 STORY STREET
City,State,Zip:	ESSEX, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	09/30/2021
End Date:	10/07/2021
Date Entered:	Not reported
Entry Date:	09/17/2021
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	8
Project Description:	TRANSPIPE
AR Tracking ID:	373086
Super Lic Number:	AS031082
Monitor Lic Number:	AM001760
Lab Lic Number:	AA000225
Year:	2021
Sticker Number:	100343188
Form Type:	ANF-001
Fee Status:	Not reported
Facility Phone:	9787740749
Sub Town:	Not reported
Worksite:	166 EASTERN AVENUE ESSEX MA-SMALL 10’ CONTAINER
Occupied:	-1
Contractor:	AC000459
Contract Type:	WRITTEN
Hours:	7A-5P
Project Type:	Oth:DISPOSAL ONLY
Abatement Process:	Disp
Location:	OUTDOORS
Decon Process:	N/A
Disposal Methods:	(2) 6-MIL BAGS WETTED
Facility Usage:	PUBLIC SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	-1
Owner Name:	JASON WALDRON
Owner Address:	12 STORY STREET
Owner City:	ESSEX
Owner State:	MA
On Site Manager Name:	MATT BERGERON
On Site Manager Phone:	9787740749
Ins Comp:	STATE NATIONAL INSURANCE
Policy Number:	WC0868369
EXP Date:	9/15/2022
Facility Size:	47196
Transporter Name:	ECONOMIC ENVIRO TECHS, INC.
Transporter Address:	38 INTERVALE ROAD

PUBLIC SCHOOL (Continued) **S119811876**

Transporter City:	FITCHBURG
Transporter State:	MA
Final Site:	Not reported
Certified Name:	HENRY MOSES
Cert Sign Date:	09/17/2021
Certified Company:	ECONOMIC ENVIRO TECHS, INC.
Certified Phone:	9784233999
Entered_by:	HENRYMOSES
Name:	ESSEX ELEMENTARY
Address:	12 STORY STREET
City,State,Zip:	ESSEX, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	07/31/2006
End Date:	08/31/2006
Date Entered:	Not reported
Entry Date:	06/30/2006
Quantity Materical Removed SF:	1000.00
Quantity Material Removed LF:	4000.00
Project Description:	Spr,Trns
AR Tracking ID:	69979
Super Lic Number:	AS040577
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	2006
Sticker Number:	100035184
Form Type:	ANF-001
Fee Status:	Exempt
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	CLASSES AND CRAWL SPACES
Occupied:	-1
Contractor:	AC000196
Contract Type:	Off
Hours:	Week days: 7-7 Week end:
Project Type:	Renv
Abatement Process:	Glv,Fcontain
Location:	Indoors
Decon Process:	AS REQUIRED INCLUDING 453CMR6.14(4)(A)7.A IMPERVIOUS SURFACES
Disposal Methods:	AS REQUIRED
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	5
Owner Name:	MERSD
Owner Address:	36 LINCOLN STREET
Owner City:	MANCHESTER
Owner State:	MA
On Site Manager Name:	ROGER YOUNG
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported

PUBLIC SCHOOL (Continued) **S119811876**

Transporter Name:	NESM
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	39
Certified Name:	JIM DOYLE
Cert Sign Date:	06/30/2006
Certified Company:	NESM
Certified Phone:	Not reported
Entered_by:	Not reported

A2 **ESSEX ELEMENTARY SCHOOL** **MA ASBESTOS** **S122934933**
Target **12 STOREY STREET** **N/A**
Property **ESSEX, MA**

Site 2 of 4 in cluster A

Actual: **75 ft.**

ASBESTOS:

Name:	ESSEX ELEMENTARY SCHOOL
Address:	12 STOREY STREET
City,State,Zip:	ESSEX, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	07/28/2017
End Date:	07/28/2017
Date Entered:	Not reported
Entry Date:	07/14/2017
Quantity Materical Removed SF:	.00
Quantity Material Removed LF:	12.00
Project Description:	PIPEINSUL
AR Tracking ID:	272138
Super Lic Number:	AS053031
Monitor Lic Number:	AM060275
Lab Lic Number:	AA000122
Year:	2017
Sticker Number:	100268805
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	6172933670
Sub Town:	Not reported
Worksite:	KITCHEN STORAGE ARE
Occupied:	-1
Contractor:	AC000133
Contract Type:	WRITTEN
Hours:	7-5
Project Type:	Renv
Abatement Process:	Encp
Location:	INDOORS
Decon Process:	N/A
Disposal Methods:	ALL CM TO BE DOUBLED BAGGED IN 6 MIL LABELED ASBESTOS REMOVAL BAGS
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	-1
Owner Name:	ESSEX ELEMENTARY SCHOOL
Owner Address:	12 STOREY STREET

ESSEX ELEMENTARY SCHOOL (Continued) **S122934933**

Owner City:	ESSEX
Owner State:	MA
On Site Manager Name:	JAY PAGLIARULO
On Site Manager Phone:	6172933670
Ins Comp:	TRAVELERS INSURANCE
Policy Number:	0753N602
EXP Date:	5/13/2018
Facility Size:	5000
Transporter Name:	ASBESTOS FREE, INC.
Transporter Address:	42 BROADWAY
Transporter City:	WAKEFIELD
Transporter State:	MA
Final Site:	Not reported
Certified Name:	FRANK ARSENAULT
Cert Sign Date:	07/14/2017
Certified Company:	ASBESTOS FREE, INC.
Certified Phone:	7812454403
Entered_by:	MARGARET

A3 **ERNS** **2008891302**
Target **12 STORY ST** **N/A**
Property **ESSEX (County), MA**

Site 3 of 4 in cluster A

Actual: **75 ft.**

Incident Commons:

NRC Report #:	891302
Description of Incident:	CALLER REPORTED THAT THERE WAS AN OIL TRUCK DRIVING DOWN THE ROAD AND SPILLED MATERIALS ONTO THE GROUND WHILE DRIVING UNKNOWINGLY.
Type of Incident:	MOBILE
Incident Cause:	UNKNOWN
Incident Date Time:	2008-11-30 10:00:00
Incident DTG:	DISCOVERED
Incident Location:	Not reported
Loaction Address:	12 STORY ST
Location Street 1:	Not reported
Location Street 2:	Not reported
Location Nearest City:	Not reported
Location State:	MA
Location County:	ESSEX
Location Zip:	Not reported
Distance From City:	Not reported
Distance Units:	Not reported
Direction From City:	Not reported
Lat Deg:	Not reported
Lat Min:	Not reported
Lat Sec:	Not reported
Lat Quad:	Not reported
Long Deg:	Not reported
Long Min:	Not reported
Long Sec:	Not reported
Long Quad:	Not reported
Location Section:	Not reported
Location Township:	Not reported
Location range:	Not reported
Potential Range:	N

Incidents:

(Continued) **2008891302**

Year:	2008
NRC Report #:	891302
Aircraft Type:	Not reported
Aircraft Model:	Not reported
Aircraft ID:	Not reported
Aircraft Fuel Capacity:	Not reported
Aircraft Fuel Capacity Units:	Not reported
Aircraft Fuel on Board:	Not reported
Aircraft Fuel on Board Units:	Not reported
Aircraft Spot Number:	Not reported
Aircraft Hanger:	Not reported
Aircraft Runway Number:	Not reported
Road Mile Marker:	Not reported
Building ID:	Not reported
Type of Fixed Object:	Not reported
Power Generating Facility:	U
Generating Capacity:	Not reported
Type of Fuel:	Not reported
NPDES:	Not reported
NPDES Compliance:	U
Pipeline Type:	Not reported
DOT Regulated:	U
Pipeline Above Ground:	ABOVE
Exposed Underwater:	N
Pipeline Covered:	U
Railroad Hotline:	Not reported
Grade Crossing:	U
Location Subdivision:	Not reported
Railroad Milepost:	Not reported
Type Vehicle Involved:	Not reported
Crossing Device Type:	Not reported
Device Operational:	Y
DOT Crossing Number:	Not reported
Brake Failure:	U
Description of Tank:	Not reported
Tank Above Ground:	ABOVE
Transportable Container:	U
Tank Regulated:	U
Tank Regulated By:	Not reported
Tank ID:	Not reported
Capacity of Tank:	Not reported
Capacity of Tank Units:	Not reported
Actual Amount:	Not reported
Actual Amount Units:	Not reported
Platform Rig Name:	Not reported
Platform Letter:	Not reported
Location Area ID:	Not reported
Location Block ID:	Not reported
OCSG Number:	Not reported
OCSP Number:	Not reported
State Lease Number:	Not reported
Pier Dock Number:	Not reported
Berth Slip Number:	Not reported
Continuous Release Type:	Not reported
Initial Continuous Release No:	Not reported
Continuous Release Permit:	Not reported
Allision:	U

(Continued) **2008891302**

Type of Structure:	Not reported
Structure Name:	Not reported
Structure Operational:	U
Airbag Deployed:	U
Date Tiem Normal Service:	Not reported
Service Disruption Time:	Not reported
Service Disruption Units:	Not reported
Transit Bus Flag:	Not reported
CR Begin Date:	Not reported
CR End Date:	Not reported
CR Change Date:	Not reported
FBI Contact:	Not reported
FBI Contact Date Time:	Not reported
Sub Part C Testing Req:	XXX
Conductor Testing:	Not reported
Engineer Testing:	Not reported
Trainman Testing:	Not reported
Yard Foreman Testing:	Not reported
RCL Operator Testing:	Not reported
Brakeman Testing:	Not reported
Train Dispatcher Testing:	Not reported
Signalman Testing:	Not reported
Other Employee Testing:	Not reported
Unknown Testing:	Not reported
Passenger Handling:	Not reported
Passenger Route:	XXX
Passenger Delay:	XXX

Incident Details:

Year:	2008
NRC Report #:	891302
Fire Involved:	N
Fire Extinguished:	U
Any Evacuations:	N
Number Evacuated:	Not reported
Who Evacuated:	Not reported
Radius of Evacuation:	Not reported
Any Injuries:	N
Number Injured:	Not reported
Number Hospitalized:	Not reported
Any Fatalities:	N
Number Fatalities:	Not reported
Any Damages:	N
Damage Amount:	Not reported
Air Corridor Closed:	N
Air Corridor Desc:	Not reported
Air Closure Time:	Not reported
Waterway Closed:	N
Waterway Desc:	Not reported
Waterway Closure Time:	Not reported
Road Closed:	Y
Road Desc:	STORY ST
Road Closure Time:	1
Closure Direction:	N/S
Major Artery:	N
Track Closed:	N
Track Desc:	Not reported

(Continued) **2008891302**

Track Closure Time:	Not reported
Media Interest:	NONE
Medium Desc:	LAND
Additional Medium Info:	ROAD
Body of Water:	Not reported
Tributary of:	Not reported
Release Secured:	Y
Estimated Duration of Release:	Not reported
Release rate:	Not reported
Desc Remedial Action:	ABSORBENTS APPLIED, CLEAN UP UNDERWAY
State Agency on Scene:	NONE
State Agency Report Number:	NONE
Other Agency Notified:	Not reported
Weather Conditions:	OVERCAST
Air Temperature:	40
Wind Speed:	Not reported
Wind Direction:	Not reported
Water Supply Contaminated:	U
Sheen Size:	Not reported
Sheen Color:	Not reported
Direction of Sheen Travel:	Not reported
Sheen Odor Description:	Not reported
Wave Condition:	Not reported
Current Speed:	Not reported
Current Direction:	Not reported
Water Temperature:	Not reported
Track Close Dir:	Not reported
Empl Fatality:	Not reported
Pass Fatality:	Not reported
Community Impact:	Not reported
Wind Speed Unit:	Not reported
Employee Injuries:	Not reported
Passenger Injuries:	Not reported
Occupant Fatality:	Not reported
Current Speed Unit:	Not reported
Road Closure Units:	Not reported
Track CLosure Units:	Not reported
Sheen Size Units:	Not reported
Additional Info:	CALLER HAD NO ADDITIONAL INFORMATION.
State Agency Notified:	NONE
Federal Agency Notified:	NONE
nearest River Mile Marker:	Not reported
Sheen Size Length:	Not reported
Sheen Size Length Units:	Not reported
Sheen Size Width:	Not reported
Sheen Size Width Units:	Not reported
Offshore:	N
Duration Unit:	Not reported
Release Rate Unit:	Not reported
Release Rate Rate:	Not reported
Passengers Transferred:	NO

Mobile Detail:

Year:	2008
NRC Report #:	891302
Vehicle Number:	UNKNOWN
Trailer Number:	Not reported

(Continued) **2008891302**

Vehicle Own Fuel Capacity:	Not reported
Cargo Capacity:	Not reported
Amount of Cargo on Board:	Not reported
Hazmat Carrier:	U
Carrier Licensed:	U
Noncompliance With Hazmat:	U
Mobile Type:	TANKER TRUCK
Cargo Capacity Units:	Not reported
Amount of Cargo on Board Units:	Not reported
Vehicle Year:	Not reported
Vehicle Make:	Not reported
Vehicle Model:	Not reported

Calls:

Year:	2008
NRC Report #:	891302
Site ID:	2008891302
Date Time Received:	2008-11-30 10:43:36
Date Time Complete:	2008-11-30 10:50:52
Call Type:	INC
Responsible Company:	FOX HILL OIL
Responsible Org Type:	PRIVATE ENTERPRISE
Responsible City:	Not reported
Responsible State:	MA
Responsible Zip:	Not reported
On Behalf:	N
Source:	TELEPHONE

Material Involved:

Year:	2008
NRC Report #:	891302
Chris Code:	OTW
Case Number:	000000-00-0
UN Number:	Not reported
Amount of Material:	50
Unit of Measure:	GALLON(S)
Name of Material:	OIL, FUEL: NO. 2
If Reached Water:	NO
Amount in Water:	Not reported
Unit of Measure Reach Water:	Not reported

A4
Target
Property

ESSEX ELEMENTARY
12 STORY STREET
ESSEX, MA 01929

FINDS **1008331072**
N/A

Site 4 of 4 in cluster A

Actual:
75 ft.

FINDS:
Registry ID: 110022249388

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
The National Compliance Database (NCDB) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA).

ESSEX ELEMENTARY (Continued) **1008331072**

The Integrated Compliance Information System (ICIS) provides a database that, when complete, will contain integrated enforcement and compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained in ICIS by EPA in the Regional offices and it at Headquarters. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

5
NNW
< 1/8
0.023 mi.
124 ft.

NO LOCATION AID
17 STORY ST
ESSEX, MA 01929

MA SHWS **S104545374**
MA RELEASE **N/A**

Relative:
Lower

Actual:
73 ft.

SHWS:

Name:	NO LOCATION AID
Address:	17 STORY ST
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0012521
Source Type:	TRANSFORM
Release Town:	ESSEX
Notification Date:	05/26/1995
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	07/10/1995
Phase:	Not reported
Response Action Outcome:	A1
Oil Or Haz Material:	Oil

Release:

Name:	NO LOCATION AID
Address:	17 STORY ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0012521 / RAO
Primary ID:	Not reported
Official City:	ESSEX
Notification:	05/26/1995
Category:	TWO HR
Status Date:	07/10/1995
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type:	Oil

NO LOCATION AID (Continued) **S104545374**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/26/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	5/26/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RLFA
Action Status:	FOLFLD
Action Date:	5/30/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	6/8/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	7/10/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	7/10/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:

Chemical:	TRANSFORMER OIL
Quantity:	25 gallons
Chemical:	MINERAL OIL
Quantity:	25 gallons
Location Type:	ROADWAY
Source:	TRANSFORM

6
South
< 1/8
0.031 mi.
164 ft.

NO LOCATION AID
60 WESTERN AVE
ESSEX, MA 01929

MA SHWS **S102967526**
MA RELEASE **N/A**

Relative:
Higher

Actual:
79 ft.

SHWS:

Name:	NO LOCATION AID
Address:	60 WESTERN AVE
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0015915
Source Type:	PIPE
Release Town:	ESSEX
Notification Date:	01/14/1998
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	01/17/2001
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Not reported

Release:

Name:	NO LOCATION AID
Address:	60 WESTERN AVE
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0015915 / RAO
Primary ID:	Not reported
Official City:	ESSEX
Notification:	01/14/1998
Category:	TWO HR
Status Date:	01/17/2001
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	FLDISS
Action Date:	1/14/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	1/14/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLFLD
Action Date:	1/14/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

NO LOCATION AID (Continued) **S102967526**

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/14/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 1/17/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/17/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 1/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/31/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 10/27/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 11/3/1998

NO LOCATION AID (Continued) **S102967526**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/12/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/12/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 5/19/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/19/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/21/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/26/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/18/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/19/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL #2
Quantity: 400 gallons
Chemical: FUEL OIL #2
Quantity: 10 gallons
Location Type: RESIDNTIAL

NO LOCATION AID (Continued) **S102967526**

Source: PIPE

7
ESE
1/8-1/4
0.146 mi.
771 ft.

NO LOCATION AID
ACROSS FROM 3 BROOK PASTURE LN
ESSEX, MA

MA SHWS **S108962859**
MA RELEASE **N/A**

Relative:
Lower

Actual:
30 ft.

SHWS:

Name:	NO LOCATION AID
Address:	ACROSS FROM 3 BROOK PASTURE LN
City,State,Zip:	ESSEX, MA
Facility ID:	3-0027443
Source Type:	50 KVA
Release Town:	ESSEX
Notification Date:	01/16/2008
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	07/16/2008
Phase:	Not reported
Response Action Outcome:	A1
Oil Or Haz Material:	Oil

Name:	NO LOCATION AID
Address:	ACROSS FROM 3 BROOK PASTURE LN
City,State,Zip:	ESSEX, MA
Facility ID:	3-0027443
Source Type:	PADMOUNT
Release Town:	ESSEX
Notification Date:	01/16/2008
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	07/16/2008
Phase:	Not reported
Response Action Outcome:	A1
Oil Or Haz Material:	Oil

Name:	NO LOCATION AID
Address:	ACROSS FROM 3 BROOK PASTURE LN
City,State,Zip:	ESSEX, MA
Facility ID:	3-0027443
Source Type:	TRANSFORM
Release Town:	ESSEX
Notification Date:	01/16/2008
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	07/16/2008
Phase:	Not reported
Response Action Outcome:	A1
Oil Or Haz Material:	Oil

Release:

Name:	NO LOCATION AID
Address:	ACROSS FROM 3 BROOK PASTURE LN

NO LOCATION AID (Continued) **S108962859**

City,State,Zip: ESSEX, MA
Release Tracking Number/Current Status: 3-0027443 / RAO
Primary ID: Not reported
Official City: ESSEX
Notification: 01/16/2008
Category: TWO HR
Status Date: 07/16/2008
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 1/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/13/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 3/17/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/17/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/17/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/18/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

NO LOCATION AID (Continued) **S108962859**

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 3/19/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 3/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 7/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: NON-PCB MINERAL OIL DIELECTRIC FLUID
Quantity: 30 gallons
Chemical: MODF NON PCB
Quantity: 30 gallons
Location Type: RESIDNTIAL
Source: 50 KVA
Source: PADMOUNT
Source: TRANSFORM

B8 **NEAL AUTOMOTIVE** **MA HW GEN** **S112553343**
NE **15 WESTERN AVE** **N/A**
1/8-1/4 **ESSEX, MA 01929**
0.185 mi.
977 ft. **Site 1 of 2 in cluster B**

Relative: **Higher**
Actual: **92 ft.**

HW GEN:
Name: NEAL AUTOMOTIVE
Address: 15 WESTERN AVE
City,State,Zip: ESSEX, MA 01929
EPA Id: MAD985266402
RCRA Generator Status: VSQG
State Generator Status: VQG-MA

B9 **NEAL AUTOMOTIVE** **RCRA-VSQG** **1004717599**
NE **15 WESTERN AVE** **FINDS** **MAD985266402**
1/8-1/4 **ESSEX, MA 01929** **ECHO**
0.185 mi. **RI MANIFEST**
977 ft. **Site 2 of 2 in cluster B**

Relative: **Higher**
Actual: **92 ft.**

RCRA Listings:

Date Form Received by Agency:		19871119
Handler Name:		Neal Automotive
Handler Address:		15 Western Ave
Handler City,State,Zip:		ESSEX, MA 01929
EPA ID:		MAD985266402
Contact Name:		EDWARD-T NEAL
Contact Address:		15 WESTERN AVE
Contact City,State,Zip:		ESSEX, MA 01929
Contact Telephone:		508-768-6001
Contact Fax:		Not reported
Contact Email:		Not reported
Contact Title:		Not reported
EPA Region:		01
Land Type:		Private
Federal Waste Generator Description:		Conditionally Exempt Small Quantity Generator
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities
State District Owner:		Ma
State District:		N
Mailing Address:		15 WESTERN AVENUE
Mailing City,State,Zip:		ESSEX, MA 01929-0000
Owner Name:	Edward T Neal	
Owner Type:		Private
Operator Name:	Neal Automotive Repair	
Operator Type:		Private
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		No
Universal Waste Destination Facility:		No
Federal Universal Waste:		No
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		N
Sub-Part K Indicator:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
202 GPRA Corrective Action Baseline:		No
Subject to Corrective Action Universe:		No
Non-TSDFs Where RCRA CA has Been Imposed Universe:		No
Corrective Action Priority Ranking:		No NCAPS ranking
Environmental Control Indicator:		No
Institutional Control Indicator:		No

NEAL AUTOMOTIVE (Continued) **1004717599**

Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20171020
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	Ignitable Waste

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: NEAL AUTOMOTIVE REPAIR	
Legal Status:	Private
Date Became Current:	19971218
Date Ended Current:	Not reported
Owner/Operator Address:	15 WESTERN AVE
Owner/Operator City,State,Zip:	ESSEX, MA 01929
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: NEAL AUTOMOTIVE REPAIR	
Legal Status:	Private
Date Became Current:	19971218
Date Ended Current:	Not reported
Owner/Operator Address:	15 WESTERN AVE
Owner/Operator City,State,Zip:	ESSEX, MA 01929
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: EDWARD T NEAL	
Legal Status:	Private
Date Became Current:	20041016
Date Ended Current:	Not reported
Owner/Operator Address:	15 WESTERN AVE
Owner/Operator City,State,Zip:	ESSEX, MA 01929
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported

NEAL AUTOMOTIVE (Continued) **1004717599**

Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: EDWARD T NEAL
Legal Status: Private
Date Became Current: 20041016
Date Ended Current: Not reported
Owner/Operator Address: 15 WESTERN AVE
Owner/Operator City,State,Zip: ESSEX, MA 01929
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 19871119
Handler Name: NEALS AUTOMOTIVE REPAIR
Federal Waste Generator Description: Very Small Quantity Generator (formerly Conditionally-Exempt Small Quantity Generator
State District Owner: Ma
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 19871119
Handler Name: NEAL AUTOMOTIVE
Federal Waste Generator Description: Very Small Quantity Generator (formerly Conditionally-Exempt Small Quantity Generator
State District Owner: Ma
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 811111
NAICS Description: General Automotive Repair

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

NEAL AUTOMOTIVE (Continued) **1004717599**

FINDS:
Registry ID: 110003484042

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
The Massachusetts - Environmental Protection Integrated Computer System (MA-EPICS) is the central repository for all environmental protection data for the State of Massachusetts.
The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1004717599
Registry ID:	110003484042
DFR URL:	
Name:	NEAL AUTOMOTIVE REPAIR
Address:	15 Western Ave
City,State,Zip:	ESSEX, MA 01929

RI MANIFEST:

Name:	NEAL'S AUTOMATIC TRANS
Address:	15 WESTERN AVE
City,State,Zip:	ESSEX, MA 01929
EPA Id:	MAD985266402
GEN Cert Date:	4/13/2005
Manifest Document Number:	RIG0251040
Waste Description:	RQ WASTE PETROLEUM DISTILLATES NOS
TSDF Id:	RID084802842
TSDF Name:	United Oil Recovery Inc
Qty:	20
WT/Vol Units:	G
TSDF Date:	4/13/2005
Transporter 2 Id:	Not reported
Item Number:	25273
Transporter 2 Name:	Not reported
Transporter Name 2:	UNITED INDUSTRIAL SERVICES
Transporter EPAID:	CTD021816889
Transporter Receipt Date:	4/13/2005
Number Of Containers:	1
Container Type:	DM
Waste Code1:	D001
Waste Code2:	D039
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Fee Exempt Code:	Not reported
Comment:	Not reported

NEAL AUTOMOTIVE (Continued) **1004717599**

Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
Quarter:	Not reported
Transporter Contact Name:	Not reported
Transporter Contact Email:	Not reported
Filing Date:	Not reported
Total Fee:	Not reported
Billing Name:	Not reported
Paid Date:	Not reported
Paid Time:	Not reported
Facility Receipt Date:	Not reported
Fee:	Not reported
Manifest Created Date:	Not reported
Manifest Updated Date:	Not reported

RI MANIFEST:

Transporter Receipt Date:	10/19/2007
Number Of Containers:	1
Container Type:	DM
Waste Code1:	D001
Waste Code2:	D039
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	United Oil Recovery Inc
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD985266402
Manifest Docket Number:	000082553UIS
Quarter:	Not reported
Waste Description:	RQ WASTE PETROLEUM DISTILLATES NOS
Transporter Contact Name:	Not reported
Quantity:	20
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	a
Transporter Name:	UNITED INDUSTRIAL SERVICES
Billing Name:	Not reported
Transporter EPA ID:	CTD021816889
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	10/19/2007
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	10/22/2007
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported

NEAL AUTOMOTIVE (Continued) **1004717599**

Transporter Receipt Date:	10/19/2007
Number Of Containers:	1
Container Type:	DM
Waste Code1:	D001
Waste Code2:	D039
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	United Oil Recovery Inc
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD985266402
Manifest Docket Number:	000082553UIS
Quarter:	Not reported
Waste Description:	RQ WASTE PETROLEUM DISTILLATES NOS
Transporter Contact Name:	Not reported
Quantity:	20
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	a
Transporter Name:	UNITED INDUSTRIAL SERVICES
Billing Name:	Not reported
Transporter EPA ID:	CTD021816889
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	10/19/2007
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	10/22/2007
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported

Transporter Receipt Date:	8/21/2006
Number Of Containers:	1
Container Type:	DM
Waste Code1:	D001
Waste Code2:	D039
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	United Oil Recovery Inc
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported

NEAL AUTOMOTIVE (Continued) **1004717599**

EPA ID:	MAD985266402
Manifest Docket Number:	RIG0292215
Quarter:	Not reported
Waste Description:	RQ WASTE PETROLEUM DISTILLATES NOS
Transporter Contact Name:	Not reported
Quantity:	20
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	a
Transporter Name:	UNITED INDUSTRIAL SERVICES
Billing Name:	Not reported
Transporter EPA ID:	CTD021816889
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	8/21/2006
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	8/21/2006
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported
Transporter Receipt Date:	3/10/2006
Number Of Containers:	1
Container Type:	DM
Waste Code1:	D001
Waste Code2:	D039
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	United Oil Recovery Inc
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD985266402
Manifest Docket Number:	RIG0282110
Quarter:	Not reported
Waste Description:	RQ WASTE PETROLEUM DISTILLATES NOS
Transporter Contact Name:	Not reported
Quantity:	20
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	a
Transporter Name:	UNITED INDUSTRIAL SERVICES
Billing Name:	Not reported
Transporter EPA ID:	CTD021816889
Date Paid:	Not reported
Time Paid:	Not reported

NEAL AUTOMOTIVE (Continued) **1004717599**

GEN Cert Date:	3/10/2006
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	3/10/2006
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported
Transporter Receipt Date:	8/21/2006
Number Of Containers:	1
Container Type:	DM
Waste Code1:	D001
Waste Code2:	D039
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	United Oil Recovery Inc
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD985266402
Manifest Docket Number:	RIG0292215
Quarter:	Not reported
Waste Description:	RQ WASTE PETROLEUM DISTILLATES NOS
Transporter Contact Name:	Not reported
Quantity:	20
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	a
Transporter Name:	UNITED INDUSTRIAL SERVICES
Billing Name:	Not reported
Transporter EPA ID:	CTD021816889
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	8/21/2006
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	8/21/2006
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported
Transporter Receipt Date:	3/10/2006
Number Of Containers:	1
Container Type:	DM
Waste Code1:	D001
Waste Code2:	D039
Waste Code3:	Not reported
Waste Code4:	Not reported

NEAL AUTOMOTIVE (Continued) **1004717599**

Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	United Oil Recovery Inc
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD985266402
Manifest Docket Number:	RIG0282110
Quarter:	Not reported
Waste Description:	RQ WASTE PETROLEUM DISTILLATES NOS
Transporter Contact Name:	Not reported
Quantity:	20
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	a
Transporter Name:	UNITED INDUSTRIAL SERVICES
Billing Name:	Not reported
Transporter EPA ID:	CTD021816889
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	3/10/2006
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	3/10/2006
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported
Transporter Receipt Date:	4/13/2005
Number Of Containers:	1
Container Type:	DM
Waste Code1:	D001
Waste Code2:	D039
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	United Oil Recovery Inc
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD985266402
Manifest Docket Number:	RIG0251040
Quarter:	Not reported
Waste Description:	RQ WASTE PETROLEUM DISTILLATES NOS
Transporter Contact Name:	Not reported
Quantity:	20
Transporter Contact Email:	Not reported

NEAL AUTOMOTIVE (Continued) **1004717599**

WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	a
Transporter Name:	UNITED INDUSTRIAL SERVICES
Billing Name:	Not reported
Transporter EPA ID:	CTD021816889
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	4/13/2005
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	4/13/2005
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported
Transporter Receipt Date:	4/13/2005
Number Of Containers:	1
Container Type:	DM
Waste Code1:	D001
Waste Code2:	D039
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	United Oil Recovery Inc
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD985266402
Manifest Docket Number:	RIG0251040
Quarter:	Not reported
Waste Description:	RQ WASTE PETROLEUM DISTILLATES NOS
Transporter Contact Name:	Not reported
Quantity:	20
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	25273
Transporter Name:	UNITED INDUSTRIAL SERVICES
Billing Name:	Not reported
Transporter EPA ID:	CTD021816889
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	4/13/2005
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	4/13/2005
Transporter 2 ID:	Not reported

NEAL AUTOMOTIVE (Continued) **1004717599**

Manifest Updated Date:	Not reported
Transporter Receipt Date:	6/29/2005
Number Of Containers:	1
Container Type:	DM
Waste Code1:	D001
Waste Code2:	D039
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	United Oil Recovery Inc
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD985266402
Manifest Docket Number:	RIG0259382
Quarter:	Not reported
Waste Description:	RQ WASTE PETROLEUM DISTILLATES NOS
Transporter Contact Name:	Not reported
Quantity:	29
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	a
Transporter Name:	UNITED INDUSTRIAL SERVICES
Billing Name:	Not reported
Transporter EPA ID:	CTD021816889
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	6/29/2005
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	6/29/2005
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported
Transporter Receipt Date:	6/29/2005
Number Of Containers:	1
Container Type:	DM
Waste Code1:	D001
Waste Code2:	D039
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	United Oil Recovery Inc
TSDF Id:	RID084802842
Transporter Name 2:	Not reported

NEAL AUTOMOTIVE (Continued) **1004717599**

Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD985266402
Manifest Docket Number:	RIG0259382
Quarter:	Not reported
Waste Description:	RQ WASTE PETROLEUM DISTILLATES NOS
Transporter Contact Name:	Not reported
Quantity:	29
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	11980
Transporter Name:	UNITED INDUSTRIAL SERVICES
Billing Name:	Not reported
Transporter EPA ID:	CTD021816889
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	6/29/2005
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	6/29/2005
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported

Transporter Receipt Date:	6/29/2005
Number Of Containers:	1
Container Type:	DM
Waste Code1:	D001
Waste Code2:	D039
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	United Oil Recovery Inc
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD985266402
Manifest Docket Number:	RIG0259382
Quarter:	Not reported
Waste Description:	RQ WASTE PETROLEUM DISTILLATES NOS
Transporter Contact Name:	Not reported
Quantity:	29
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	11980
Transporter Name:	UNITED INDUSTRIAL SERVICES
Billing Name:	Not reported
Transporter EPA ID:	CTD021816889

NEAL AUTOMOTIVE (Continued) **1004717599**

Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	6/29/2005
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	6/29/2005
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported

Click this hyperlink while viewing on your computer to access
26 additional RI_MANIFEST: record(s) in the EDR Site Report.

10
SSE
1/4-1/2
0.267 mi.
1408 ft.

ESSEX SANITARY LANDFILL **ODI** **1007444480**
OFF LANDING ROAD **N/A**
ESSEX, MA

Relative:
Lower

Actual:
6 ft.

ODI:

Non Compliance Category:	06
Latitude:	42 37 40
Longitude:	070 47 10

C11
East
1/4-1/2
0.323 mi.
1703 ft.

NO LOCATION AID **MA SHWS** **S106512763**
MARTIN ST AND SHEPARD MEMORIAL **MA RELEASE** **N/A**
ESSEX, MA 01929

Site 1 of 2 in cluster C

Relative:
Lower

Actual:
22 ft.

SHWS:

Name:	NO LOCATION AID
Address:	MARTIN ST AND SHEPARD MEMORIAL
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0022999
Source Type:	DRUMS
Release Town:	ESSEX
Notification Date:	07/10/2003
Category:	120 DY
Associated ID:	Not reported
Current Status:	URAM
Status Date:	07/17/2003
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Release:

Name:	NO LOCATION AID
Address:	MARTIN ST AND SHEPARD MEMORIAL
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0022999 / URAM
Primary ID:	Not reported
Official City:	ESSEX
Notification:	07/10/2003

NO LOCATION AID (Continued) **S106512763**

Category: 120 DY
Status Date: 07/17/2003
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/3/2003
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/17/2003
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notice of Intent to Conduct a URAM
Action Date: 7/10/2003
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/10/2003
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/17/2003
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notification of URAM Received
Action Date: 7/17/2003
Response Action Outcome: Not reported

Chemicals:

Chemical: ASPHALT
Quantity: Not reported
Chemical: UNKNOWN
Quantity: 41000 milligrams per kilogram
Location Type: ROADWAY
Source: DRUMS

D12 **BOTHWAY FARM** **MA SHWS** **S100257102**
SSE **SOUTHERN AVE** **MA SWF/LF** **N/A**
1/4-1/2 **ESSEX, MA 01929** **MA INST CONTROL**
0.331 mi. **MA RELEASE**
1747 ft. **Site 1 of 2 in cluster D** **MA ASBESTOS**

Relative: Lower

Actual: 33 ft.

SHWS:

Name:	BOTHWAY FARM
Address:	SOUTHERN AVE
City,State,Zip:	ESSEX, MA 01929
Facility ID:	3-0011464
Source Type:	UNKNOWN
Release Town:	ESSEX
Notification Date:	08/15/1994
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	11/29/1995
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

LF:

Name:	ESSEX LANDFILL
Address:	30 LANDING RD
City,State,Zip:	ESSEX, MA 01929
Facility Phone:	Not reported
Annual Tons for 1995:	Not reported
Annual Tons for 1996:	Not reported
Annual Tons for 1997:	Not reported
Annual Tons for 1998:	Not reported
Annual Tons for 1999:	Not reported
Annual Tons for 2000:	Not reported
Annual Tons for 2001:	Not reported
Annual Tons for 2002:	Not reported
Annual Tons for 2003:	Not reported
Annual Tons for 2004:	Not reported
Annual Tons for 2005:	Not reported
Annual Tons for 2006:	Not reported
Annual Tons for 2007:	Not reported
Annual Tons for 2008:	Not reported
Annual Tons for 2009:	Not reported
Annual Tons for 2010:	Not reported
Annual Tons for 2011:	Not reported
Annual Tons for 2012:	Not reported
Annual Tons for 2013:	Not reported
Annual Tons for 2014:	Not reported
Annual Tons for 2015:	Not reported
Reg Obj Acct ID Num For Each Solid Waste Operation:	172508
Days of Operation:	Not reported
Note On The Physical Location Of The Site:	Not reported
Acres:	14
Active Year:	Not reported
Classification Group:	Land Disposal
Current Or Most Recent Closed Classification:	CSU-LF
Description Of The Last Classification:	Landfill Closure Status Unknown
Close Year:	Not reported
Name Of The Organization:	TOWN OF ESSEX
Contacts Organization Type:	Municipal

BOTHWAY FARM (Continued) **S100257102**

Contact Persons Name And Title:	BRUCE JULIAN, DPW DIRECTOR
Contact Phone Including Extension:	(978)768-6262
Contact Mailing Street Address:	MARTIN STREET
Contacts Mailing City, State, Zip:	ESSEX, MA 01929
Inactive Year:	1985
Land Disposal Closure Status:	Incomplete
Land Disposal Only, Category Waste Disposed:	MSW
Landfills Liner:	Not Lined
Municipality That The Operation Is Located In:	ESSEX
Alpha-Numeric Identification Code:	SL0092.001
Numeric-Only Portion Of The Identification Code:	92.001
Region:	Northeast (Wilmington)
Org That Pays Any Annual Compliance Fee And/Or Permittee:	Not reported
Responsible Party Organization Type:	Not reported
Responsible Party Mailing Street Address Line 1:	Not reported
Responsible Party Mailing Street Address Line 2:	Not reported
Responsible Party Mailing City, State, Zip:	Not reported
Responsible Party Telephone Inc Extension:	Not reported
Maximum Permitted Tons Per Day:	Not reported
Current Operational Status:	Inactive

Name:	ESSEX TRANSFER STATION
Address:	30 LANDING RD
City,State,Zip:	ESSEX, MA 01929
Facility Phone:	(978)768-6262
Annual Tons for 1995:	1417
Annual Tons for 1996:	Not reported
Annual Tons for 1997:	Not reported
Annual Tons for 1998:	1538
Annual Tons for 1999:	1578
Annual Tons for 2000:	1572
Annual Tons for 2001:	1635
Annual Tons for 2002:	1730
Annual Tons for 2003:	1678
Annual Tons for 2004:	1771
Annual Tons for 2005:	1808
Annual Tons for 2006:	1869
Annual Tons for 2007:	1726
Annual Tons for 2008:	1685
Annual Tons for 2009:	1724
Annual Tons for 2010:	Not reported
Annual Tons for 2011:	Not reported
Annual Tons for 2012:	Not reported
Annual Tons for 2013:	Not reported
Annual Tons for 2014:	Not reported
Annual Tons for 2015:	Not reported
Reg Obj Acct ID Num For Each Solid Waste Operation:	173155
Days of Operation:	208
Note On The Physical Location Of The Site:	Not reported
Acres:	Not reported
Active Year:	1983
Classification Group:	Handling/Transfer
Current Or Most Recent Closed Classification:	SMTRAN
Description Of The Last Classification:	Small Transfer Station
Close Year:	Not reported
Name Of The Organization:	TOWN OF ESSEX
Contacts Organization Type:	Municipal

BOTHWAY FARM (Continued) **S100257102**

Contact Persons Name And Title:	PAUL GOODWIN, SUPERINTENDENT
Contact Phone Including Extension:	(978)768-6262
Contact Mailing Street Address:	44 CENTENNIAL GROVE RD
Contacts Mailing City, State, Zip:	ESSEX, MA 01929
Inactive Year:	Not reported
Land Disposal Closure Status:	n/a
Land Disposal Only, Category Waste Disposed:	n/a
Landfills Liner:	n/a
Municipality That The Operation Is Located In:	ESSEX
Alpha-Numeric Identification Code:	TR0092.003
Numeric-Only Portion Of The Identification Code:	92.003
Region:	Northeast (Wilmington)
Org That Pays Any Annual Compliance Fee And/Or Permittee:	Not reported
Responsible Party Organization Type:	Not reported
Responsible Party Mailing Street Address Line 1:	Not reported
Responsible Party Mailing Street Address Line 2:	Not reported
Responsible Party Mailing City, State, Zip:	Not reported
Responsible Party Telephone Inc Extension:	Not reported
Maximum Permitted Tons Per Day:	6
Current Operational Status:	Active

LF PROFILES:

Site Type Code:	MSW
Site Type Desc:	Municipal Solid Waste
Status:	Inactive
Owner Type:	Municipal
Stat Active Yr:	Not reported
Stat Inactive Yr:	1985
Stat Close Yr:	Not reported
Lined?:	Not Lined
Cap Status:	Incomplete
Cap Cert Date:	Not reported
Post Closure Permit:	APPROV 8/20/2004
Post Closure Use:	POST-CLOSURE USE: DPW GARAGE
LF Gas Energy:	Not reported
Acres:	13.68
Acres Doc:	EL
Acres Doc Desc:	Estimated Location
Electrical Provider:	National Grid
Dist To Trans Miles:	8.01
Wind Speed 30m:	5.1688
Wind Speed 50m:	5.8088
Wind Speed 100m:	6.8485
Wind Speed 70m:	6.3484
Mass DEP FMF DB Id:	39261

INST CONTROL:

Name:	BOTHWAY FARM
Address:	SOUTHERN AVE
City,State,Zip:	ESSEX, MA 01929
Release Tracking Number:	3-0011464
Action Type:	AUL
Action Stat:	RECPT
Action Date:	11/29/1995
Response Action Outcome:	-

BOTHWAY FARM (Continued) **S100257102**

Name: BOTHWAY FARM
Address: SOUTHERN AVE
City,State,Zip: ESSEX, MA 01929
Release Tracking Number: 3-0011464
Action Type: AUL
Action Stat: TERMIN
Action Date: 08/13/2002
Response Action Outcome: -

Release:
Name: BOTHWAY FARM
Address: SOUTHERN AVE
City,State,Zip: ESSEX, MA 01929
Release Tracking Number/Current Status: 3-0011464 / RAO
Primary ID: Not reported
Official City: ESSEX
Notification: 08/15/1994
Category: TWO HR
Status Date: 11/29/1995
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/14/1994
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 10/14/1994
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 10/14/1994
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/29/1995
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/29/1995
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/24/1995
Response Action Outcome: Not reported

BOTHWAY FARM (Continued) **S100257102**

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/16/2002
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 4/16/2002
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/17/1995
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 7/23/1999
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 7/24/1995
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 7/6/1995
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 7/6/1995
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 8/12/1999
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Action Status or AUL Terminated
Action Date: 8/13/2002
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 8/13/2002
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 8/13/2002
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only

BOTHWAY FARM (Continued) **S100257102**

Action Date: 8/15/1994
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/15/1994
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 8/18/1995
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/25/1994
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 8/28/1995
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/28/1995
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 8/6/1999
Response Action Outcome: Not reported

Chemicals:
Chemical: ARSENIC
Quantity: 113 micrograms per gallon
Chemical: LEAD
Quantity: 810 parts per million
Chemical: LEAD
Quantity: 810 micrograms per gallon
Chemical: ARSENIC
Quantity: 130 parts per million
Location Type: RESIDNTIAL
Source: UNKNOWN

ASBESTOS:
Name: TOWN OF ESSEX
Address: 30 LANDING RD
City,State,Zip: ESSEX, MA
Notification: Not reported
DEP Region: Not reported
Notifiers Name: Not reported
Start Date: 08/07/2020
End Date: 08/07/2020
Date Entered: Not reported
Entry Date: 08/04/2020

BOTHWAY FARM (Continued) **S100257102**

Quantity Materical Removed SF:	0
Quantity Material Removed LF:	10
Project Description:	TRANSPIPE
AR Tracking ID:	347779
Super Lic Number:	AS901713
Monitor Lic Number:	AA000179
Lab Lic Number:	AA000179
Year:	2020
Sticker Number:	100331786
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	9783616158
Sub Town:	Not reported
Worksite:	GARAGE
Occupied:	0
Contractor:	AC000806
Contract Type:	WRITTEN
Hours:	0700-1530
Project Type:	Oth:PICK UP
Abatement Process:	Disp
Location:	OUTDOORS
Decon Process:	ALL APLLICABLE
Disposal Methods:	ALL APPLICABLE
Facility Usage:	PUBLIC WORKS
Waiver Given:	Not reported
DEP Waiver Number:	NAW2008598
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	TOWN OF ESSEX
Owner Address:	30 LANDING RD
Owner City:	ESSEX
Owner State:	MA
On Site Manager Name:	NA
On Site Manager Phone:	1111111111
Ins Comp:	HAYS COMPANIES
Policy Number:	R2WC528067
EXP Date:	11/11/2020
Facility Size:	45000
Transporter Name:	PENIEL ENVIRONMENTAL
Transporter Address:	778 ELM ST
Transporter City:	MILFORD
Transporter State:	NH
Final Site:	Not reported
Certified Name:	THOMAS MORNEAULT
Cert Sign Date:	08/04/2020
Certified Company:	PENIEL ENVIRONMENTAL
Certified Phone:	6033161691
Entered_by:	TMORNEAULT

D13 **TRANSFER STATION** **MA MERCURY** **S113670346**
SSE **30 LANDING ROAD** **N/A**
1/4-1/2 **ESSEX, MA**
0.331 mi.
1747 ft. **Site 2 of 2 in cluster D**

Relative: **Lower**
Actual: **33 ft.**

MERCURY:

Name:	TRANSFER STATION
Address:	30 LANDING ROAD
City,State,Zip:	ESSEX, MA
Hours1: Tues, Fri, Sat: 7:30am-3pm	
Work Phone:	(978) 768-6262
Button Batteries B:	Yes
Button Batteries R:	Yes
Fluorescent Lamps (Incl# Cfls) B:	Not reported
Fluorescent Lamps (Incl# Cfls) R:	Yes
Thermostats B:	Yes
Thermostats R:	Not reported
Electronics-Inc Flat Panel TV,Laptops B:	Yes
Electronics-Inc Flat Panel TV,Laptops R:	Yes
Other Hg Products-Thermometers Blood Press Cuffs B:	Not reported
Other Hg Products-Thermometers Blood Press Cuffs R:	Yes
Comments:	Residents of Essex only with sticker.
Municipality:	ESSEX
Site Status:	Not reported
End Date:	Not reported
Add Date:	8/25/2023
Display On Map:	YES
Accepts Small Business:	Not reported
Small Business Comments:	Not reported

C14 **WHITEY'S GARAGE** **MA SHWS** **1000404179**
East **16 MARTIN ST** **MA UST** **N/A**
1/4-1/2 **ESSEX, MA 01929** **MA RELEASE**
0.356 mi.
1882 ft. **Site 2 of 2 in cluster C**

Relative: **Lower**
Actual: **20 ft.**

SHWS:

Name:	NO LOCATION AID
Address:	16 MARTIN ST
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0021187
Source Type:	Not reported
Release Town:	ESSEX
Notification Date:	10/09/2001
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	07/29/2003
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Hazardous Material

UST:

Facility ID:	19184
Name:	WHITEY'S GARAGE
Address:	16 MARTIN ST
Address 2:	Not reported
City,State,Zip:	ESSEX, MA 01929

WHITEY'S GARAGE (Continued) **1000404179**

Owner ID:	8871
Owner:	TERMINAL GARAGE INC
Owner Address:	11 COUNTY RD
Owner Address 2:	Not reported
Owner City,State,Zip:	ESSEX, MA 01929
Telephone:	Not reported
Description:	Retail Motor Vehicle Fuel Dispensing
Contact Name:	Not reported
Contact Address:	Not reported
Contact Address 2:	Not reported
Contact City,State,Zip:	Not reported
Contact Email:	Not reported
Update:	2009-02-06 00:00:00
Update By:	Not reported
Facility Status:	CLOSED
Longitude:	-70.78171
Latitude:	42.63242

URL:

UST:

Facility ID:	19184
Tank ID:	2
Capacity:	1000.00000
Substance:	Diesel
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	05/06/1936
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	10/01/1988
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

Facility ID:	19184
Tank ID:	7
Capacity:	4000.00000
Substance:	Gasoline
Tank Construct:	Single-walled metal tank (cathodic protection required)

WHITEY'S GARAGE (Continued) **1000404179**

Tank Usage:	Motor Vehicle
Pipe Construct:	Single-walled metal (Corrosion protection required)
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	12/01/1988
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	08/18/1999
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	In-Tank Monitoring System
Pipe Leak Detection:	Not reported

Facility ID:	19184
Tank ID:	4
Capacity:	1000.00000
Substance:	Gasoline
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	05/06/1936
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	10/01/1988
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported

WHITEY'S GARAGE (Continued) **1000404179**

Pipe Leak Detection:	Not reported
Facility ID:	19184
Tank ID:	3
Capacity:	1000.00000
Substance:	Gasoline
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	05/06/1936
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	10/01/1988
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported
Facility ID:	19184
Tank ID:	6
Capacity:	4000.00000
Substance:	Diesel
Tank Construct:	Single-walled metal tank (cathodic protection required)
Tank Usage:	Motor Vehicle
Pipe Construct:	Single-walled metal (Corrosion protection required)
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	12/01/1988
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed

WHITEY'S GARAGE (Continued) **1000404179**

Status Date:	08/18/1999
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	In-Tank Monitoring System
Pipe Leak Detection:	Not reported
Facility ID:	19184
Tank ID:	5
Capacity:	4000.00000
Substance:	Gasoline
Tank Construct:	Single-walled metal tank (cathodic protection required)
Tank Usage:	Motor Vehicle
Pipe Construct:	Single-walled metal (Corrosion protection required)
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	12/01/1988
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	08/18/1999
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	In-Tank Monitoring System
Pipe Leak Detection:	Not reported
Facility ID:	19184
Tank ID:	1
Capacity:	4000.00000
Substance:	Gasoline
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	05/06/1974
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported

WHITEY'S GARAGE (Continued) **1000404179**

Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	10/01/1988
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

Release:

Name:	NO LOCATION AID
Address:	16 MARTIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0021187 / RAO
Primary ID:	Not reported
Official City:	ESSEX
Notification:	10/09/2001
Category:	120 DY
Status Date:	07/29/2003
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/15/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	1/21/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/15/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	10/15/2002

WHITEY'S GARAGE (Continued) **1000404179**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/15/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/9/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/9/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 3/26/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/26/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/19/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: LEAD
Quantity: 301 milligrams per kilogram
Chemical: 2-METHYLNAPHTHALENE
Quantity: 28 milligrams per kilogram
Chemical: NAPHTHALENE
Quantity: 69 milligrams per kilogram

E15
ENE
1/4-1/2
0.373 mi.
1971 ft.

NO LOCATION AID
8 MAIN ST
ESSEX, MA 01929

Site 1 of 4 in cluster E

MA LUST **S132538793**
MA INST CONTROL **N/A**
MA RELEASE

Relative:
Lower

Actual:
22 ft.

LUST:

Facility:

Name:	NO LOCATION AID
Address:	8 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Current Status:	**Response Action Outcome**
Release Tracking Number/Current Status:	3-0025432 / RAO
Status Date:	12/22/2011
Source Type:	UST
Release Town:	ESSEX
Notification Date:	11/18/2005
Category:	120 DY
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material:	Not reported
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	TOTAL PETROLEUM HYDROCARBONS (TPH)
Quantity:	3200 milligrams per kilogram

Actions:

Action Type:	Activity and Use Limitation
Action Status:	Legal Notice Published
Action Date:	1/10/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Tier Classification
Action Status:	Legal Notice Published
Action Date:	1/11/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	10/1/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT

NO LOCATION AID (Continued) **S132538793**

Action Date: 10/10/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 10/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/18/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/18/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/27/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/27/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/27/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 11/27/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 11/27/2006

NO LOCATION AID (Continued) **S132538793**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/22/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/22/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/7/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Action Status or AUL Terminated
Action Date: 4/12/2018
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 5/5/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 5/5/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 6/4/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 8/12/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

NO LOCATION AID (Continued) **S132538793**

reduced to background and an Activity and use Limitation (AUL) has been implemented.

INST CONTROL:

Name:	NO LOCATION AID
Address:	8 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number:	3-0025432
Action Type:	AUL
Action Stat:	LEGNOT
Action Date:	01/10/2012
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Name:	NO LOCATION AID
Address:	8 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number:	3-0025432
Action Type:	AUL
Action Stat:	RECPT
Action Date:	12/22/2011
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Name:	NO LOCATION AID
Address:	8 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number:	3-0025432
Action Type:	AUL
Action Stat:	TERMIN
Action Date:	04/12/2018
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:

Name:	NO LOCATION AID
Address:	8 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0025432 / RAO
Primary ID:	Not reported
Official City:	ESSEX
Notification:	11/18/2005
Category:	120 DY
Status Date:	12/22/2011
Phase:	Not reported
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type:	Not reported

NO LOCATION AID (Continued) **S132538793**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Activity and Use Limitation
Action Status:	Legal Notice Published
Action Date:	1/10/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Tier Classification
Action Status:	Legal Notice Published
Action Date:	1/11/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	10/1/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	10/10/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Compliance and Enforcement Action
Action Status:	ACO
Action Date:	10/20/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/18/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	11/18/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	11/27/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

NO LOCATION AID (Continued) **S132538793**

been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/27/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/27/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 11/27/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 11/27/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/22/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/22/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/7/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Action Status or AUL Terminated
Action Date: 4/12/2018
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

NO LOCATION AID (Continued) **S132538793**

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 5/5/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 5/5/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 6/4/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 8/12/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: TOTAL PETROLEUM HYDROCARBONS (TPH)
Quantity: 3200 milligrams per kilogram
Source: UST

E16 **NO LOCATION AID** **UST FINDER RELEASE** **1029055258**
ENE **8 MAIN ST** **N/A**
1/4-1/2 **ESSEX, MA 19290**
0.373 mi.
1971 ft. **Site 2 of 4 in cluster E**

Relative: **Lower**
Actual: **22 ft.**

UST FINDER RELEASE:
Object ID: 201067
Facility ID: Not reported
Lust ID: MA3-0025432
Name: NO LOCATION AID
Address: 8 MAIN ST
City,State,Zip: ESSEX, MA 19290000
Address Match Type: PointAddress
Reported Date: 2005/11/18 15:59:59+00
Status: No Further Action
Substance: Not reported
Population within 1500ft: 305
Domestic Wells within 1500ft: 8
Land Use: Developed, Medium Intensity
Within SPA: No
SPA PWS Facility ID: Not reported
SPA Water Type: Not reported
SPA Facility Type: Not reported

NO LOCATION AID (Continued) **1029055258**

SPA HUC12:	Not reported
Within WHPA:	No
WHPA PWS Facility ID:	Not reported
WHPA Water Type:	Not reported
WHPA Facility Type:	Not reported
WHPA HUC12:	Not reported
Within 100yr Floodplain:	No
Tribe:	Not reported
EPA Region:	1
NFA Letter 1:	Not reported
NFA Letter 2:	Not reported
NFA Letter 3:	Not reported
NFA Letter 4:	Not reported
Closed With Residual Contaminate:	Not reported
Coordinate Source:	Geocode
X Coord:	-70.7820956699999
Y Coord:	42.63511055
Latitude:	42.63511055
Longitude:	-70.78209567

E17 **ERNIE'S SERVICE STATION** **UST FINDER RELEASE** **1028953272**
ENE **8 MAIN STREET** **N/A**
1/4-1/2 **ESSEX, MA 0**
0.373 mi.
1971 ft. **Site 3 of 4 in cluster E**

Relative: **Lower**
Actual: **22 ft.**

UST FINDER RELEASE:

Object ID:	201525
Facility ID:	Not reported
Lust ID:	MA3-0034160
Name:	ERNIE'S SERVICE STATION
Address:	8 MAIN STREET
City,State,Zip:	ESSEX, MA 0
Address Match Type:	PointAddress
Reported Date:	2017/04/06 15:59:59+00
Status:	No Further Action
Substance:	Not reported
Population within 1500ft:	305
Domestic Wells within 1500ft:	8
Land Use:	Developed, Medium Intensity
Within SPA:	No
SPA PWS Facility ID:	Not reported
SPA Water Type:	Not reported
SPA Facility Type:	Not reported
SPA HUC12:	Not reported
Within WHPA:	No
WHPA PWS Facility ID:	Not reported
WHPA Water Type:	Not reported
WHPA Facility Type:	Not reported
WHPA HUC12:	Not reported
Within 100yr Floodplain:	No
Tribe:	Not reported
EPA Region:	1
NFA Letter 1:	Not reported
NFA Letter 2:	Not reported
NFA Letter 3:	Not reported
NFA Letter 4:	Not reported
Closed With Residual Contaminate:	Not reported

ERNIE'S SERVICE STATION (Continued) **1028953272**

Coordinate Source:	Geocode
X Coord:	-70.7820956699999
Y Coord:	42.63511055
Latitude:	42.63511055
Longitude:	-70.78209567

E18 **ERNIE'S SERVICE STATION** **MA SHWS** **S132542190**
ENE **8 MAIN STREET** **MA LUST** **N/A**
1/4-1/2 **ESSEX, MA** **MA INST CONTROL**
0.373 mi. **MA RELEASE**
1971 ft. **Site 4 of 4 in cluster E**

Relative:
Lower

Actual:
22 ft.

SHWS:

Name:	ERNIE'S SERVICE STATION
Address:	8 MAIN STREET
City,State,Zip:	ESSEX, MA
Facility ID:	3-0034160
Source Type:	TANK
Release Town:	ESSEX
Notification Date:	04/06/2017
Category:	72 HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	04/13/2018
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Not reported

LUST:

Facility:

Name:	ERNIE'S SERVICE STATION
Address:	8 MAIN STREET
City,State,Zip:	ESSEX, MA
Current Status:	**Permanent Solution with No Conditions**
Release Tracking Number/Current Status:	3-0034160 / PSNC
Status Date:	04/13/2018
Source Type:	USTPIPE
Release Town:	ESSEX
Notification Date:	04/06/2017
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil Or Haz Material:	Not reported

Location Type:	COMMERCIAL
Source:	UST
Source:	USTOTHER
Source:	TANK
Source:	USTPIPE

Click here to access the MA DEP site for this facility:

Chemicals:

ERNIE'S SERVICE STATION (Continued) **S132542190**

Chemical: GASOLINE
Quantity: 327 parts per million

Actions:

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 2/8/2018
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 4/13/2018
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 4/19/2018
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 5/11/2018
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/21/2017
Response Action Outcome: PN

ERNIE'S SERVICE STATION (Continued) **S132542190**

Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	8/23/2017
Response Action Outcome:	PN

Facility:

Name:	ERNIE'S SERVICE STATION
Address:	8 MAIN STREET
City,State,Zip:	ESSEX, MA
Current Status:	**Permanent Solution with No Conditions**
Release Tracking Number/Current Status:	3-0034160 / PSNC
Status Date:	04/13/2018
Source Type:	UST
Release Town:	ESSEX
Notification Date:	04/06/2017
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil Or Haz Material:	Not reported
Location Type:	COMMERCIAL
Source:	UST
Source:	USTOTHER
Source:	TANK
Source:	USTPIPE

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	GASOLINE
Quantity:	327 parts per million

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	2/8/2018
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	4/13/2018
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	4/19/2018
Response Action Outcome:	PN
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/6/2017
Response Action Outcome:	PN

ERNIE'S SERVICE STATION (Continued) **S132542190**

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 5/11/2018
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/21/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/23/2017
Response Action Outcome: PN

Facility:
Name: ERNIE'S SERVICE STATION
Address: 8 MAIN STREET
City,State,Zip: ESSEX, MA
Current Status: **Permanent Solution with No Conditions**
Release Tracking Number/Current Status: 3-0034160 / PSNC
Status Date: 04/13/2018
Source Type: USTOTHER
Release Town: ESSEX
Notification Date: 04/06/2017
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: PN - PN
Oil Or Haz Material: Not reported

ERNIE'S SERVICE STATION (Continued) **S132542190**

Location Type: COMMERCIAL
Source: UST
Source: USTOTHER
Source: TANK
Source: USTPIPE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 327 parts per million

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 2/8/2018
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 4/13/2018
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 4/19/2018
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 5/11/2018
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received

ERNIE'S SERVICE STATION (Continued) **S132542190**

Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/21/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/23/2017
Response Action Outcome: PN

INST CONTROL:
Name: ERNIE'S SERVICE STATION
Address: 8 MAIN STREET
City,State,Zip: ESSEX, MA
Release Tracking Number: 3-0034160
Action Type: AUL
Action Stat: LEGNOT
Action Date: 05/11/2018
Response Action Outcome: PN - PN

Release:
Name: ERNIE'S SERVICE STATION
Address: 8 MAIN STREET
City,State,Zip: ESSEX, MA
Release Tracking Number/Current Status: 3-0034160 / PSNC
Primary ID: Not reported
Official City: ESSEX
Notification: 04/06/2017
Category: 72 HR
Status Date: 04/13/2018
Phase: Not reported
Response Action Outcome: PN - PN
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 2/8/2018
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 4/13/2018
Response Action Outcome: PN

ERNIE'S SERVICE STATION (Continued) **S132542190**

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 4/19/2018
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 5/11/2018
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/21/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/23/2017
Response Action Outcome: PN

Chemicals:
Chemical: GASOLINE
Quantity: 327 parts per million
Location Type: COMMERCIAL
Source: UST
Source: USTOTHER
Source: TANK

ERNIE'S SERVICE STATION (Continued) **S132542190**

Source: USTPIPE

19
East
1/4-1/2
0.398 mi.
2100 ft.

ESSEX FIRE STATION
MARTIN ST
ESSEX, MA 01929

MA LUST **S104545597**
MA RELEASE **N/A**

Relative:
Lower

Actual:
17 ft.

LUST:

Facility:

Name:	ESSEX FIRE STATION
Address:	MARTIN ST
City,State,Zip:	ESSEX, MA 019290000
Current Status:	**Response Action Outcome**
Release Tracking Number/Current Status:	3-0013690 / RAO
Status Date:	07/29/1996
Source Type:	UST
Release Town:	ESSEX
Notification Date:	04/22/1996
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Not reported
Location Type:	MUNICIPAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	315 parts per million

Actions:

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	4/22/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/22/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	4/22/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)

ESSEX FIRE STATION (Continued) **S104545597**

Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	5/3/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	6/21/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	6/21/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	7/29/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release:

Name:	ESSEX FIRE STATION
Address:	MARTIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0013690 / RAO
Primary ID:	Not reported
Official City:	ESSEX
Notification:	04/22/1996
Category:	72 HR
Status Date:	07/29/1996
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	4/22/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/22/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action

ESSEX FIRE STATION (Continued) **S104545597**

Action Date: 4/22/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/3/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/21/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 6/21/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/29/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL #2
Quantity: 315 parts per million
Location Type: MUNICIPAL
Source: UST

---

20 NE 1/4-1/2 0.437 mi. 2308 ft. **NO LOCATION AID** **MA SHWS S103811985**
22 JOHN WISE AVE **MA RELEASE N/A**
ESSEX, MA 01929

Relative: Lower
Actual: 54 ft.

SHWS:
Name: NO LOCATION AID
Address: 22 JOHN WISE AVE
City,State,Zip: ESSEX, MA 019290000
Facility ID: 3-0017866
Source Type: PIPE
Release Town: ESSEX
Notification Date: 01/15/1999
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 05/21/1999
Phase: Not reported
Response Action Outcome: A2
Oil Or Haz Material: Not reported

Name: NO LOCATION AID

NO LOCATION AID (Continued) **S103811985**

Address:	22 JOHN WISE AVE
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0017866
Source Type:	TRUCK
Release Town:	ESSEX
Notification Date:	01/15/1999
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	05/21/1999
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Not reported

Release:

Name:	NO LOCATION AID
Address:	22 JOHN WISE AVE
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0017866 / RAO
Primary ID:	Not reported
Official City:	ESSEX
Notification:	01/15/1999
Category:	TWO HR
Status Date:	05/21/1999
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/15/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/15/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	1/15/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FLDD1U
Action Date:	1/16/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

NO LOCATION AID (Continued) **S103811985**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 1/19/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 1/19/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 1/19/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/19/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/20/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/12/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/12/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 5/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL #2
Quantity: 20 gallons
Chemical: DIESEL FUEL
Quantity: 8 gallons
Location Type: COMMERCIAL
Source: PIPE
Source: TRUCK

F21
East
1/4-1/2
0.441 mi.
2326 ft.

ESSEX RIVER
ROUTE 133
ESSEX, MA 01929

Site 1 of 5 in cluster F

SEMS-ARCHIVE **1003862935**
MAD985318559

Relative:
Lower

Actual:
22 ft.

SEMS Archive:

Site ID:	0102693
EPA ID:	MAD985318559
Name:	ESSEX RIVER
Address:	ROUTE 133
Address 2:	Not reported
City,State,Zip:	ESSEX, MA 01929
Cong District:	06
FIPS Code:	25009
FF:	N
NPL:	Not on the NPL
Non NPL Status:	Removal Only Site (No Site Assessment Work Needed)

SEMS Archive Detail:

Region:	01
Site ID:	0102693
EPA ID:	MAD985318559
Site Name:	ESSEX RIVER
NPL:	N
FF:	N
OU:	00
Action Code:	RV
Action Name:	RMVL
SEQ:	1
Start Date:	1993-06-25 04:00:00
Finish Date:	1993-06-25 04:00:00
Qual:	C
Current Action Lead:	EPA Perf

Region:	01
Site ID:	0102693
EPA ID:	MAD985318559
Site Name:	ESSEX RIVER
NPL:	N
FF:	N
OU:	00
Action Code:	VS
Action Name:	ARCH SITE
SEQ:	1
Start Date:	Not reported
Finish Date:	1996-08-06 04:00:00
Qual:	Not reported
Current Action Lead:	EPA Perf In-Hse

F22
East
1/4-1/2
0.464 mi.
2449 ft.

ESSEX SHIPBUILDING MUSEUM
66 MAIN ST
ESSEX, MA 01929

Site 2 of 5 in cluster F

MA SHWS **S132538511**
MA INST CONTROL **N/A**
MA RELEASE

Relative:
Lower

Actual:
12 ft.

SHWS:

Name:	ESSEX SHIPBUILDING MUSEUM
Address:	66 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0024673
Source Type:	UNKNOWN
Release Town:	ESSEX
Notification Date:	03/03/2005
Category:	TWO HR
Associated ID:	3-0004552
Current Status:	RTNCLOSED
Status Date:	12/30/2005
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

INST CONTROL:

Name:	ESSEX SHIPBUILDING MUSEUM
Address:	66 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number:	3-0024673
Action Type:	AUL
Action Stat:	RECPT
Action Date:	06/09/2008
Response Action Outcome:	-

Release:

Name:	ESSEX SHIPBUILDING MUSEUM
Address:	66 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0024673 / RTNCLOSED
Primary ID:	3-0004552
Official City:	ESSEX
Notification:	03/03/2005
Category:	TWO HR
Status Date:	12/30/2005
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	12/30/2005
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	12/30/2005
Response Action Outcome:	Not reported

ESSEX SHIPBUILDING MUSEUM (Continued) **S132538511**

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 12/30/2005
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 3/2/2010
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/22/2005
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/3/2005
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 3/3/2005
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/7/2005
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/12/2005
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1U
Action Date: 4/12/2005
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 4/29/2005
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 4/29/2005
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 6/13/2005
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension

ESSEX SHIPBUILDING MUSEUM (Continued) **S132538511**

Action Date: 6/18/2003
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 6/28/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 6/7/2006
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/9/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 7/8/2004
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/2/2005
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 8/6/1997
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/6/1997
Response Action Outcome: Not reported

Chemicals:
Chemical: ARSENIC
Quantity: 80.3 parts per million
Chemical: ZINC
Quantity: 3340 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 44 milligrams per kilogram
Chemical: ARSENIC
Quantity: 80.3 milligrams per kilogram
Location Type: COMMERCIAL
Source: UNKNOWN

F23 **ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC** **MA SHWS** **S132532869**
East **66 MAIN ST** **MA INST CONTROL** **N/A**
1/4-1/2 **ESSEX, MA 01929** **MA RELEASE**
0.464 mi.
2449 ft. **Site 3 of 5 in cluster F**

Relative:
Lower

Actual:
12 ft.

SHWS:

Name:	ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC
Address:	66 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0004552
Source Type:	UNKNOWN
Release Town:	ESSEX
Notification Date:	10/01/1993
Category:	NONE
Associated ID:	3-0004552
Current Status:	RAO
Status Date:	02/18/2012
Phase:	Not reported
Response Action Outcome:	A3
Oil Or Haz Material:	Not reported

INST CONTROL:

Name:	ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC
Address:	66 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number:	3-0004552
Action Type:	AUL
Action Stat:	RECPT
Action Date:	06/09/2008
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:

Name:	ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC
Address:	66 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0004552 / RAO
Primary ID:	3-0004552
Official City:	ESSEX
Notification:	10/01/1993
Category:	NONE
Status Date:	02/18/2012
Phase:	Not reported
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	1/27/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC (Continued) **S132532869**

been implemented.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 10/1/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 10/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 11/21/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 11/21/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: TREGS
Action Status: WAVSIG
Action Date: 12/13/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via IRA Completion Statement
Action Date: 12/30/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/18/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 2/18/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC (Continued) **S132532869**

Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	3/2/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/13/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/18/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Partial RAO for this RTN
Action Status:	RAO Statement Received
Action Date:	6/18/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/28/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Partial RAO for this RTN
Action Status:	Fee Received - FMCRA Use Only
Action Date:	6/6/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/7/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	6/9/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Activity and Use Limitation

ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC (Continued) **S132532869**

Action Status:	Transmittal, Notice, or Notification Received
Action Date:	6/9/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Partial RAO for this RTN
Action Status:	Fee Not Required - Fee Refunded-FMCRA Use Only
Action Date:	7/15/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	TREGS
Action Status:	WAVREC
Action Date:	7/22/1993
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	7/3/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	7/8/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	8/14/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	8/6/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	8/6/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Phase 1
Action Status:	Completion Statement Received

ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC (Continued) **S132532869**

Action Date: 8/6/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: TREGS
Action Status: LSPFA
Action Date: 9/9/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 9/9/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/9/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: PETROLEUM BASED OIL
Quantity: Not reported
Location Type: BOAT YARD
Location Type: FORMER
Source: UNKNOWN

F24 **BROWN, DAVID** **MA BROWNFIELDS S100828680**
East **66 MAIN ST** **MA ENF N/A**
1/4-1/2 **ESSEX, MA 01929**
0.464 mi.
2449 ft. **Site 4 of 5 in cluster F**

Relative: **Lower**
Actual: **12 ft.**

BROWNFIELDS 2:
Name: ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC
Address: 66 MAIN ST
City,State,Zip: ESSEX, MA
RTN: 3-0004552
RAO Class: A3
Other RTNs: 3-0024673
Current Owner: Essex Historical Society Shipbuilding Museum Inc
MCP Status: RAO
AUL: No
COCs: Petroleum
Former Use: Boat Yard
Current Use: Museum
Total Acreage: 1.3480000000000001

Fact Sheet:

BROWN, DAVID (Continued) **S100828680**

ENFORCEMENT:

Name:	BROWN, DAVID
Address:	66 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Region:	NERO
DEP Region:	NERO
DEP Program:	3c
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0004552
High Or Low Level Enforcement:	LLE
FMF #:	0
Town Where Violation Occurred:	Not reported
Date Executed:	01/27/2010
ENF #:	Faux Enf- 0334
Document Type:	IDL
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	NO
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned

F25 **SAM'S CREEK INVESTIGATION** **US BROWNFIELDS** **1023620578**
East **SAM'S CREEK** **N/A**
1/4-1/2 **ESSEX, MA 01929**
0.470 mi.
2484 ft. **Site 5 of 5 in cluster F**

Relative:
Lower

Actual:
6 ft.

US BROWNFIELDS:

Name:	Sam'S Creek Investigation
Address:	Sam'S Creek
City,State,Zip:	ESSEX, MA 01929
Property ID:	108161
Property Alias:	Not reported
Recipient Name:	Massachusetts Department of Environmental Protection
Grant Type:	Hazardous
Property Number:	Not reported
Parcel Size:	1
Latitude:	42.633469
Longitude:	-70.779419
Census Tract:	25009222100
State or Tribal Voluntary Response Program:	Not reported
Program Name:	RP
AA Activity Funded:	Not reported
Start Date:	Not reported
Redev Completition Date:	Not reported
Completed Date:	Not reported
Cleanup Funding:	Not reported

SAM'S CREEK INVESTIGATION (Continued) **1023620578**

Cleanup Funding Source:	Not reported
Activity Funded:	Not reported
Assessment Funding:	Not reported
Assessment Funding Source:	Not reported
Redevelopment Funding:	Not reported
Contaminants REC:	Other Metals
Contaminants Found at Actionable Level:	Other Metals
Redev. Funding Source:	Not reported
Redev. Funding Entity Name:	Not reported
Contaminants Found Below Actionable Level:	Not reported
Redevelopment Start Date:	Not reported
Assessment Funding Entity:	Not reported
Cleanup Funding Entity:	Not reported
Climate Adapt Mitig - Planning or Assessment:	Not reported
Cooperative Agreement Number:	97119401
Start Date:	Not reported
Ownership Entity:	Private
Additional Institutional Controls Information:	Not reported
Completion Date:	Not reported
Address of Data Sources (URL if available) 1:	Not reported
Cleanup Required:	U
Indicates Cleanup/Treatment Tech Implemented:	Not reported
Institutional Controls Required:	U
IC Category Proprietary Controls:	Not reported
Excavation and Disposal of Soils:	Not reported
Extraction of contaminants:	Not reported
IC Cat. Info. Devices:	Not reported
Removal of materials (tanks and piping, etc.):	Not reported
IC Cat. Gov. Controls:	Not reported
Reduction of Contam Bioremediation/Phytoremediation:	Not reported
IC Cat. Enforcement Permit Tools:	Not reported
Cleanup of structures:	Not reported
IC in place date:	Not reported
Additional Cleanup/Treatment Tech Info:	Not reported
IC in place:	N
Address of Data Source (URL if available) 2:	Not reported
Indicate whether Engineering Controls are required:	U
State/tribal program ID:	Not reported
Cover Technologies (e.g., Capping):	Not reported
Security (e.g., Guard, Fence):	Not reported
Immobilization Process:	Not reported
Engineering Barriers (e.g., Slurry Walls, Sheet):	Not reported
Other:	Not reported
Additional Engineering Controls Information:	Not reported
Address of Data Source (URL if available) 3:	Not reported
Indicate whether Engineering Controls are in place:	N
Date Engineering Controls put into place:	Not reported
ACRES Cleaned Up:	Not reported
Section 128(a) State/Tribal:	Not reported
Multipurpose - Cost Share Amount:	Not reported
Cleanup - Cost Share Amount:	Not reported
RLF Loan - Total Loan Amount:	Not reported
RLF - Loan Signed Date:	Not reported
RLF Loan - Anticipated Repayment Start Date:	Not reported
RLF Loan - Anticipated Repayment End Date:	Not reported
RLF Loan - Interest Rate:	Not reported
RLF Loan - EPA Funds Used:	Not reported

SAM'S CREEK INVESTIGATION (Continued) **1023620578**

Contaminant Cleanup:	Not reported
RLF Loan - Cost Share Used:	Not reported
Media Affected:	Sediments Soil
RLF Loan - Program Income Used:	Not reported
Media Cleanup:	Not reported
RLF Loan - Discounted:	Not reported
RLF Loan - Discount Percentage:	Not reported
RLF Subgrant - Total Subgrant Amount:	Not reported
RLF Subgrant - Signed Date:	Not reported
RLF Subgrant - EPA Funds Used:	Not reported
RLF Subgrant - Cost Share Used:	Not reported
RLF Subgrant - Program Income Used:	Not reported
RLF Direct Cleanup - Total Funding Amt:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
RLF Direct Cleanup - Source of Funding:	Not reported
RLF Leveraged - Funding Source Type:	Not reported
Past use greenspace acreage:	1
Past use residential acreage:	Not reported
RLF Leveraged - Entity Providing Funding:	Not reported
RLF Leveraged - Funding Amount:	Not reported
Cleanup Completion Doc - NFA Letter Received:	N
Past use commercial acreage:	Not reported
NFA Letter Date Received:	Not reported
Past use industrial acreage:	Not reported
Cleanup Comp Doc - Letter/Signed Rep Qualified Pro:	N
Future use greenspace acreage:	Not reported
Letter/Signed Report Date Received:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Cleanup Completion Doc- Other forms of Doc:	Not reported
Future use industrial acreage:	Not reported
Climate Adapt and Mitiga - Demo or Cleanup:	Not reported
ReDev Activity Funded:	Not reported
Amount of Funding Expended on this Activity 2:	Not reported
Number of Redevelopment Jobs Leveraged:	Not reported
Climate Adaptation and Mitigation Redevelopment:	Not reported
Radius:	0.5
Below Poverty Number:	15
Below Poverty Percent:	3.56
Meidan Income:	4898
Meidan Income Number:	52
Meidan Income Percent:	12.35
Vacant Housing Number:	8
Vacant Housing Percent:	4.15
Unemployed Number:	11
Unemployed Percent:	2.61

---

26 **ADJACENT TO 42 APPLE STREET** **MA SHWS** **S127590270**
SSE **42 APPLE STREET** **MA RELEASE** **N/A**
1/2-1 **ESSEX, MA 01929**
0.512 mi.
2704 ft.

Relative: SHWS:
Lower

Name:	ADJACENT TO 42 APPLE STREET
Address:	42 APPLE STREET
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0036867

Actual:
37 ft.

ADJACENT TO 42 APPLE STREET (Continued) **S127590270**

Source Type:	TRANSFORM
Release Town:	ESSEX
Notification Date:	05/28/2021
Category:	TWO HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	07/27/2021
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Not reported

Release:

Name:	ADJACENT TO 42 APPLE STREET
Address:	42 APPLE STREET
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0036867 / PSNC
Primary ID:	Not reported
Official City:	ESSEX
Notification:	05/28/2021
Category:	TWO HR
Status Date:	07/27/2021
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/28/2021
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	5/28/2021
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	6/17/2021
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	7/27/2021
Response Action Outcome:	PN
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	7/27/2021
Response Action Outcome:	PN

Chemicals:

Chemical:	MINERAL OIL
Quantity:	49 gallons

ADJACENT TO 42 APPLE STREET (Continued) **S127590270**

Location Type: ROADWAY
Source: TRANSFORM

27
East
1/2-1
0.591 mi.
3119 ft.

CONSTRUCTION SITE
91 MAIN STREET ADJ
ESSEX, MA

MA SHWS **S125163254**
MA RELEASE **N/A**

Relative:
Lower

Actual:
8 ft.

SHWS:

Name:	CONSTRUCTION SITE
Address:	91 MAIN STREET ADJ
City,State,Zip:	ESSEX, MA
Facility ID:	3-0035511
Source Type:	LINE
Release Town:	ESSEX
Notification Date:	03/19/2019
Category:	TWO HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	05/17/2019
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Oil

Name:	CONSTRUCTION SITE
Address:	91 MAIN STREET ADJ
City,State,Zip:	ESSEX, MA
Facility ID:	3-0035511
Source Type:	VEHICLE
Release Town:	ESSEX
Notification Date:	03/19/2019
Category:	TWO HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	05/17/2019
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Oil

Release:

Name:	CONSTRUCTION SITE
Address:	91 MAIN STREET ADJ
City,State,Zip:	ESSEX, MA
Release Tracking Number/Current Status:	3-0035511 / PSNC
Primary ID:	Not reported
Official City:	ESSEX
Notification:	03/19/2019
Category:	TWO HR
Status Date:	05/17/2019
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

CONSTRUCTION SITE (Continued) **S125163254**

Actions:

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	3/19/2019
Response Action Outcome:	PN
Action Type:	RLFA
Action Status:	FLDD1U
Action Date:	3/19/2019
Response Action Outcome:	PN
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/19/2019
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/25/2019
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	5/17/2019
Response Action Outcome:	PN
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/17/2019
Response Action Outcome:	PN
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	5/17/2019
Response Action Outcome:	PN

Chemicals:

Chemical:	HYDRAULIC FLUID
Quantity:	18 gallons
Location Type:	ROADWAY
Location Type:	COMMERCIAL
Source:	VEHICLE
Source:	LINE

G28 **LIBERTY RESEARCH FACILITY FMR** **MA SHWS** **S132536273**
SSW **7 ESSEX PARK DR** **MA RELEASE** **N/A**
1/2-1 **ESSEX, MA 01929**
0.593 mi.
3129 ft. **Site 1 of 4 in cluster G**

Relative: **Lower**

Actual: **40 ft.**

SHWS:

Name:	LIBERTY RESEARCH FACILITY FMR
Address:	7 ESSEX PARK DR
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0019187
Source Type:	Not reported
Release Town:	ESSEX

LIBERTY RESEARCH FACILITY FMR (Continued) **S132536273**

Notification Date:	01/18/2000
Category:	120 DY
Associated ID:	3-0019187
Current Status:	TMPS
Status Date:	10/01/2021
Phase:	PHASE V
Response Action Outcome:	TN
Oil Or Haz Material:	Hazardous Material

Release:

Name:	LIBERTY RESEARCH FACILITY FMR
Address:	7 ESSEX PARK DR
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0019187 / TMPS
Primary ID:	3-0019187
Official City:	ESSEX
Notification:	01/18/2000
Category:	120 DY
Status Date:	10/01/2021
Phase:	PHASE V
Response Action Outcome:	TN - TN
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Phase 4
Action Status:	Completion Statement Received
Action Date:	1/13/2004
Response Action Outcome:	TN

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	1/18/2000
Response Action Outcome:	TN

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/18/2000
Response Action Outcome:	TN

Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	1/18/2012
Response Action Outcome:	TN

Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	1/22/2001
Response Action Outcome:	TN

Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	1/25/2001
Response Action Outcome:	TN

LIBERTY RESEARCH FACILITY FMR (Continued) **S132536273**

Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/25/2001
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	Tier 1A Classification
Action Date:	1/25/2001
Response Action Outcome:	TN
Action Type:	Response Action Outcome - RAO
Action Status:	TSNRCD
Action Date:	10/1/2021
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	10/11/2006
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	10/11/2006
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	10/21/2005
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	10/6/2006
Response Action Outcome:	TN
Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	11/28/2001
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Minor Permit Modification
Action Date:	12/6/2001
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	2/23/2007
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	2/23/2007
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement

LIBERTY RESEARCH FACILITY FMR (Continued) **S132536273**

Action Date:	2/3/2009
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	2/3/2010
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	2/3/2010
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	2/4/2008
Response Action Outcome:	TN
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	3/6/2000
Response Action Outcome:	TN
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	3/7/2000
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	4/1/2008
Response Action Outcome:	TN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/20/2000
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	4/20/2005
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Level II - Audit Inspection
Action Date:	4/20/2005
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	4/7/2008
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	5/11/2009
Response Action Outcome:	TN

LIBERTY RESEARCH FACILITY FMR (Continued) **S132536273**

Action Type: Phase 5
Action Status: RMRINT
Action Date: 5/11/2009
Response Action Outcome: TN

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 5/3/2005
Response Action Outcome: TN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 6/23/2009
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Level II - Audit Inspection
Action Date: 6/23/2009
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 6/27/2003
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Inspection and Monitoring Report Received
Action Date: 6/28/2005
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 6/5/2006
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 6/7/2006
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Inspection and Monitoring Report Received
Action Date: 6/8/2006
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Inspection and Monitoring Report Received
Action Date: 7/1/2004
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 7/13/2001
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: Tier 1B Classification

LIBERTY RESEARCH FACILITY FMR (Continued) **S132536273**

Action Date: 7/13/2001
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: DEP Disagrees with Classification
Action Date: 7/13/2001
Response Action Outcome: TN

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 7/15/2002
Response Action Outcome: TN

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 7/15/2002
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: Permit Extension Received
Action Date: 7/29/2006
Response Action Outcome: TN

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 8/1/2006
Response Action Outcome: TN

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/14/2000
Response Action Outcome: TN

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 8/15/2006
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 8/26/2008
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 8/26/2008
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Level II - Audit Inspection
Action Date: 8/8/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 8/8/2006
Response Action Outcome: TN

LIBERTY RESEARCH FACILITY FMR (Continued) **S132536273**

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 9/14/2009
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 9/16/2014
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Level I - Technical Screen Audit
Action Date: 9/22/2010
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 9/3/2009
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 9/3/2009
Response Action Outcome: TN

Action Type: BWS01
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: TN

Action Type: BWS20
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: TN

Chemicals:
Chemical: ALIPHATIC HYDROCARBONS C19 THROUGH C36
Quantity: 15500 parts per million
Chemical: VPH
Quantity: 1640 micrograms per liter
Chemical: cis-1,3-DICHLOROPROPENE
Quantity: 2 milligrams per kilogram
Chemical: EPH
Quantity: 354400 micrograms per liter
Chemical: AROMATIC HYDROCARBONS C11 THROUGH C22
Quantity: 2760 parts per million
Chemical: TRICHLOROETHYLENE
Quantity: 13 milligrams per kilogram
Chemical: TETRACHLOROETHENE
Quantity: 0.51 milligrams per kilogram

G29
SSW
1/2-1
0.593 mi.
3129 ft.

NO LOCATION AID
7 ESSEX PARK RD
ESSEX, MA

Site 2 of 4 in cluster G

MA SHWS **S132539686**
MA RELEASE **N/A**

Relative:
Lower

Actual:
40 ft.

SHWS:

Name:	NO LOCATION AID
Address:	7 ESSEX PARK RD
City,State,Zip:	ESSEX, MA
Facility ID:	3-0027639
Source Type:	UNKNOWN
Release Town:	ESSEX
Notification Date:	04/03/2008
Category:	72 HR
Associated ID:	3-0019187
Current Status:	TMPS
Status Date:	10/01/2021
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Name:	NO LOCATION AID
Address:	7 ESSEX PARK RD
City,State,Zip:	ESSEX, MA
Facility ID:	3-0027639
Source Type:	SOLVENTS
Release Town:	ESSEX
Notification Date:	04/03/2008
Category:	72 HR
Associated ID:	3-0019187
Current Status:	TMPS
Status Date:	10/01/2021
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Name:	NO LOCATION AID
Address:	7 ESSEX PARK RD
City,State,Zip:	ESSEX, MA
Facility ID:	3-0027639
Source Type:	INBED
Release Town:	ESSEX
Notification Date:	04/03/2008
Category:	72 HR
Associated ID:	3-0019187
Current Status:	TMPS
Status Date:	10/01/2021
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Name:	NO LOCATION AID
Address:	7 ESSEX PARK RD
City,State,Zip:	ESSEX, MA
Facility ID:	3-0027639
Source Type:	ROCKFRAC
Release Town:	ESSEX
Notification Date:	04/03/2008

NO LOCATION AID (Continued) **S132539686**

Category:	72 HR
Associated ID:	3-0019187
Current Status:	TMPS
Status Date:	10/01/2021
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Name:	NO LOCATION AID
Address:	7 ESSEX PARK RD
City,State,Zip:	ESSEX, MA
Facility ID:	3-0027639
Source Type:	TURES
Release Town:	ESSEX
Notification Date:	04/03/2008
Category:	72 HR
Associated ID:	3-0019187
Current Status:	TMPS
Status Date:	10/01/2021
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Release:

Name:	NO LOCATION AID
Address:	7 ESSEX PARK RD
City,State,Zip:	ESSEX, MA
Release Tracking Number/Current Status:	3-0027639 / TMPS
Primary ID:	3-0019187
Official City:	ESSEX
Notification:	04/03/2008
Category:	72 HR
Status Date:	10/01/2021
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/25/2001
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	Tier 1A Classification
Action Date:	1/25/2001
Response Action Outcome:	Not reported

Action Type:	Response Action Outcome - RAO
Action Status:	TSNRCD
Action Date:	10/1/2021
Response Action Outcome:	Not reported

Action Type:	Tier Classification

NO LOCATION AID (Continued) **S132539686**

Action Status: RTN Linked to TCLASS Via Minor Permit Modification
Action Date: 12/6/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via IRA Completion Statement
Action Date: 2/3/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/3/2009
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 2/3/2009
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/18/2008
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/3/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 4/3/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/13/2008
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 5/15/2008
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/15/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/15/2009
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/8/2008

NO LOCATION AID (Continued) **S132539686**

Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/8/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/8/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 6/5/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 1B Classification
Action Date: 7/13/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 7/13/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: DEP Disagrees with Classification
Action Date: 7/13/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Extension Received
Action Date: 7/29/2006
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 8/18/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/4/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 9/2/2008
Response Action Outcome: Not reported

Chemicals:
Chemical: CHLORINATED SOLVENTS
Quantity: Not reported
Chemical: TRICHLOROETHENE
Quantity: 62.2 micrograms per liter

NO LOCATION AID (Continued) **S132539686**

Chemical:	VINYL CHLORIDE
Quantity:	11.6 micrograms per liter
Location Type:	INDUSTRIAL
Location Type:	RESIDNTIAL
Source:	TURES
Source:	ROCKFRAC
Source:	UNKNOWN
Source:	SOLVENTS
Source:	INBED

G30 **NO LOCATION AID** **MA SHWS** **S132539050**
SSW **7 ESSEX PARK RD** **MA RELEASE** **N/A**
1/2-1 **ESSEX, MA 01929**
0.593 mi.
3129 ft. **Site 3 of 4 in cluster G**

Relative:
Lower

Actual:
40 ft.

SHWS:

Name:	NO LOCATION AID
Address:	7 ESSEX PARK RD
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0026038
Source Type:	DRUMS
Release Town:	ESSEX
Notification Date:	07/10/2006
Category:	TWO HR
Associated ID:	Not reported
Current Status:	TMPS
Status Date:	10/01/2021
Phase:	PHASE III
Response Action Outcome:	TN
Oil Or Haz Material:	Hazardous Material

Release:

Name:	NO LOCATION AID
Address:	7 ESSEX PARK RD
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0026038 / TMPS
Primary ID:	Not reported
Official City:	ESSEX
Notification:	07/10/2006
Category:	TWO HR
Status Date:	10/01/2021
Phase:	PHASE III
Response Action Outcome:	TN - TN
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	1/10/2007
Response Action Outcome:	TN

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/10/2007

NO LOCATION AID (Continued) **S132539050**

Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/10/2007
Response Action Outcome: TN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 1/11/2007
Response Action Outcome: TN

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 1/12/2007
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/12/2007
Response Action Outcome: TN

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 1/18/2012
Response Action Outcome: TN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/18/2012
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/2/2007
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/24/2022
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 1/26/2007
Response Action Outcome: TN

Action Type: Phase 2
Action Status: Level I - Technical Screen Audit
Action Date: 1/26/2010
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/27/2020
Response Action Outcome: TN

NO LOCATION AID (Continued) **S132539050**

Action Type:	Phase 4
Action Status:	Status or Interim Report Received
Action Date:	1/27/2020
Response Action Outcome:	TN
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/3/2007
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/3/2007
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	1/3/2014
Response Action Outcome:	TN
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	1/31/2012
Response Action Outcome:	TN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/31/2012
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FLDD1A
Action Date:	1/5/2007
Response Action Outcome:	TN
Action Type:	Immediate Response Action
Action Status:	Oral Approval of a Modified Plan
Action Date:	1/5/2007
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/9/2007
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	1/9/2007
Response Action Outcome:	TN
Action Type:	Response Action Outcome - RAO
Action Status:	TSNRCD
Action Date:	10/1/2021
Response Action Outcome:	TN
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received

NO LOCATION AID (Continued) **S132539050**

Action Date: 10/1/2021
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 10/15/2012
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 10/15/2012
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/3/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/30/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 10/30/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/14/2014
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/15/2013
Response Action Outcome: TN

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 11/17/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/21/2012
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 11/9/2007
Response Action Outcome: TN

Action Type: Response Action Outcome - RAO
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 12/18/2013
Response Action Outcome: TN

NO LOCATION AID (Continued) **S132539050**

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/19/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/21/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 12/21/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 12/28/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/8/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FLDRUN
Action Date: 2/13/2007
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/17/2021
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 2/17/2021
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 2/5/2007
Response Action Outcome: TN

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 2/5/2007
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/5/2009
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received

NO LOCATION AID (Continued) **S132539050**

Action Date: 3/15/2012
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Modified Revised or Updated Plan Received
Action Date: 4/30/2019
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 4/30/2019
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 4/30/2019
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 4/5/2017
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 4/5/2018
Response Action Outcome: TN

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 4/9/2010
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 4/9/2010
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/10/2013
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/21/2007
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/30/2014
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 5/31/2007
Response Action Outcome: TN

NO LOCATION AID (Continued) **S132539050**

Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	5/9/2008
Response Action Outcome:	TN
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	6/29/2012
Response Action Outcome:	TN
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	6/4/2015
Response Action Outcome:	TN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	6/7/2007
Response Action Outcome:	TN
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	7/10/2006
Response Action Outcome:	TN
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	7/10/2006
Response Action Outcome:	TN
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	7/10/2007
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	7/10/2007
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	7/10/2007
Response Action Outcome:	TN
Action Type:	Phase 2
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	7/13/2009
Response Action Outcome:	TN
Action Type:	Phase 3
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	7/13/2009
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	Legal Notice Published

NO LOCATION AID (Continued) **S132539050**

Action Date: 7/16/2007
Response Action Outcome: TN

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 7/24/2009
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: TCEXT
Action Date: 7/31/2020
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/31/2020
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 7/31/2020
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 8/14/2008
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: TCEXT
Action Date: 8/2/2018
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/24/2016
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/28/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/30/2006
Response Action Outcome: TN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/30/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/30/2017
Response Action Outcome: TN

NO LOCATION AID (Continued) **S132539050**

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/4/2008
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: TCEXT
Action Date: 8/4/2016
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/7/2009
Response Action Outcome: TN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/8/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/8/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 9/15/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 9/15/2006
Response Action Outcome: TN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 9/15/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/15/2011
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/19/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/6/2006
Response Action Outcome: TN

Chemicals:
Chemical: CHROMIUM (TOTAL)

NO LOCATION AID (Continued) **S132539050**

Quantity:	Not reported
Chemical:	TOLUENE
Quantity:	Not reported
Chemical:	ETHYLBENZENE
Quantity:	Not reported
Chemical:	PCBS
Quantity:	Not reported
Chemical:	METHYL ETHYL KETONE (MEK)
Quantity:	Not reported
Location Type:	INDUSTRIAL
Source:	DRUMS

G31 **FMR LIBERTY RESEARCH FACILITY** **MA SHWS** **S132536735**
SSW **7 ESSEX PARK RD** **MA RELEASE** **N/A**
1/2-1 **ESSEX, MA 01929**
0.593 mi.
3129 ft. **Site 4 of 4 in cluster G**

Relative:
Lower

Actual:
40 ft.

SHWS:

Name:	FMR LIBERTY RESEARCH FACILITY
Address:	7 ESSEX PARK RD
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0020280
Source Type:	UNKNOWN
Release Town:	ESSEX
Notification Date:	01/04/2001
Category:	72 HR
Associated ID:	3-0019187
Current Status:	TMPS
Status Date:	10/01/2021
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Release:

Name:	FMR LIBERTY RESEARCH FACILITY
Address:	7 ESSEX PARK RD
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0020280 / TMPS
Primary ID:	3-0019187
Official City:	ESSEX
Notification:	01/04/2001
Category:	72 HR
Status Date:	10/01/2021
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	1/22/2001
Response Action Outcome:	Not reported
Action Type:	Tier Classification

FMR LIBERTY RESEARCH FACILITY (Continued) **S132536735**

Action Status: Tier 1A Classification
Action Date: 1/25/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/25/2001
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/25/2001
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/4/2001
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 1/4/2001
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: TSNRCD
Action Date: 10/1/2021
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 11/5/2001
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 11/5/2001
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 12/6/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Minor Permit Modification
Action Date: 12/6/2001
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/12/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via IRA Completion Statement
Action Date: 2/3/2009

FMR LIBERTY RESEARCH FACILITY (Continued) **S132536735**

Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/7/2001
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/7/2001
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/4/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 6/5/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 7/13/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 1B Classification
Action Date: 7/13/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: DEP Disagrees with Classification
Action Date: 7/13/2001
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/24/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Extension Received
Action Date: 7/29/2006
Response Action Outcome: Not reported

Chemicals:
Chemical: CIS-1,2-DICHLOROETHENE
Quantity: 2800 micrograms per liter
Chemical: TRICHLOROETHENE
Quantity: 4800 micrograms per liter
Chemical: VINYL CHLORIDE
Quantity: 16 micrograms per liter
Chemical: 1,1-DICHLOROETHENE
Quantity: 13 micrograms per liter
Location Type: COMMERCIAL

FMR LIBERTY RESEARCH FACILITY (Continued) **S132536735**

Source: UNKNOWN

32
East
1/2-1
0.661 mi.
3491 ft.

NO LOCATION AID
109 MAIN ST
ESSEX, MA 01929

MA SHWS **S107517212**
MA RELEASE **N/A**

Relative:
Lower

Actual:
6 ft.

SHWS:

Name:	NO LOCATION AID
Address:	109 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0025296
Source Type:	UNKNOWN
Release Town:	ESSEX
Notification Date:	10/07/2005
Category:	120 DY
Associated ID:	Not reported
Current Status:	URAM
Status Date:	10/18/2005
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Release:

Name:	NO LOCATION AID
Address:	109 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0025296 / URAM
Primary ID:	Not reported
Official City:	ESSEX
Notification:	10/07/2005
Category:	120 DY
Status Date:	10/18/2005
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Utility-related Abatement Measure
Action Status:	Completion Statement Received
Action Date:	1/19/2006
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Notification of URAM Received
Action Date:	10/18/2005
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	10/18/2005
Response Action Outcome:	Not reported
Action Type:	Release Disposition

NO LOCATION AID (Continued) **S107517212**

Action Status: Reportable Release under MGL 21E
Action Date: 10/7/2005
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notice of Intent to Conduct a URAM
Action Date: 10/7/2005
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/9/2005
Response Action Outcome: Not reported

Chemicals:
Chemical: TOTAL PETROLEUM HYDROCARBONS (TPH)
Quantity: Not reported
Chemical: NAPHTHALENE
Quantity: 9.85 milligrams per kilogram
Chemical: AROMATIC HYDROCARBONS C9 THROUGH C10
Quantity: 374 milligrams per kilogram
Chemical: ALIPHATIC HYDROCARBONS C5 THROUGH C8
Quantity: 1110 milligrams per kilogram
Chemical: ALIPHATIC HYDROCARBONS C9 THROUGH C12
Quantity: 1100 milligrams per kilogram
Location Type: ROADWAY
Source: UNKNOWN

H33 **RICHDALE CONVENIENCE STORE** **MA SHWS** **S132538087**
ESE **156 NORTH MAIN ST** **MA LUST** **N/A**
1/2-1 **ESSEX, MA 01929** **MA INST CONTROL**
0.891 mi. **MA RELEASE**
4702 ft. **Site 1 of 2 in cluster H**

Relative: Lower
Actual: 13 ft.

SHWS:
Name: RICHDALE CONVENIENCE STORE
Address: 156 NORTH MAIN ST
City,State,Zip: ESSEX, MA 019290000
Facility ID: 3-0023545
Source Type: UNKNOWN
Release Town: ESSEX
Notification Date: 01/26/2004
Category: 72 HR
Associated ID: 3-0023545
Current Status: RAO
Status Date: 06/09/2010
Phase: Not reported
Response Action Outcome: A3
Oil Or Haz Material: Not reported

LUST:

Facility:
Name: RICHDALE CONVENIENCE STORE
Address: 156 NORTH MAIN ST
City,State,Zip: ESSEX, MA 019290000
Current Status: **Response Action Outcome**

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Release Tracking Number/Current Status:	3-0023545 / RAO
Status Date:	06/09/2010
Source Type:	UST
Release Town:	ESSEX
Notification Date:	01/26/2004
Category:	72 HR
Associated ID:	3-0023545
Phase:	Not reported
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material:	Not reported
Location Type:	COMMERCIAL
Source:	UNKNOWN
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	GASOLINE
Quantity:	200 parts per million
Chemical:	GASOLINE
Quantity:	200 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	1/20/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Immediate Response Action
Action Status:	Modified Revised or Updated Plan Received
Action Date:	1/20/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/26/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	1/26/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Phase 3

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Action Status: Completion Statement Received
Action Date: 10/10/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 10/10/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level III - Comprehensive Audit
Action Date: 11/18/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 11/18/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level II - Audit Inspection
Action Date: 12/13/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 12/18/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 12/18/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 12/29/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Action Date: 12/30/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 3/17/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/24/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/24/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/24/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 4/14/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 4/29/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 5/11/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/19/2005

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 5/19/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 5/19/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/27/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 5/7/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 6/17/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 6/22/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 6/9/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 6/9/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/9/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/9/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 9/26/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/26/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NON-A
Action Date: 9/26/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

INST CONTROL:
Name: RICHDALE CONVENIENCE STORE
Address: 156 NORTH MAIN ST
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number: 3-0023545
Action Type: AUL
Action Stat: AMEND
Action Date: 12/18/2012
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Name: RICHDALE CONVENIENCE STORE
Address: 156 NORTH MAIN ST
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number: 3-0023545
Action Type: AUL
Action Stat: LEGNOT

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Action Date: 06/17/2010
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Name: RICHDALE CONVENIENCE STORE
Address: 156 NORTH MAIN ST
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number: 3-0023545
Action Type: AUL
Action Stat: RECPT
Action Date: 06/09/2010
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:
Name: RICHDALE CONVENIENCE STORE
Address: 156 NORTH MAIN ST
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number/Current Status: 3-0023545 / RAO
Primary ID: 3-0023545
Official City: ESSEX
Notification: 01/26/2004
Category: 72 HR
Status Date: 06/09/2010
Phase: Not reported
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/20/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 1/20/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/26/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 1/26/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 10/10/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 10/10/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level III - Comprehensive Audit
Action Date: 11/18/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 11/18/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level II - Audit Inspection
Action Date: 12/13/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 12/18/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 12/18/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Action Status:	Written Plan Received
Action Date:	12/29/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	12/30/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	3/17/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/24/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	3/24/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	3/24/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	4/14/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	4/29/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Phase 2
Action Status:	Notice of Delay in Meeting RA Deadline Received

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Action Date: 5/11/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/19/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 5/19/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 5/19/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/27/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 5/7/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 6/17/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 6/22/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 6/9/2008

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 6/9/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/9/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/9/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 9/26/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/26/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NON-A
Action Date: 9/26/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: GASOLINE
Quantity: 200 parts per million
Chemical: GASOLINE
Quantity: 200 parts per million
Location Type: COMMERCIAL
Source: UNKNOWN
Source: UST

H34
ESE
1/2-1
0.891 mi.
4702 ft.

RICHDALE CONVENIENCE STORE
156 NORTH MAIN ST
ESSEX, MA 01929

Site 2 of 2 in cluster H

MA SHWS **S132539523**
MA RELEASE **N/A**

Relative:
Lower

Actual:
13 ft.

SHWS:

Name:	RICHDALE CONVENIENCE STORE
Address:	156 NORTH MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0027206
Source Type:	Not reported
Release Town:	ESSEX
Notification Date:	10/10/2007
Category:	120 DY
Associated ID:	3-0023545
Current Status:	RTNCLOSED
Status Date:	06/09/2008
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Release:

Name:	RICHDALE CONVENIENCE STORE
Address:	156 NORTH MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0027206 / RTNCLOSED
Primary ID:	3-0023545
Official City:	ESSEX
Notification:	10/10/2007
Category:	120 DY
Status Date:	06/09/2008
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	10/10/2007
Response Action Outcome:	Not reported

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/10/2007
Response Action Outcome:	Not reported

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	11/14/2007
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	5/19/2005
Response Action Outcome:	Not reported

RICHDALE CONVENIENCE STORE (Continued) **S132539523**

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 5/19/2005
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 6/9/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 6/9/2008
Response Action Outcome: Not reported

Chemicals:
Chemical: LEAD
Quantity: 11700 milligrams per kilogram

---

35 **COMMERCIAL PROPERTY** **MA SHWS** **S100361172**
ESE **9 SOUTHERN AVE** **MA BROWNFIELDS** **N/A**
1/2-1 **ESSEX, MA 01929** **MA RELEASE**
0.938 mi.
4954 ft.

Relative:
Lower

Actual:
14 ft.

SHWS:
Name: COMMERCIAL PROPERTY
Address: 9 SOUTHERN AVE
City,State,Zip: ESSEX, MA 01929
Facility ID: 3-0003021
Source Type: UNKNOWN
Release Town: ESSEX
Notification Date: 04/15/1990
Category: 120 DY
Associated ID: Not reported
Current Status: TIERII
Status Date: 08/09/2006
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Hazardous Material

Name: COMMERCIAL PROPERTY
Address: 9 SOUTHERN AVE
City,State,Zip: ESSEX, MA 01929
Facility ID: 3-0003021
Source Type: DRUMS
Release Town: ESSEX
Notification Date: 04/15/1990
Category: 120 DY
Associated ID: Not reported
Current Status: TIERII
Status Date: 08/09/2006
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Hazardous Material

Name: COMMERCIAL PROPERTY

COMMERCIAL PROPERTY (Continued) **S100361172**

Address:	9 SOUTHERN AVE
City,State,Zip:	ESSEX, MA 01929
Facility ID:	3-0003021
Source Type:	VEHICLE
Release Town:	ESSEX
Notification Date:	04/15/1990
Category:	120 DY
Associated ID:	Not reported
Current Status:	TIERII
Status Date:	08/09/2006
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

BROWNFIELDS 2:

Name:	Not reported
Address:	9 SOUTHERN AVE
City,State,Zip:	ESSEX, MA
RTN:	3-0003021
RAO Class:	Not reported
Other RTNs:	Not reported
Current Owner:	Managed by Court Appointed Receiver-Richard T. Cuffe, Jr., Esq.
MCP Status:	TIER 2
AUL:	Not reported
COCs:	Metals, PCBs, Petroleum, PAHs
Former Use:	Commercial/Residential
Current Use:	Vacant
Total Acreage:	14

Fact Sheet:

Release:

Name:	COMMERCIAL PROPERTY
Address:	9 SOUTHERN AVE
City,State,Zip:	ESSEX, MA 01929
Release Tracking Number/Current Status:	3-0003021 / TIERII
Primary ID:	Not reported
Official City:	ESSEX
Notification:	04/15/1990
Category:	120 DY
Status Date:	08/09/2006
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/30/2025
Response Action Outcome:	Not reported

Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	1/30/2025

COMMERCIAL PROPERTY (Continued) **S100361172**

Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/17/2018
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 11/15/2014
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/15/2014
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/17/2014
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1A
Action Date: 12/27/2018
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 12/29/2005
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/6/2015
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 4/15/1990
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: EPETOP
Action Date: 4/30/2025
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 4/30/2025
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 4/30/2025
Response Action Outcome: Not reported

COMMERCIAL PROPERTY (Continued) **S100361172**

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/30/2025
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 4/8/2014
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 6/14/2002
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 6/30/2006
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Fee Not Required - Fee Refunded-FMCRA Use Only
Action Date: 7/10/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 8/11/2006
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 8/29/2005
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 8/29/2005
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 8/9/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 8/9/2006
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/9/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received

COMMERCIAL PROPERTY (Continued) **S100361172**

Action Date: 8/9/2006
Response Action Outcome: Not reported

Chemicals:
Chemical: LEAD
Quantity: 635 milligrams per kilogram
Chemical: NICKEL
Quantity: 31.5 milligrams per kilogram
Chemical: WASTE OIL
Quantity: Not reported
Chemical: ALIPHATIC HYDROCARBONS C5 THROUGH C8
Quantity: 1430 milligrams per kilogram
Chemical: BENZO[B]FLUORANTHENE
Quantity: 83.5 milligrams per kilogram
Chemical: 2-METHYLNAPHTHALENE
Quantity: 8.8 milligrams per kilogram
Chemical: NAPHTHALENE
Quantity: 10.4 milligrams per kilogram
Chemical: PHENANTHRENE
Quantity: 190 milligrams per kilogram
Chemical: BENZO[A]PYRENE
Quantity: 3.4 milligrams per kilogram
Chemical: AROMATIC HYDROCARBONS C11 THROUGH C22
Quantity: 2480 milligrams per kilogram
Chemical: ACENAPHTHENE
Quantity: 42.4 milligrams per kilogram
Chemical: BENZO(K)FLUORANTHENE
Quantity: 93.9 milligrams per kilogram
Chemical: CHROMIUM (TOTAL)
Quantity: 33.4 milligrams per kilogram
Chemical: THALLIUM
Quantity: 10.1 milligrams per kilogram
Chemical: MTBE
Quantity: 1.45 milligrams per kilogram
Chemical: POLYCHLORINATED BIPHENYLS (PCBS)
Quantity: 12.2 milligrams per kilogram
Chemical: BENZO[A]PYRENE
Quantity: 97.2 milligrams per kilogram
Chemical: DIBENZO[A,H]ANTHRACENE
Quantity: 8.5 milligrams per kilogram
Chemical: ALIPHATIC HYDROCARBONS C9 THROUGH C18
Quantity: 2700 milligrams per kilogram
Chemical: ALIPHATIC HYDROCARBONS C9 THROUGH C12
Quantity: 776 milligrams per kilogram
Chemical: BERYLLIUM
Quantity: 1.34 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 106 milligrams per kilogram
Chemical: CHRYSENE
Quantity: 122 milligrams per kilogram
Chemical: INDENO(1,2,3-CD)PYRENE
Quantity: 50.6 milligrams per kilogram
Chemical: BENZENE
Quantity: 2.27 milligrams per kilogram
Chemical: ALIPHATIC HYDROCARBONS C19 THROUGH C36
Quantity: 7500 milligrams per kilogram
Location Type: JUNKYARD

COMMERCIAL PROPERTY (Continued) **S100361172**

Source: VEHICLE
Source: UNKNOWN
Source: DRUMS

Count: 3 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ESSEX	S108034574	POLE NO 558	ADJ TO 198 WESTERN AVE	01929	MA SHWS, MA RELEASE
ESSEX	S109330202	ESSEX DUMP	MARTIN ST	01929	MA SWF/LF
ESSEX	S109489628	NO LOCATION AID	STORY ST		MA SHWS, MA RELEASE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/05/2025
Date Data Arrived at EDR: 06/20/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 68

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 06/20/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/03/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 13

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/03/2025
Next Scheduled EDR Contact: 09/29/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/04/2025
Next Scheduled EDR Contact: 09/29/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/04/2025
Next Scheduled EDR Contact: 09/29/2025
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/04/2025
Next Scheduled EDR Contact: 09/29/2025
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/04/2025
Next Scheduled EDR Contact: 09/29/2025
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 03/11/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 83

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 07/29/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 05/19/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/15/2025
Next Scheduled EDR Contact: 12/02/2024
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 05/19/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/15/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/10/2025
Date Data Arrived at EDR: 06/12/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 4

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/12/2025
Next Scheduled EDR Contact: 09/29/2025
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

SHWS: Site Transition List

Contains information on releases of oil and hazardous materials that have been reported to DEP.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF: Solid Waste Facility Database/Transfer Stations

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 06/28/2024
Date Data Arrived at EDR: 06/28/2024
Date Made Active in Reports: 09/24/2024
Number of Days to Update: 88

Source: Department of Environmental Protection
Telephone: 617-292-5989
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Annually

LF PROFILES: Landfill Profiles Listing

This spreadsheet describes landfills that have actively accepted waste or have closed under MassDEP Solid Waste Regulations first adopted in 1971 (310 CMR 16.00 and 310 CMR 19.00). The list does not include landfills that closed before 1971 (and which never had a MassDEP permit or approval), or for which agency data is incomplete.

Date of Government Version: 07/01/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 12/14/2015
Number of Days to Update: 48

Source: Department of Environmental Protection
Telephone: 617-292-5868
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Varies

Lists of state and tribal leaking storage tanks

LUST: Leaking Underground Storage Tank Listing

Sites within the Leaking Underground Storage Tank Listing that have a UST listed as its source.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

LAST: Leaking Aboveground Storage Tank Sites
Sites within the Releases Database that have a AST listed as its source.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23
Source: Department of Environmental Protection
Telephone: 617-292-5500
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 01/07/2025
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/07/2025
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 04/08/2025
Date Data Arrived at EDR: 04/23/2025
Date Made Active in Reports: 04/24/2025
Number of Days to Update: 1
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 06/24/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

UST: Summary Listing of all the Tanks Registered in the State of Massachusetts
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 02/26/2025
Date Data Arrived at EDR: 05/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 84
Source: Department of Fire Services, Office of the Public Safety
Telephone: 617-556-1035
Last EDR Contact: 07/29/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Quarterly

AST 2: Aboveground Storage Tanks
Aboveground storage tanks

Date of Government Version: 04/03/2025
Date Data Arrived at EDR: 04/03/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 82
Source: Department of Fire Services
Telephone: 978-567-3181
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

AST: Aboveground Storage Tank Database
Registered Aboveground Storage Tanks.

Date of Government Version: 03/15/2025
Date Data Arrived at EDR: 04/08/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 77
Source: Department of Public Safety
Telephone: 617-556-1035
Last EDR Contact: 07/03/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: No Update Planned

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 11/08/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/15/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 01/07/2025
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Sites With Activity and Use Limitation

Activity and Use Limitations establish limits and conditions on the future use of contaminated property, and therefore allow cleanups to be tailored to these uses.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/09/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS 2: Potential Brownfields Listing

A listing of potential brownfields site locations in the state.

Date of Government Version: 07/11/2023
Date Data Arrived at EDR: 07/27/2023
Date Made Active in Reports: 10/16/2023
Number of Days to Update: 81

Source: Department of Environmental Protection
Telephone: 617-556-1007
Last EDR Contact: 07/24/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

BROWNFIELDS: Completed Brownfields Covenants Listing

Under Massachusetts law, M.G.L. c. 21E is the statute that governs the cleanup of releases of oil and/or hazardous material to the environment. The Brownfields Act of 1998 amended M.G.L. c. 21E by establishing significant liability relief and financial incentives to spur the redevelopment of brownfields, while ensuring that the Commonwealth's environmental standards are met. Most brownfields are redeveloped with the benefit of liability protections that operate automatically under M.G.L. c. 21E.

Date of Government Version: 12/31/2024
Date Data Arrived at EDR: 01/22/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 75

Source: Office of the Attorney General
Telephone: 617-963-2423
Last EDR Contact: 07/21/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Annually

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 09/09/2024
Date Data Arrived at EDR: 09/11/2024
Date Made Active in Reports: 12/06/2024
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/04/2025
Next Scheduled EDR Contact: 12/22/2025
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/15/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/08/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 02/07/2024
Date Data Arrived at EDR: 11/13/2024
Date Made Active in Reports: 11/19/2024
Number of Days to Update: 6

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/17/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 04/04/2025
Date Data Arrived at EDR: 06/02/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 04/04/2025
Date Data Arrived at EDR: 06/02/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Quarterly

Local Land Records

LIENS: Liens Information Listing

A listing of environmental liens.

Date of Government Version: 03/07/2018
Date Data Arrived at EDR: 03/09/2018
Date Made Active in Reports: 06/21/2018
Number of Days to Update: 104

Source: Department of Environmental Protection
Telephone: 617-292-5628
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/11/2025
Date Data Arrived at EDR: 06/12/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 4

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/12/2025
Next Scheduled EDR Contact: 09/29/2025
Data Release Frequency: Quarterly

MA SPILLS: Historical Spill List

The Spills Database was the release notification tracking system for spills that occurred prior to October 1, 1993. This information should be considered to be primarily of historical interest since all of the listed spills have either been cleaned up or assigned new tracking numbers and moved to the Reportable Releases or Sites Transition List databases.

Date of Government Version: 09/30/1993
Date Data Arrived at EDR: 12/03/2003
Date Made Active in Reports: 12/31/2003
Number of Days to Update: 28

Source: Department of Environmental Protection
Telephone: 617-292-5720
Last EDR Contact: 12/03/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

RELEASE: Reportable Releases

Contains information on all releases of oil and hazardous materials that have been reported to DEP

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 12/11/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/08/2013
Number of Days to Update: 36

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 03/10/1998
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/05/2013
Number of Days to Update: 61

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/04/2025
Next Scheduled EDR Contact: 09/29/2025
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 07/23/2025
Date Data Arrived at EDR: 07/23/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 6

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 07/23/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/07/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 06/25/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/07/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/03/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/03/2025
Next Scheduled EDR Contact: 09/29/2025
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EPA WATCH LIST: EPA Watch List

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/24/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 07/31/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/11/2025
Next Scheduled EDR Contact: 12/22/2025
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/11/2025
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 7

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/11/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 04/14/2025
Date Data Arrived at EDR: 04/15/2025
Date Made Active in Reports: 07/08/2025
Number of Days to Update: 84

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/14/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/29/2025
Date Data Arrived at EDR: 08/04/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 8

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/05/2025
Date Data Arrived at EDR: 04/11/2025
Date Made Active in Reports: 07/08/2025
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/09/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 28

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 10/02/2024
Date Made Active in Reports: 01/10/2025
Number of Days to Update: 100

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/02/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 05/07/2025
Date Data Arrived at EDR: 05/07/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 27

Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 07/08/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 10/16/2024
Date Made Active in Reports: 01/14/2025
Number of Days to Update: 90

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 08/28/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 07/31/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 06/17/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 03/31/2025
Date Data Arrived at EDR: 04/22/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 86
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/17/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 03/31/2025
Date Data Arrived at EDR: 05/02/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 76

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/24/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/19/2025
Date Made Active in Reports: 03/07/2025
Number of Days to Update: 16

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/03/2025
Next Scheduled EDR Contact: 09/29/2025
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 06/25/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/28/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 05/15/2025
Date Data Arrived at EDR: 05/15/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 75

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/11/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/01/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/18/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 04/01/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 83

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 04/08/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 84

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 05/28/2025
Date Data Arrived at EDR: 05/28/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 6

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/09/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 06/04/2024
Date Data Arrived at EDR: 11/22/2024
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 88

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/22/2025
Date Data Arrived at EDR: 05/05/2025
Date Made Active in Reports: 05/21/2025
Number of Days to Update: 16

Source: EPA
Telephone: (617) 918-1111
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/22/2025
Date Data Arrived at EDR: 06/25/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 06/25/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 02/14/2025
Date Data Arrived at EDR: 03/11/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 84

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/02/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/12/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/07/2025
Date Data Arrived at EDR: 05/13/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 77

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/07/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 03/23/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 05/05/2025
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 07/16/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS PROJECT: NORTHEASTERN UNIVERSITY PFAS PROJECT

The PFAS Contamination Site Tracker records qualitative and quantitative data from each site in a chart, specifically examining discovery, contamination levels, government response, litigation, health impacts, media coverage, and community characteristics. All data presented in the chart were extracted from government websites, such as state health departments or the Environmental Protection Agency, and news articles.

Date of Government Version: 05/15/2024
Date Data Arrived at EDR: 03/06/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 89

Source: Social Science Environmental Health Research Institute
Telephone: N/A
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS ECHO FIRE TRAIN: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS PT 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 12/16/2016
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 03/10/2017
Number of Days to Update: 63

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: No Update Planned

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data

The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 04/13/2025
Date Data Arrived at EDR: 04/15/2025
Date Made Active in Reports: 07/08/2025
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

UST FINDER: UST Finder Database

EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 106

Source: Environmental Protection Agency
Telephone: 202-564-0394
Last EDR Contact: 08/13/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

UST FINDER RELEASE: UST Finder Releases Database

US EPA’s UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA’s Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/31/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 79

Source: Environmental Protecton Agency
Telephone: 202-564-0394
Last EDR Contact: 08/13/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Semi-Annually

E MANIFEST: Hazardous Waste Electronic Manifest System

EPA established a national system for tracking hazardous waste shipments electronically. This system, known as ?e-Manifest,? will modernize the nation?s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 08/13/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 833-501-6826
Last EDR Contact: 06/04/2025
Next Scheduled EDR Contact: 09/29/2025
Data Release Frequency: Varies

PFAS: PFAS Contaminated Sites Listing

Detection of Per- and Polyfluoroalkyl Substances (PFAS) in drinking water.

Date of Government Version: 03/24/2025
Date Data Arrived at EDR: 03/25/2025
Date Made Active in Reports: 06/13/2025
Number of Days to Update: 80

Source: Department of Environmental Protection
Telephone: 617-292-6770
Last EDR Contact: 06/17/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Varies

AIRS: Permitted Facilities Listing

A listing of Air Quality permit applications.

Date of Government Version: 04/07/2025
Date Data Arrived at EDR: 04/08/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 77

Source: Department of Environmental Protection
Telephone: 617-292-5789
Last EDR Contact: 07/20/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

ASBESTOS: Asbestos Notification Listing

Asbestos sites

Date of Government Version: 05/21/2025
Date Data Arrived at EDR: 05/21/2025
Date Made Active in Reports: 08/20/2025
Number of Days to Update: 91

Source: Department of Environmental Protection
Telephone: 617-292-5982
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

DRYCLEANERS: Regulated Drycleaning Facilities

A listing of Department of Environmental Protection regulated drycleaning facilities that use perchloroethylene under the Environmental Results Program.

Date of Government Version: 04/25/2025
Date Data Arrived at EDR: 05/01/2025
Date Made Active in Reports: 07/25/2025
Number of Days to Update: 85

Source: Department of Environmental Protection
Telephone: 617-292-5633
Last EDR Contact: 08/12/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

ENFORCEMENT: Enforcement Action Cases

A listing of enforcement action cases tracked by Department of Environmental Protection programs, including Solid Waste and Hazardous Waste.

Date of Government Version: 04/03/2025
Date Data Arrived at EDR: 04/08/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 77

Source: Department of Environmental Quality
Telephone: 617-292-5979
Last EDR Contact: 07/15/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

FIN ASSURANCE 1: Financial Assurance Information Listing

Information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 12/01/2010
Date Data Arrived at EDR: 12/23/2010
Date Made Active in Reports: 02/03/2011
Number of Days to Update: 42

Source: Department of Environmental Protection
Telephone: 617-292-5970
Last EDR Contact: 08/26/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Varies

FIN ASSURANCE 2: Financial Assurance Information Listing

A listing of financial assurance information for underground storage tanks. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/26/2025
Date Data Arrived at EDR: 05/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 84

Source: Office of State Fire Marshal
Telephone: 978-567-3100
Last EDR Contact: 07/29/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

FIN ASSURANCE 3: Financial Assurance Information listing

Information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay

Date of Government Version: 03/27/2025
Date Data Arrived at EDR: 03/27/2025
Date Made Active in Reports: 06/13/2025
Number of Days to Update: 78

Source: Department of Environmental Protection
Telephone: 617-292-5970
Last EDR Contact: 07/08/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

GWDP: Ground Water Discharge Permits

The Ground Water Discharge Permits datalayer (formerly known as Groundwater Discharge Points) is a statewide point dataset containing approximate locations of permitted discharges to groundwater.

Date of Government Version: 01/10/2025
Date Data Arrived at EDR: 01/22/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 75

Source: MassGIS
Telephone: 617-556-1150
Last EDR Contact: 07/17/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

HW GEN: List of Massachusetts Hazardous Waste Generators

Permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities.

Date of Government Version: 06/04/2025
Date Data Arrived at EDR: 06/16/2025
Date Made Active in Reports: 09/11/2025
Number of Days to Update: 87

Source: Department of Environmental Protection
Telephone: 617-292-5500
Last EDR Contact: 06/16/2025
Next Scheduled EDR Contact: 09/29/2025
Data Release Frequency: Semi-Annually

MERCURY: Mercury Product Recyling Drop-Off Locations Listing

A listing of locations, collecting and recycling for mercury-added products. Mercury is toxic to the human nervous system, as well as fish and animals. Mercury can enter the body either through skin absorption or through inhalation of mercury vapors. At room temperature, small beads of mercury will vaporize.

Date of Government Version: 04/02/2025
Date Data Arrived at EDR: 05/13/2025
Date Made Active in Reports: 07/25/2025
Number of Days to Update: 73

Source: Department of Environmental Protection
Telephone: 617-292-5632
Last EDR Contact: 08/07/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

NPDES: NPDES Permit Listing
Listing of treatment plants in Massachusetts that hold permits to discharge to groundwater.

Date of Government Version: 05/05/2025
Date Data Arrived at EDR: 05/06/2025
Date Made Active in Reports: 07/30/2025
Number of Days to Update: 85
Source: Department of Environmental Protection
Telephone: 508-767-2781
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

TIER 2: Tier 2 Information Listing
A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 08/07/2024
Date Made Active in Reports: 11/06/2024
Number of Days to Update: 91
Source: Massachusetts Emergency Management Agency
Telephone: 508-820-2019
Last EDR Contact: 07/29/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Annually

TSD: TSD Facility
List of Licensed Hazardous Waste Treatment, Storage Disposal Facilities (TSDFs) in Massachusetts.

Date of Government Version: 06/04/2025
Date Data Arrived at EDR: 06/16/2025
Date Made Active in Reports: 09/11/2025
Number of Days to Update: 87
Source: Department of Environmental Protection
Telephone: 617-292-5580
Last EDR Contact: 06/16/2025
Next Scheduled EDR Contact: 09/29/2025
Data Release Frequency: Varies

UIC: Underground Injection Control Listing
A list of UIC registration data and their locations

Date of Government Version: 05/05/2025
Date Data Arrived at EDR: 05/06/2025
Date Made Active in Reports: 05/13/2025
Number of Days to Update: 7
Source: Department of Environmental Protection
Telephone: 617-566-1172
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A
Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/04/2025
Date Data Arrived at EDR: 05/06/2025
Date Made Active in Reports: 07/21/2025
Number of Days to Update: 76

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 07/31/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 1

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/17/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/06/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/09/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 07/02/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 08/27/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

12 STORY STREET
12 STORY STREET
ESSEX, MA 01929

TARGET PROPERTY COORDINATES

Latitude (North):	42.632184 - 42° 37' 55.86''
Longitude (West):	70.789947 - 70° 47' 23.81''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	353231.0
UTM Y (Meters):	4721309.5
Elevation:	75 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	19019791 IPSWICH, MA
Version Date:	2021
South Map:	19019793 MARBLEHEAD NORTH, MA
Version Date:	2021

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

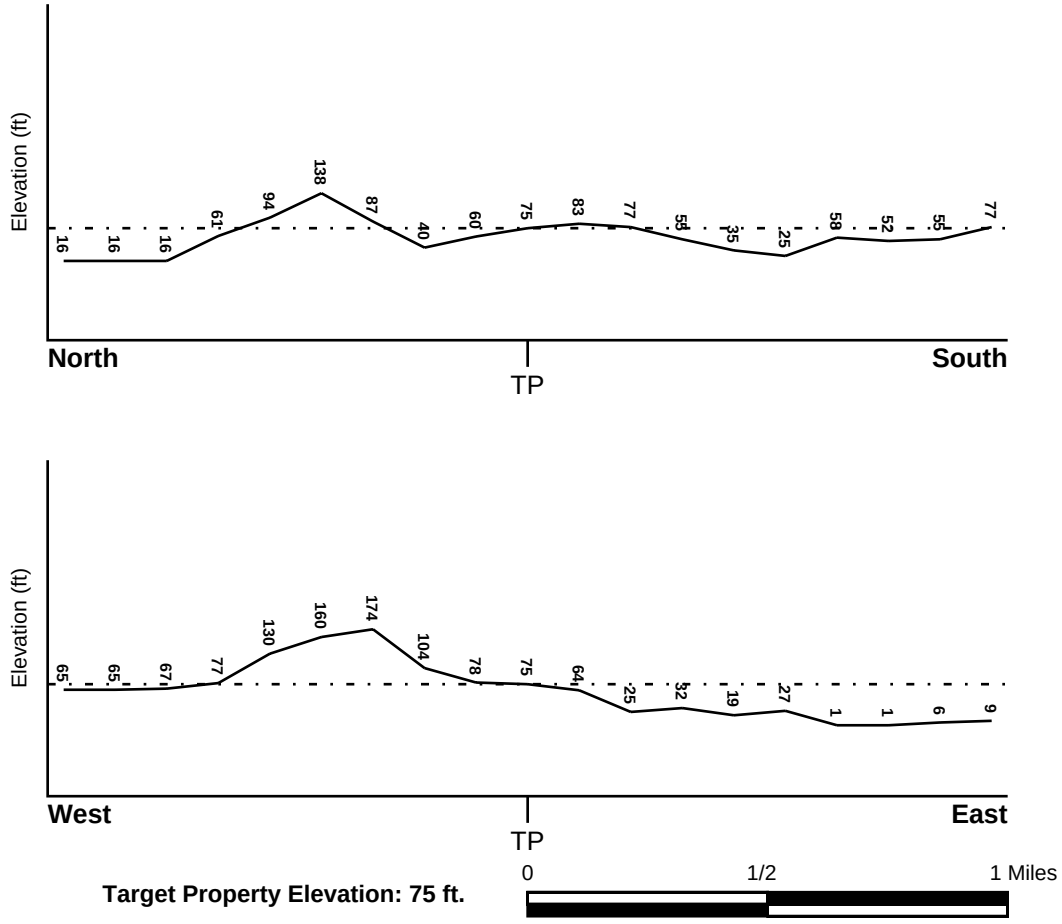
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General ENE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 75 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
25009C0293G	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
25009C0294G	FEMA FIRM Flood data
25009C0431G	FEMA FIRM Flood data
25009C0432G	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
EAST HALF OF IPSWICH	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

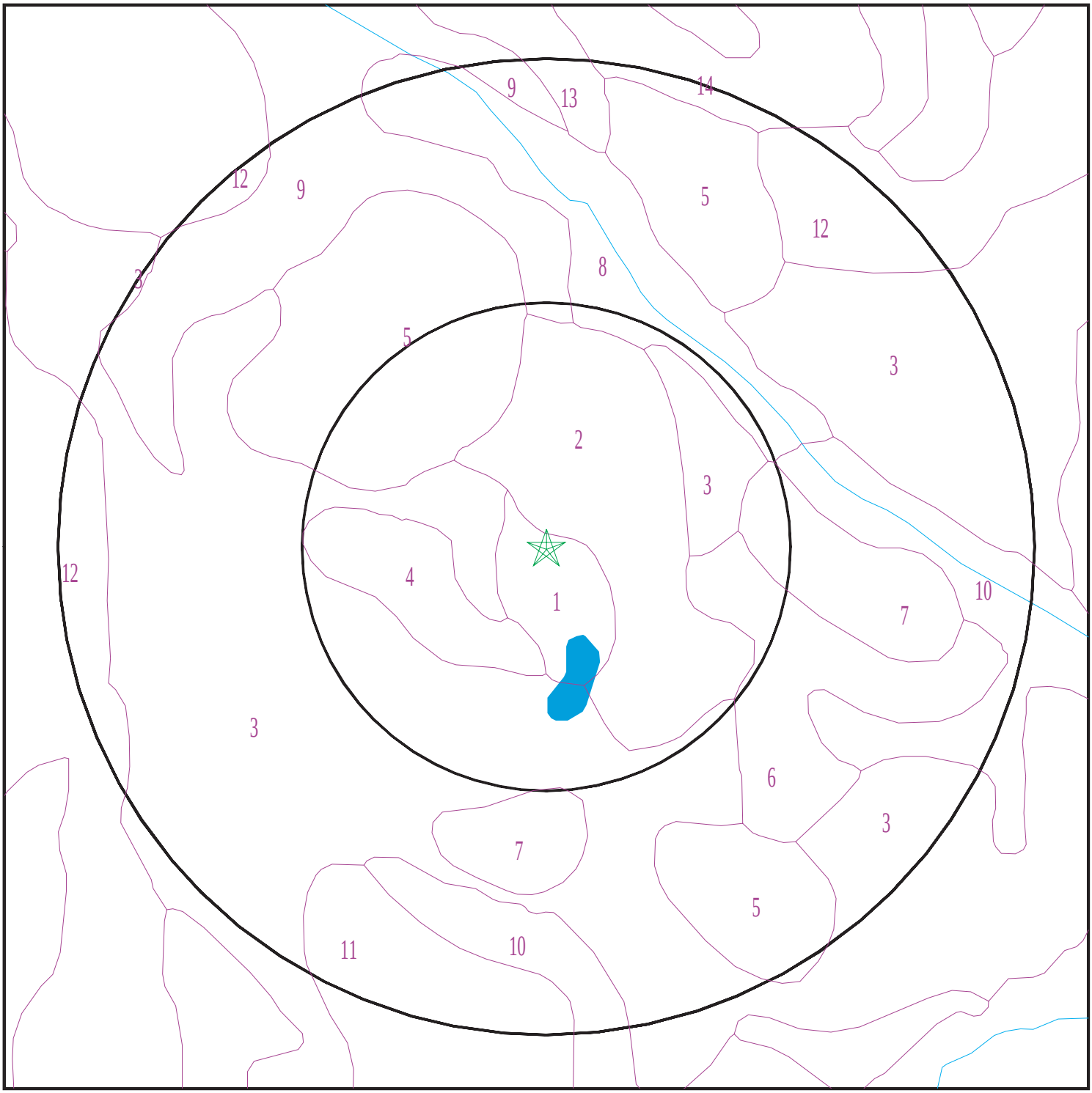
Era:	Paleozoic
System:	Ordovian
Series:	Lower Paleozoic granitic rocks
Code:	Pzg1 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 8109475.2s



SITE NAME:	12 Story Street	CLIENT:	Mabbett & Assoc.
ADDRESS:	12 Story Street Essex MA 01929	CONTACT:	Cassidy Way
		INQUIRY #:	8109475.2s
LAT/LONG:	42.632184 / 70.789947	DATE:	September 16, 2025 11:50 am

Copyright © 2025 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Urban land

Soil Surface Texture:
Hydrologic Group: Not reported

Soil Drainage Class:
Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 2

Soil Component Name: Canton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	7 inches	27 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	27 inches	59 inches	gravelly loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 3

Soil Component Name: Scituate

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 69 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0.42	Max: 6 Min: 4.5
2	9 inches	33 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0.42	Max: 6 Min: 4.5
3	33 inches	59 inches	gravelly loamy sand	Not reported	Not reported	Max: 1.41 Min: 0.42	Max: 6 Min: 4.5

Soil Map ID: 4

Soil Component Name: Ridgebury

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 23 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5
2	9 inches	20 inches	gravelly sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5
3	20 inches	59 inches	gravelly sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5

Soil Map ID: 5

Soil Component Name: Chatfield

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:
2	5 inches	33 inches	gravelly very fine sandy loam	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:
3	33 inches	59 inches	unweathered bedrock	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 6

Soil Component Name: Elmridge

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 69 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.8 Min: 5.6
2	7 inches	22 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.8 Min: 5.6
3	22 inches	59 inches	silty clay	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.8 Min: 5.6

Soil Map ID: 7

Soil Component Name: Canton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	3 inches	27 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	27 inches	59 inches	gravelly loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 8

Soil Component Name: Scarboro

Soil Surface Texture: mucky loamy fine sand

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Very poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	mucky loamy fine sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 4.5
2	7 inches	12 inches	loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 4.5
3	12 inches	18 inches	loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 4.5
4	18 inches	59 inches	stratified gravelly coarse sand to loamy fine sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 4.5

Soil Map ID: 9

Soil Component Name: Wareham

Soil Surface Texture: loamy sand

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	9 inches	16 inches	loamy fine sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	16 inches	24 inches	loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
4	24 inches	59 inches	sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 10

Soil Component Name: Scitico

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 15 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6
2	7 inches	42 inches	silty clay loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6
3	42 inches	57 inches	silty clay loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6
4	57 inches	70 inches	silty clay	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6

Soil Map ID: 11

Soil Component Name: Canton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	3 inches	27 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	27 inches	59 inches	gravelly loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 12

Soil Component Name: Chatfield

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	5 inches	33 inches	gravelly very fine sandy loam	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:
3	33 inches	59 inches	unweathered bedrock	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 13

Soil Component Name: Ridgebury

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 23 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5
2	9 inches	20 inches	gravelly sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5
3	20 inches	59 inches	gravelly sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5

Soil Map ID: 14

Soil Component Name: Paxton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 69 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5
2	9 inches	22 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5
3	22 inches	59 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40000479044	1/4 - 1/2 Mile East
2	USGS40000478964	1/4 - 1/2 Mile SSE
3	USGS40000478954	1/4 - 1/2 Mile SSW
5	USGS40000479178	1/2 - 1 Mile ENE
6	USGS40000478955	1/2 - 1 Mile WSW
7	USGS40000478856	1/2 - 1 Mile SSW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
4	MA3092001	1/2 - 1 Mile East

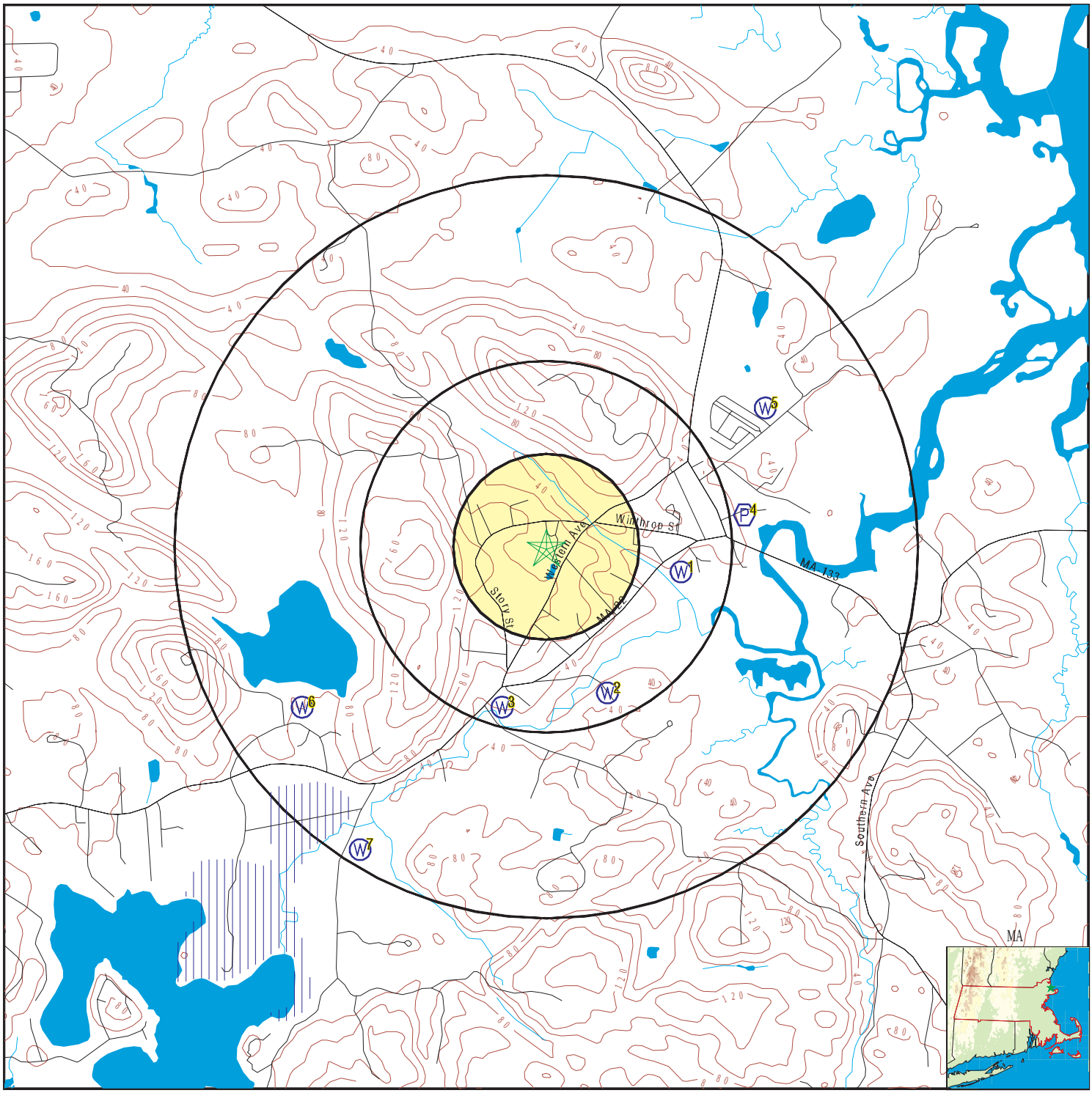
Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

OTHER STATE DATABASE INFORMATION

PHYSICAL SETTING SOURCE MAP - 8109475.2s



County Boundary
Major Roads
Contour Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location

Potentially Productive Aquifers
Not Potentially Productive Aquifers
DEP Approved Zone IIs
EPA Designated Sole Src. Aq.

SITE NAME:	12 Story Street	CLIENT:	Mabbett & Assoc.
ADDRESS:	12 Story Street Essex MA 01929	CONTACT:	Cassidy Way
		INQUIRY #:	8109475.2s
LAT/LONG:	42.632184 / 70.789947	DATE:	September 16, 2025 11:50 am

Copyright © 2025 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
East **FED USGS** **USGS40000479044**
1/4 - 1/2 Mile
Lower

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-EXW 14	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1967
Well Depth:	75	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1967-01-01
Feet below surface:	4.00	Feet to sea level:	Not Reported
Note:	Not Reported		

2
SSE **FED USGS** **USGS40000478964**
1/4 - 1/2 Mile
Lower

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-EXA 3	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1959
Well Depth:	11	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

3
SSW **FED USGS** **USGS40000478954**
1/4 - 1/2 Mile
Lower

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-EXA 2	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1959
Well Depth:	24	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

4
East
1/2 - 1 Mile
Lower

FRDS PWS **MA3092001**

Epa region:	01	State:	MA
Pwsid:	MA3092001	Pwsname:	CAMP MENORAH
Cityserved:	Not Reported	Stateserved:	MA
Zipserved:	Not Reported	Fipscounty:	25009
Status:	Closed	Retpopsrvd:	25
Pwssvcconn:	1	Psource longname:	Groundwater
Pwstype:	TNCWS	Owner:	Private
Contact:	CAMP MENORAH	Contactorgname:	Not Reported
Contactphone:	Not Reported	Contactaddress1:	BOX 555
Contactaddress2:	Not Reported	Contactcity:	ESSEX
Contactstate:	MA	Contactzip:	019290000
Pwsactivitycode:	I		
PWS ID:	MA3092001	PWS type:	Mailing
PWS name:	CAMP MENORAL	PWS address:	?
PWS city:	ESSEX	PWS state:	MA
PWS zip:	019290000	PWS ID:	MA3092001
Activity status:	Active	Date system activated:	9003
Date system deactivated:	Not Reported	Retail population:	00000025
System name:	CAMP MENORAH	System address:	BOX 555
System city:	ESSEX	System state:	MA
System zip:	019290000		
Population served:	Under 101 Persons	Treatment:	Treated
Latitude:	423800	Longitude:	0704648

5
ENE
1/2 - 1 Mile
Lower

FED USGS **USGS40000479178**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-EXA 1	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1959
Well Depth:	40	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported
Ground water levels,Number of Measurements:	1	Level reading date:	1959-10-01
Feet below surface:	22.00	Feet to sea level:	Not Reported
Note:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

6
WSW
1/2 - 1 Mile
Lower

FED USGS **USGS40000478955**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-EXW 18	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1957
Well Depth:	57	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1957-09-01
Feet below surface:	6.00	Feet to sea level:	Not Reported
Note:	Not Reported		

7
SSW
1/2 - 1 Mile
Lower

FED USGS **USGS40000478856**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-EXW 12	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1966
Well Depth:	7	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

MA_ACECS_ID 3

MA_ACECS_ID 3

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: MA Radon

Radon Test Results

County	% of sites>4 pCi/L	Median
ESSEX	36	2.8

Federal EPA Radon Zone for ESSEX County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 01929

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	3.900 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Massachusetts Geographic Information System (MassGIS) Datalayers
Source: Executive Office of Environmental Affairs
Telephone:

Public Water Supply Database

Telephone:
The Public Water Supply datalayer contains the locations of public community surface and groundwater supply sources and public non-community supply sources as defined in 310 CMR 22.00.

Areas of Critical Environmental Concern

Telephone:
The Areas of Critical Environmental Concern (ACEC) datalayer shows the location of areas that have been designated ACECs by the Secretary of Environmental Affairs. ACEC designation requires greater environmental review of certain kinds of proposed development under state jurisdiction within the ACEC boundaries. The ACEC Program is administered by the Department of Environmental Management (DEM) on behalf of the Secretary of Environmental Affairs. The Massachusetts Coastal Zone Management (MCZM) Office managed the original Coastal ACEC Program from 1978 to 1993, and continues to play a key role in monitoring coastal ACECs. Procedures for ACEC designation and the general policies governing the effects of designation are contained in the ACEC regulations (301 CMR 12.00). The ACEC datalayer has been compiled by MCZM and DEM and includes both coastal and inland areas.

EPA Designated Sole Source Aquifers

Telephone:
The Sole Source Aquifer datalayer was compiled by the Department of Environmental Protection (DEP) Division of Water Supply (DWS). Seven Sole Source Aquifers have been designated by the US Environmental Protection Agency (EPA) for Massachusetts. A Sole Source Aquifer (SSA) is an aquifer designated by US EPA as the sole or principal source of drinking water for a given aquifer service area; that is, an aquifer which is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should that aquifer become contaminated. The aquifers were defined by an EPA hydrogeologist.

Aquifers

Telephone:
MassGIS produced an aquifer datalayer composed of 20 individual panels, generally based on the boundaries of the major drainage basins. Areas of high and medium yield were mapped. This datalayer includes polygon attribute coding to help in the identification of areas in which cleanup of hazardous waste sites must meet drinking water standards, as defined in the Massachusetts Contingency Plan (MCP) (310 CMR 40.00000).

Non-Potential Drinking Water Source Areas

Telephone:
Non-Potential Drinking Water Source Areas (NPDWSA) are regulatory in nature representing one of many considerations used in determining the standards to which ground water must be cleaned in the event of a release of oil or hazardous material. NPDWSAs are not based on existing water quality and do not indicate poor ambient conditions.

DEP Approved Zone IIs

Telephone:
The Department of Environmental Protection (DEP) approved Zone IIs datalayer was compiled by the DEP Division of Water Supply (DWS). The database contains 281 approved Zone IIs statewide. As stated in 310 CMR 22.02, a Zone II is 'that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation.) It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone IIs shall extend up gradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary).' These data are used in association with the Public Water Supplies datalayer. The following describes certain unique features of this association.\n - Any proposed new well which will pump at least 100,000 gallons per day must have a Zone II delineation completed and approved by DEP prior to the well coming on line. \n- Additionally, a new source may not be on-line yet, but other, older wells may fall within its Zone II boundary.\n - Further, existing wells must have a Zone II delineated as a condition of receiving a water withdrawal permit under the Water Management Act.

OTHER STATE DATABASE INFORMATION

RADON

State Database: MA Radon
Source: Department of Health
Telephone: 413-586-7525
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

APPENDIX E

ADDITIONAL EDR REPORTS

Historical USGS Topography Maps
Historical Aerial Photographs
Historical City Directories
Certified Sanborn® Map Report

12 Story Street

12 Story Street

Essex, MA 01929

Inquiry Number: 8109475.4

September 16, 2025

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

09/16/25

Site Name:

12 Story Street
12 Story Street
Essex, MA 01929
EDR Inquiry # 8109475.4

Client Name:

Mabbett & Assoc.
105 Central Street, Suite 4100
Stoneham, MA 02180
Contact: Cassidy Way

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Mabbett & Assoc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA
Project: P2025201

Coordinates:

Latitude:	42.632184 42° 37' 56" North
Longitude:	-70.789947 -70° 47' 24" West
UTM Zone:	Zone 19 North
UTM X Meters:	353235.14
UTM Y Meters:	4721523.72
Elevation:	74.43' above sea level

Maps Provided:

2021	1966, 1970	1888
2018	1956	
2015	1950	
2012	1945	
2005	1943	
1997	1919	
1985	1915	
1977	1893	

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT. Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2025 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2021 Source Sheets



Ipswich
2021
7.5-minute, 24000



Marblehead North
2021
7.5-minute, 24000

2018 Source Sheets



Ipswich
2018
7.5-minute, 24000



Marblehead North
2018
7.5-minute, 24000

2015 Source Sheets



Ipswich
2015
7.5-minute, 24000



Marblehead North
2015
7.5-minute, 24000

2012 Source Sheets



Ipswich
2012
7.5-minute, 24000



Marblehead North
2012
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2005 Source Sheets



Salem
2005
7.5-minute, 25000
Aerial Photo Revised 1978

1997 Source Sheets



Ipswich
1997
7.5-minute, 25000
Aerial Photo Revised 1978

1985 Source Sheets



Ipswich
1985
7.5-minute, 25000
Aerial Photo Revised 1978



Salem
1985
7.5-minute, 25000
Aerial Photo Revised 1978

1977 Source Sheets



Marblehead North
1977
7.5-minute, 25000
Aerial Photo Revised 1977

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1966, 1970 Source Sheets



Ipswich
1966
7.5-minute, 24000



Marblehead North
1970
7.5-minute, 24000
Aerial Photo Revised 1969

1956 Source Sheets



Marblehead North
1956
7.5-minute, 24000
Aerial Photo Revised 1955

1950 Source Sheets



Ipswich
1950
7.5-minute, 24000

1945 Source Sheets



Ipswich
1945
7.5-minute, 31680



Marblehead North
1945
7.5-minute, 31680

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1943 Source Sheets



Cape Ann
1943
30-minute, 125000

1919 Source Sheets



Salem
1919
15-minute, 62500

1915 Source Sheets



SALEM
1915
15-minute, 62500

1893 Source Sheets



Salem
1893
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

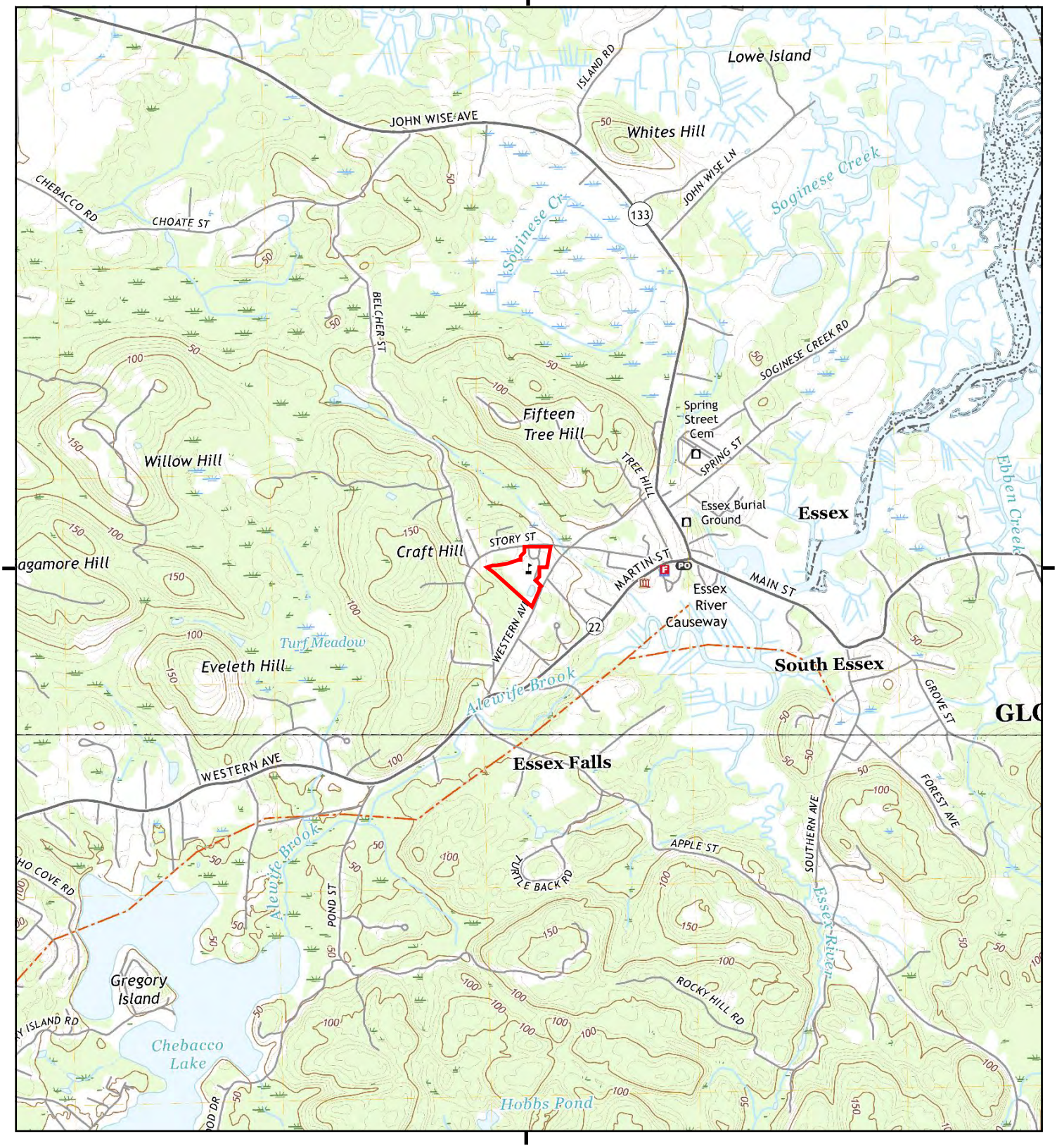
1888 Source Sheets



Salem
1888
15-minute, 62500

Historical Topo Map

2021



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

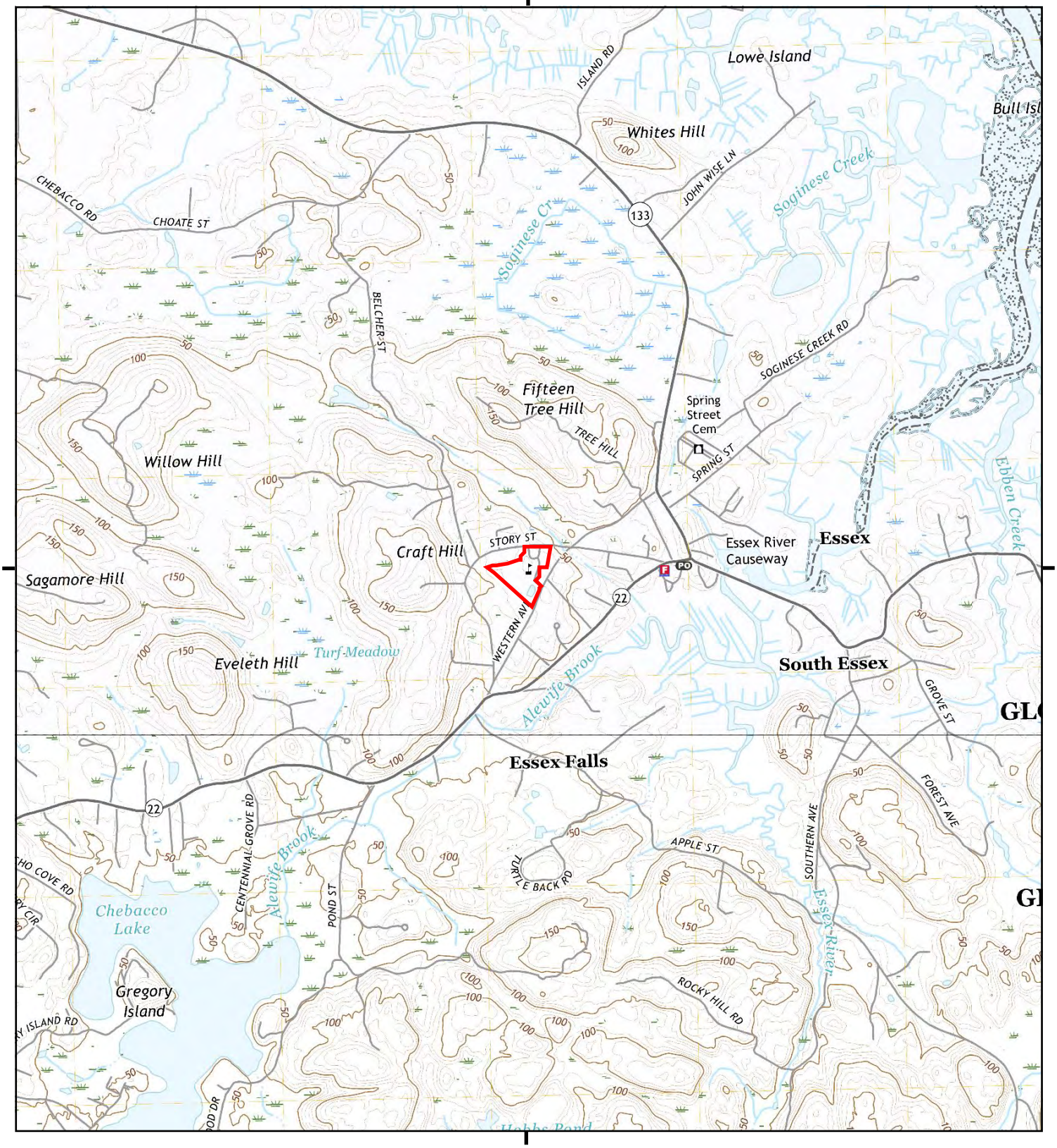
TP, Ipswich, 2021, 7.5-minute
S, Marblehead North, 2021, 7.5-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N

Historical Topo Map

2018



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

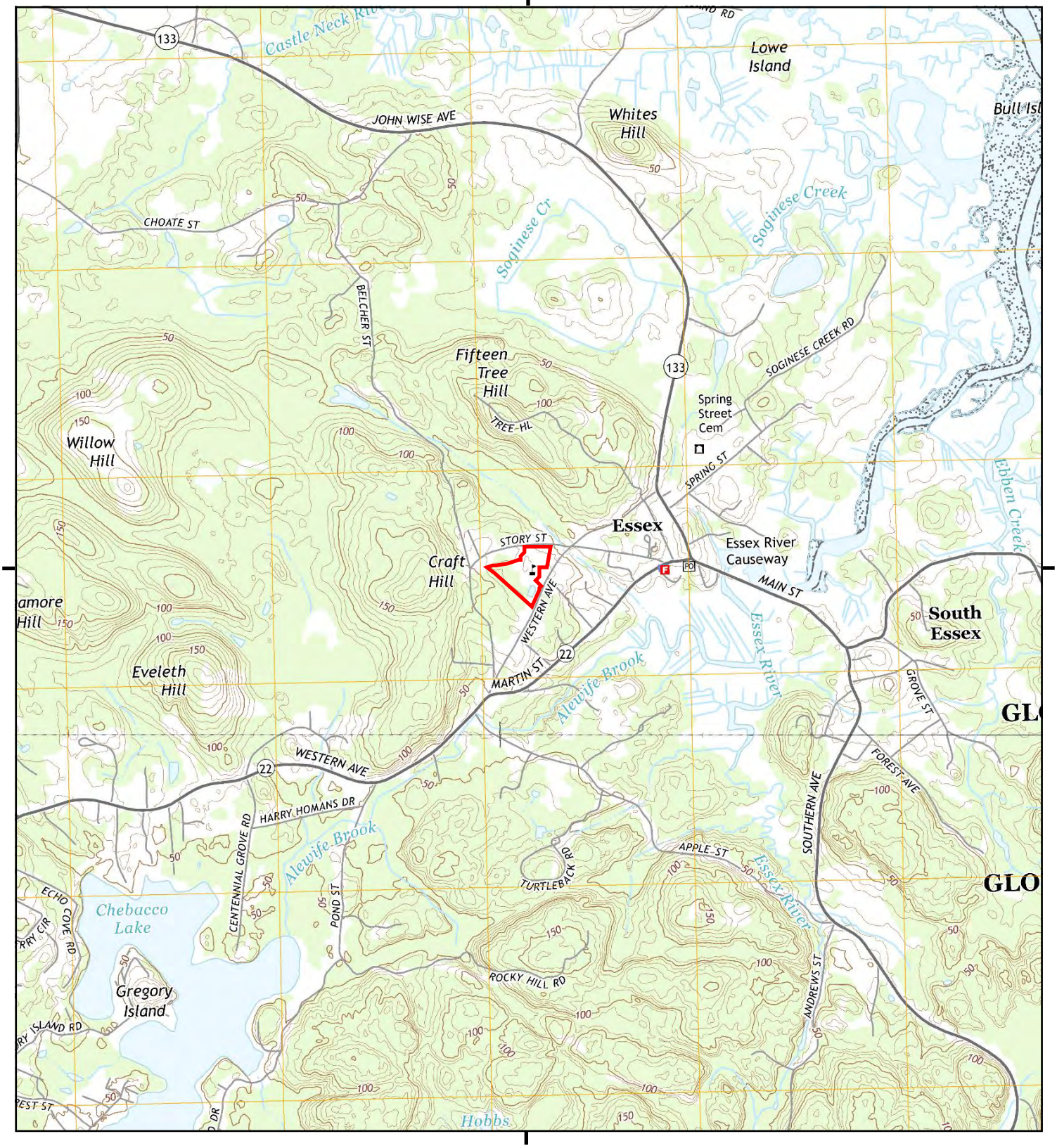
TP, Ipswich, 2018, 7.5-minute
S, Marblehead North, 2018, 7.5-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N

Historical Topo Map

2015



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

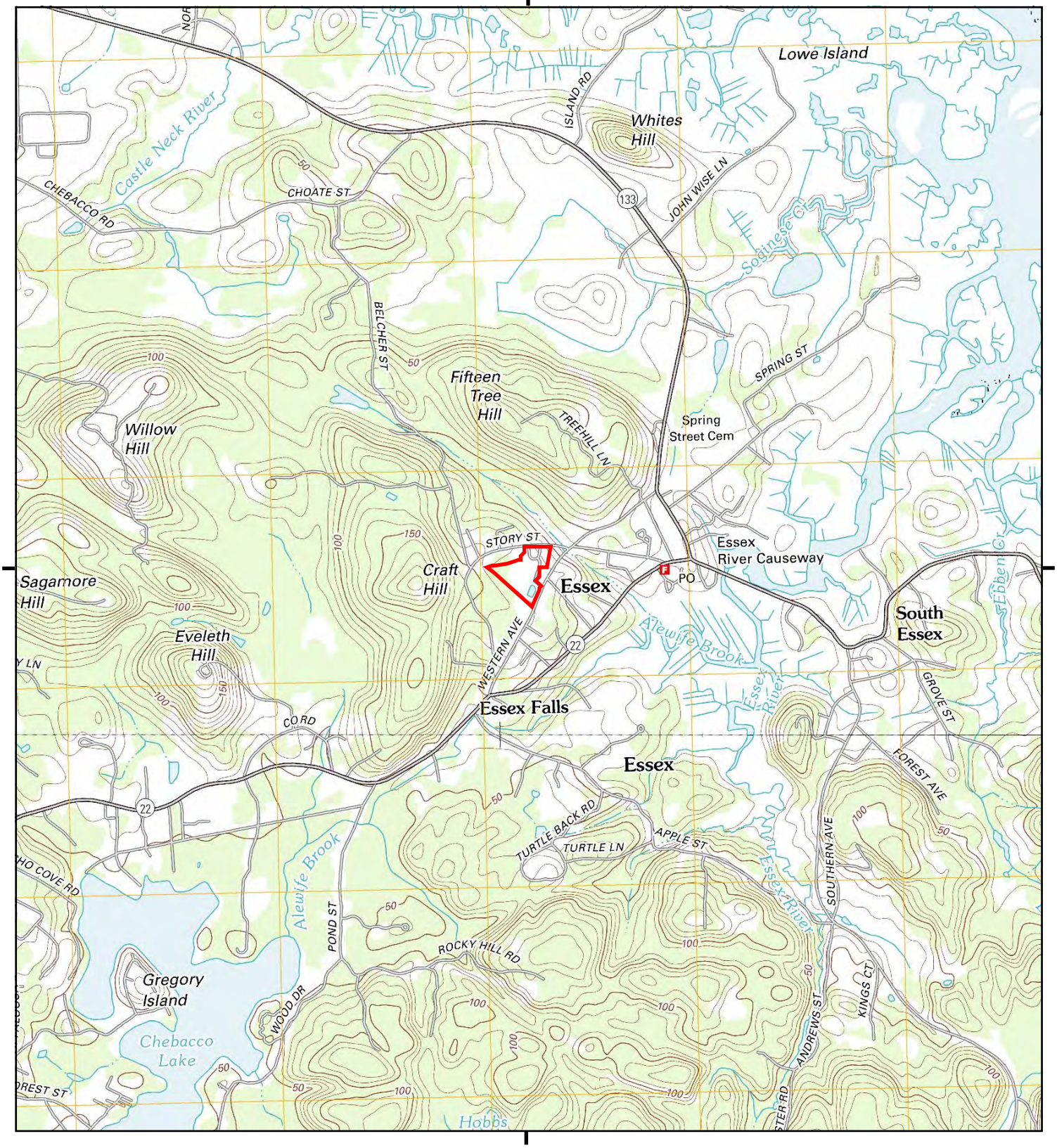
TP, Ipswich, 2015, 7.5-minute
S, Marblehead North, 2015, 7.5-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

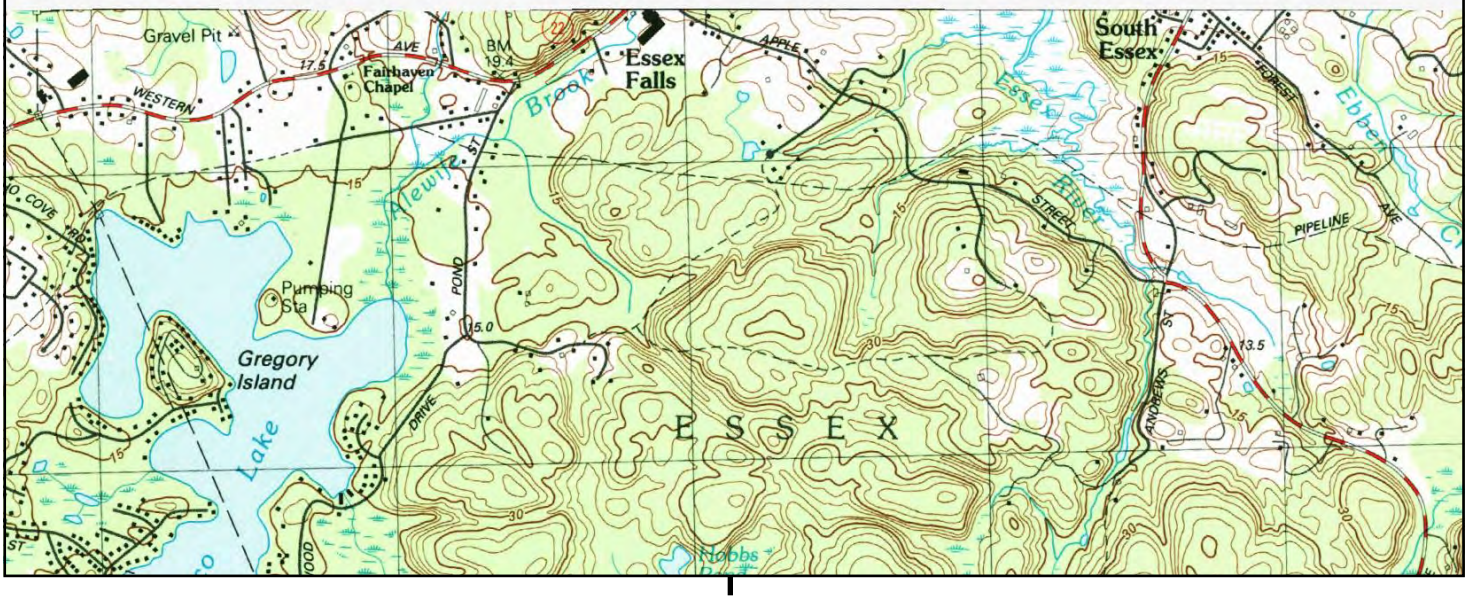
NW N NE
W E
SW S SE

TP, Ipswich, 2012, 7.5-minute
S, Marblehead North, 2012, 7.5-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N

UNMAPPED



This report includes information from the following map sheet(s).

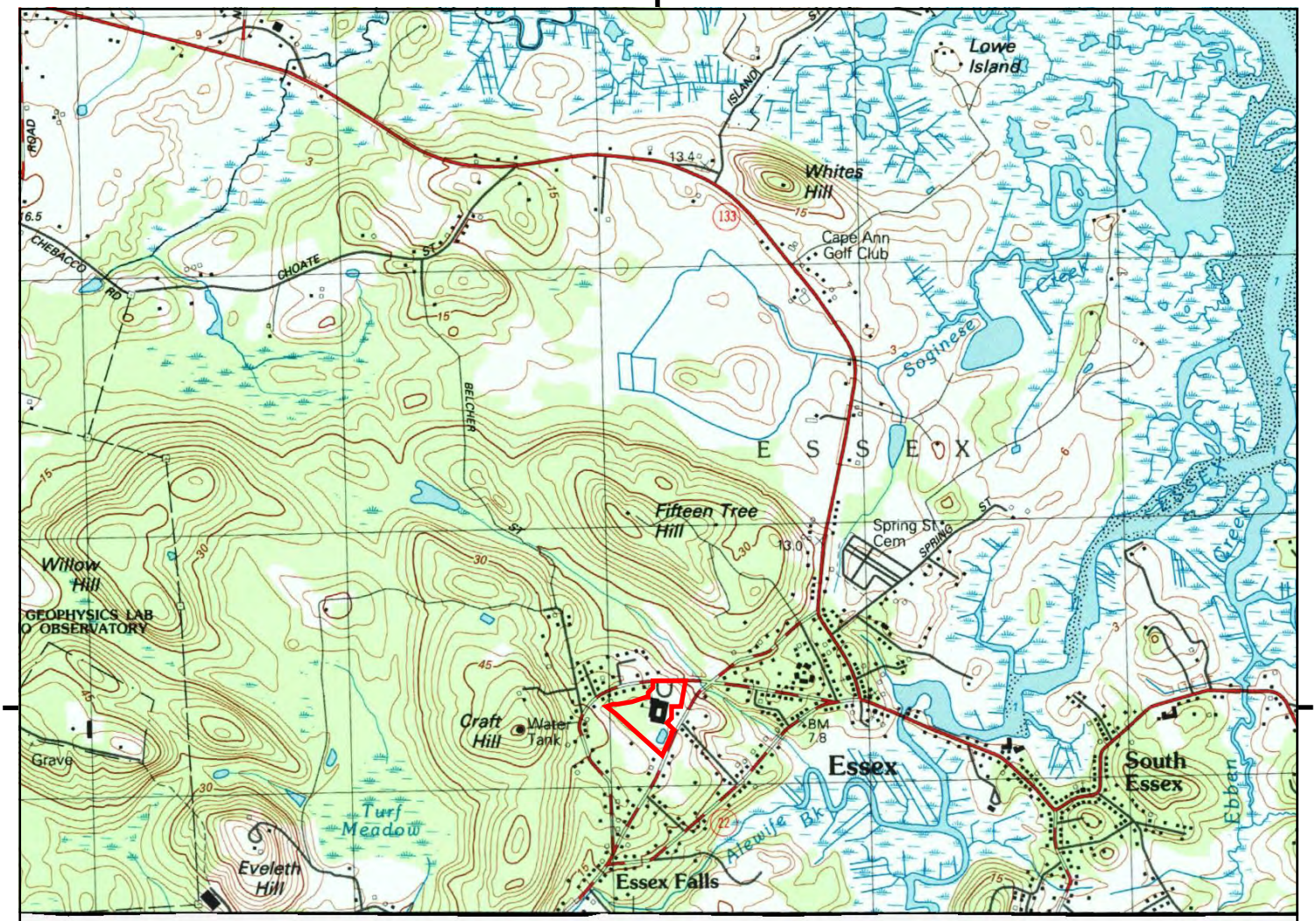
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

SW, Salem, 2005, 7.5-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



UNMAPPED

This report includes information from the following map sheet(s).

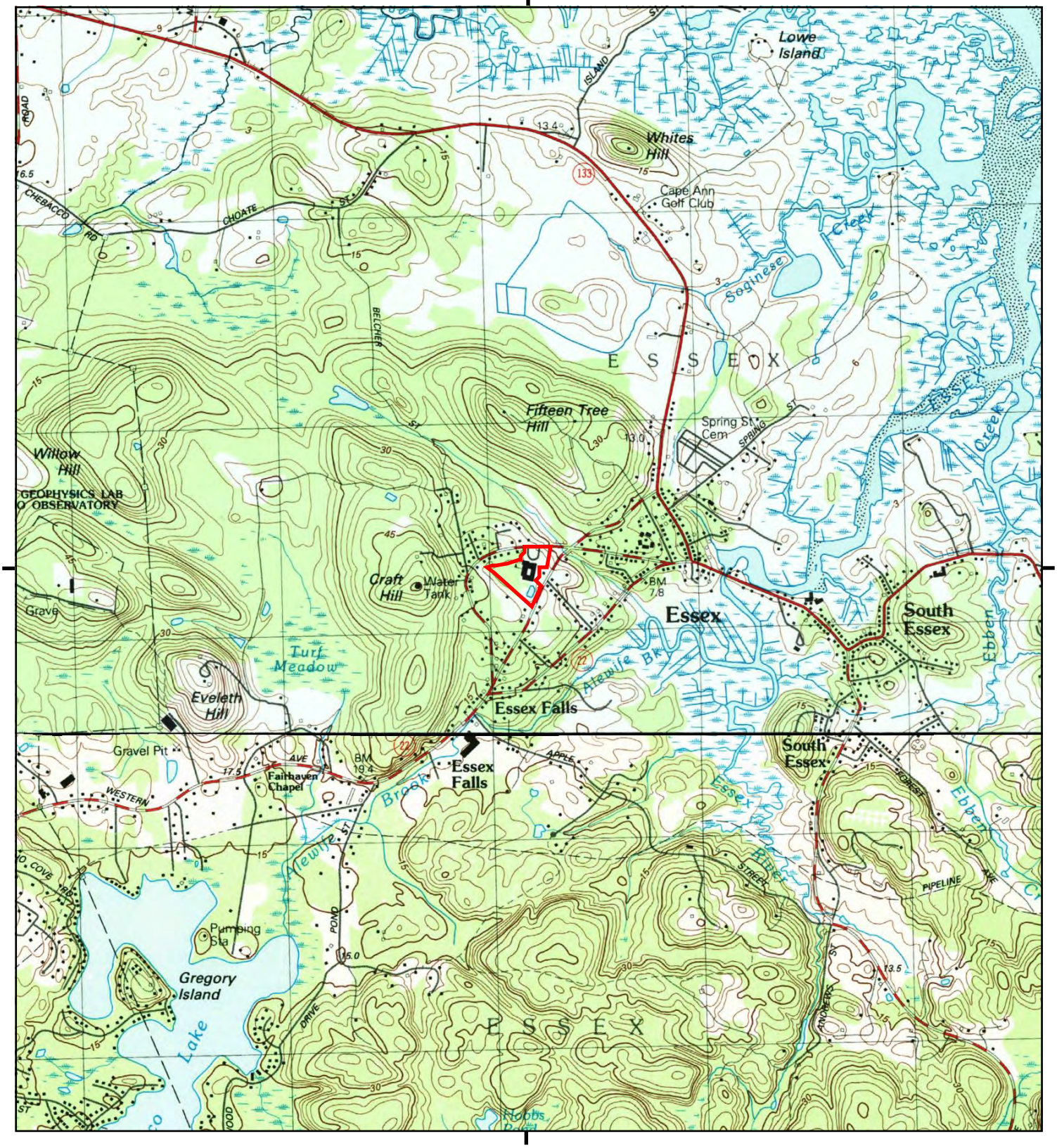
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Ipswich, 1997, 7.5-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

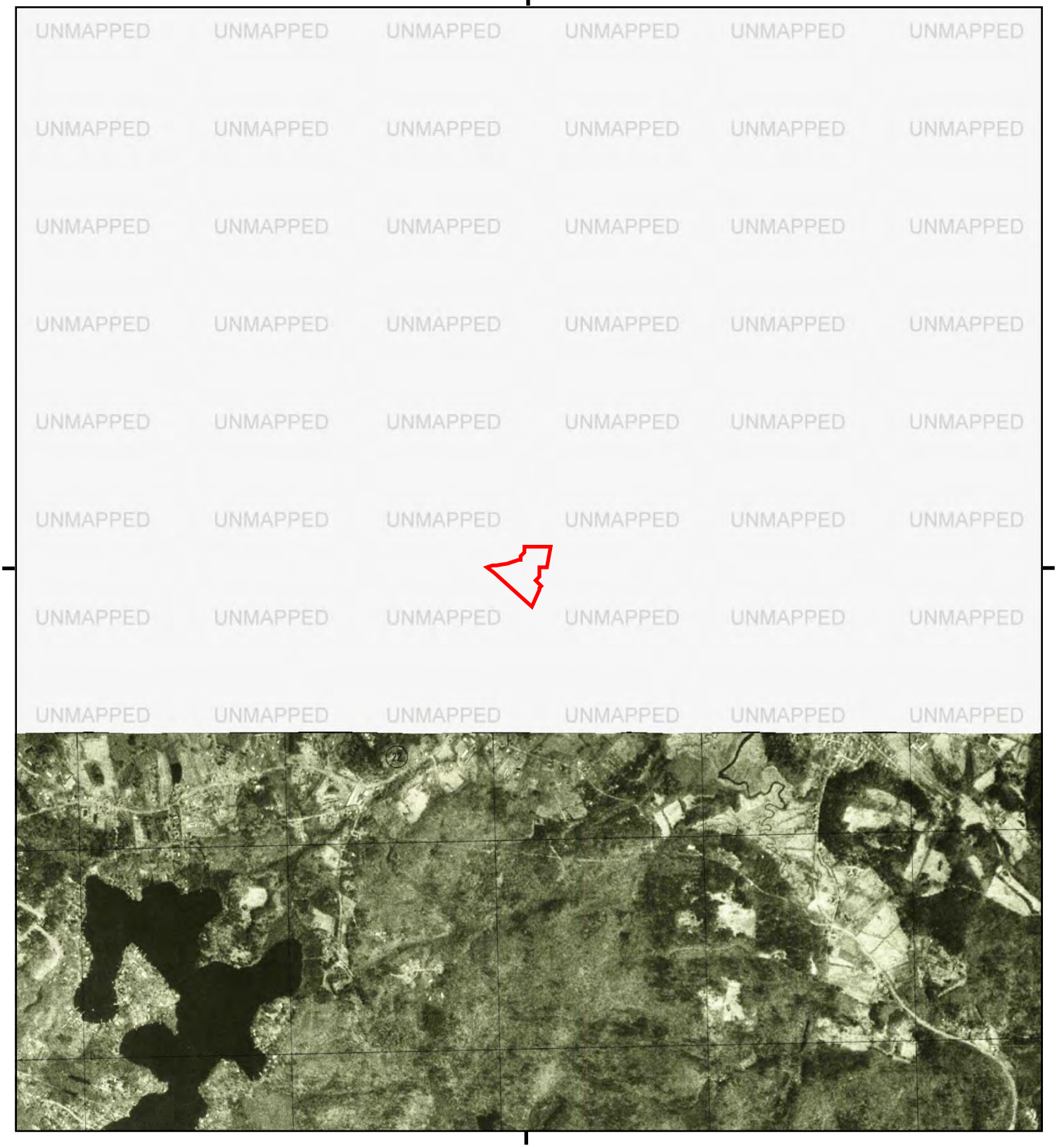
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Ipswich, 1985, 7.5-minute
SW, Salem, 1985, 7.5-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

S, Marblehead North, 1977, 7.5-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

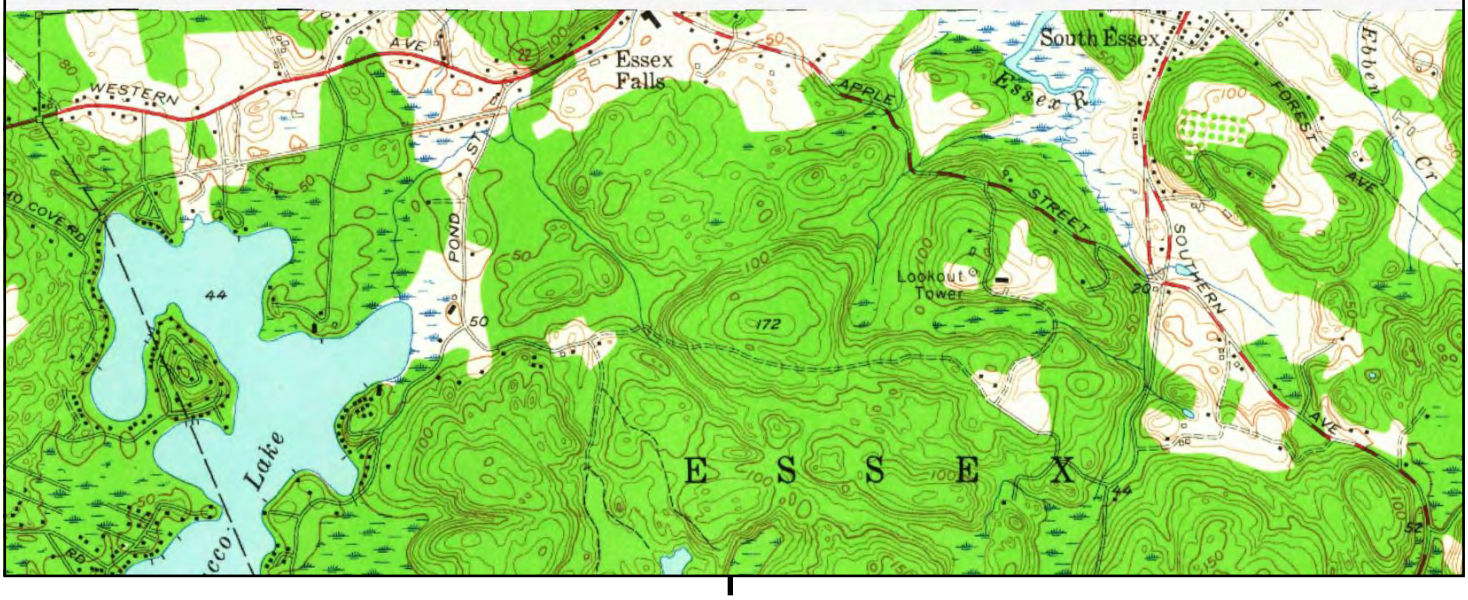
NW N NE
W E
SW S SE

TP, Ipswich, 1966, 7.5-minute
S, Marblehead North, 1970, 7.5-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N

UNMAPPED



This report includes information from the following map sheet(s).

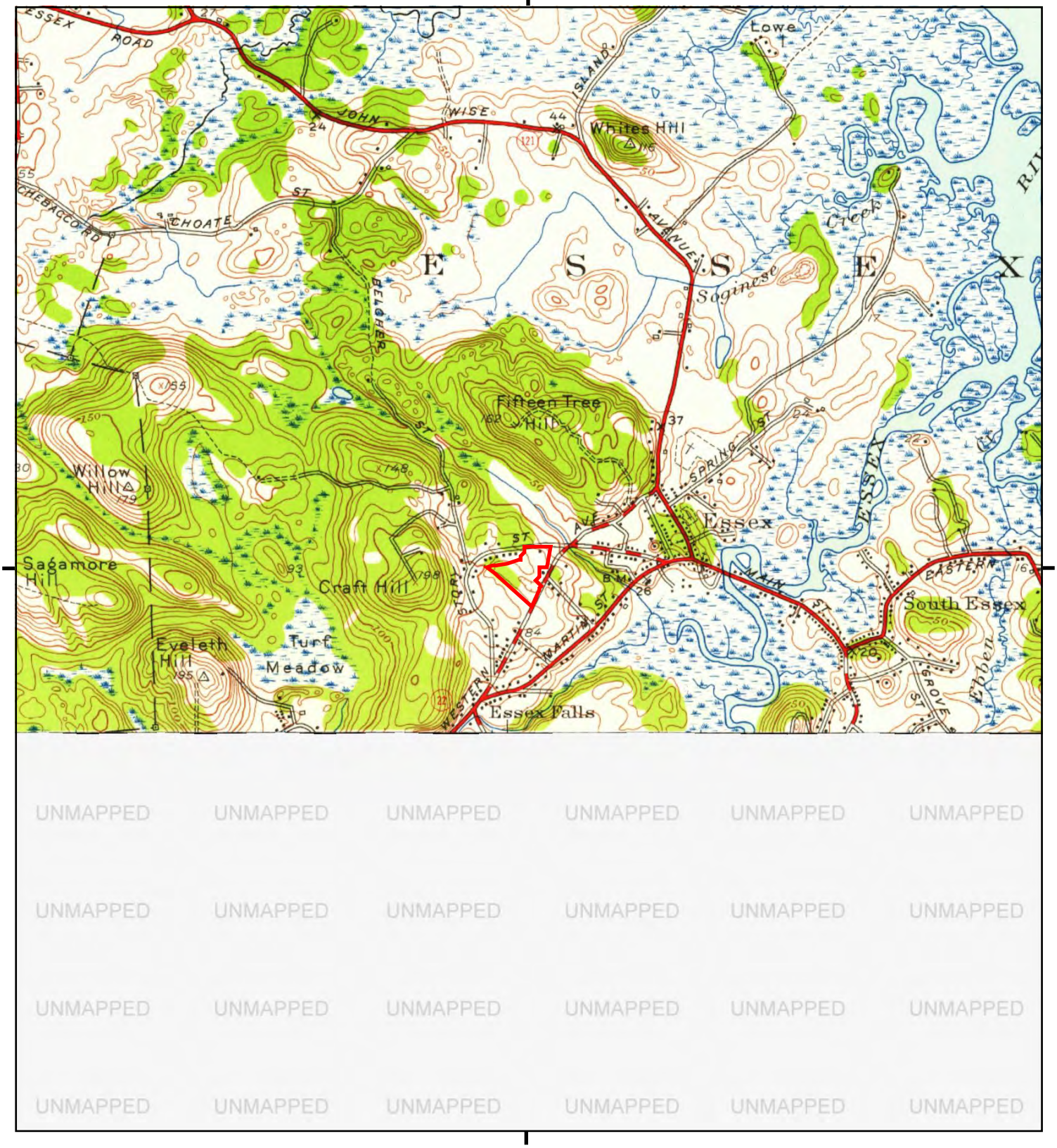
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

S, Marblehead North, 1956, 7.5-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

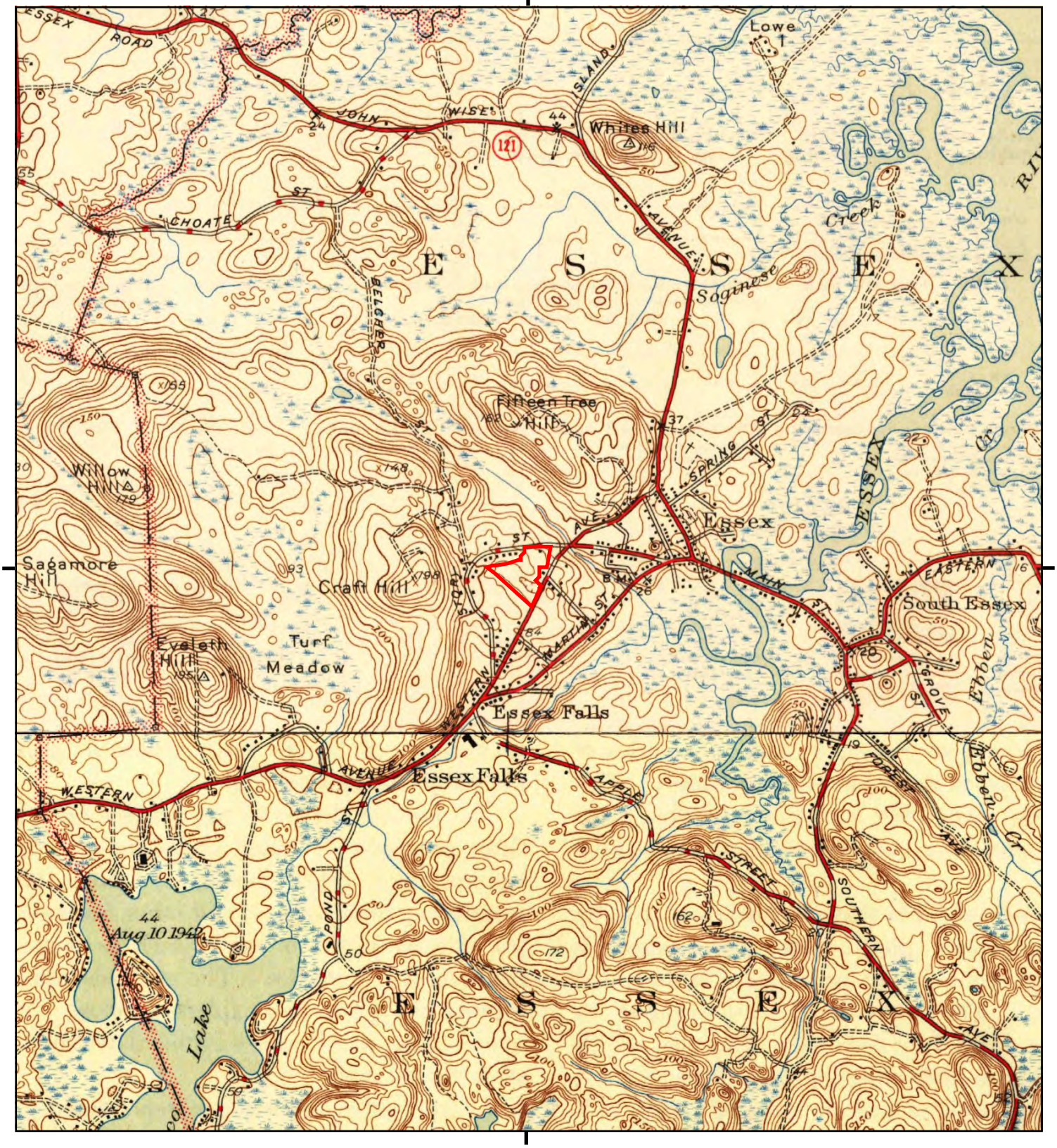
TP, Ipswich, 1950, 7.5-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N

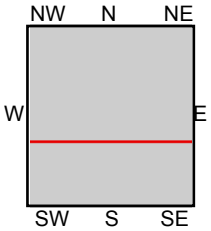
Historical Topo Map

1945



This report includes information from the following map sheet(s).

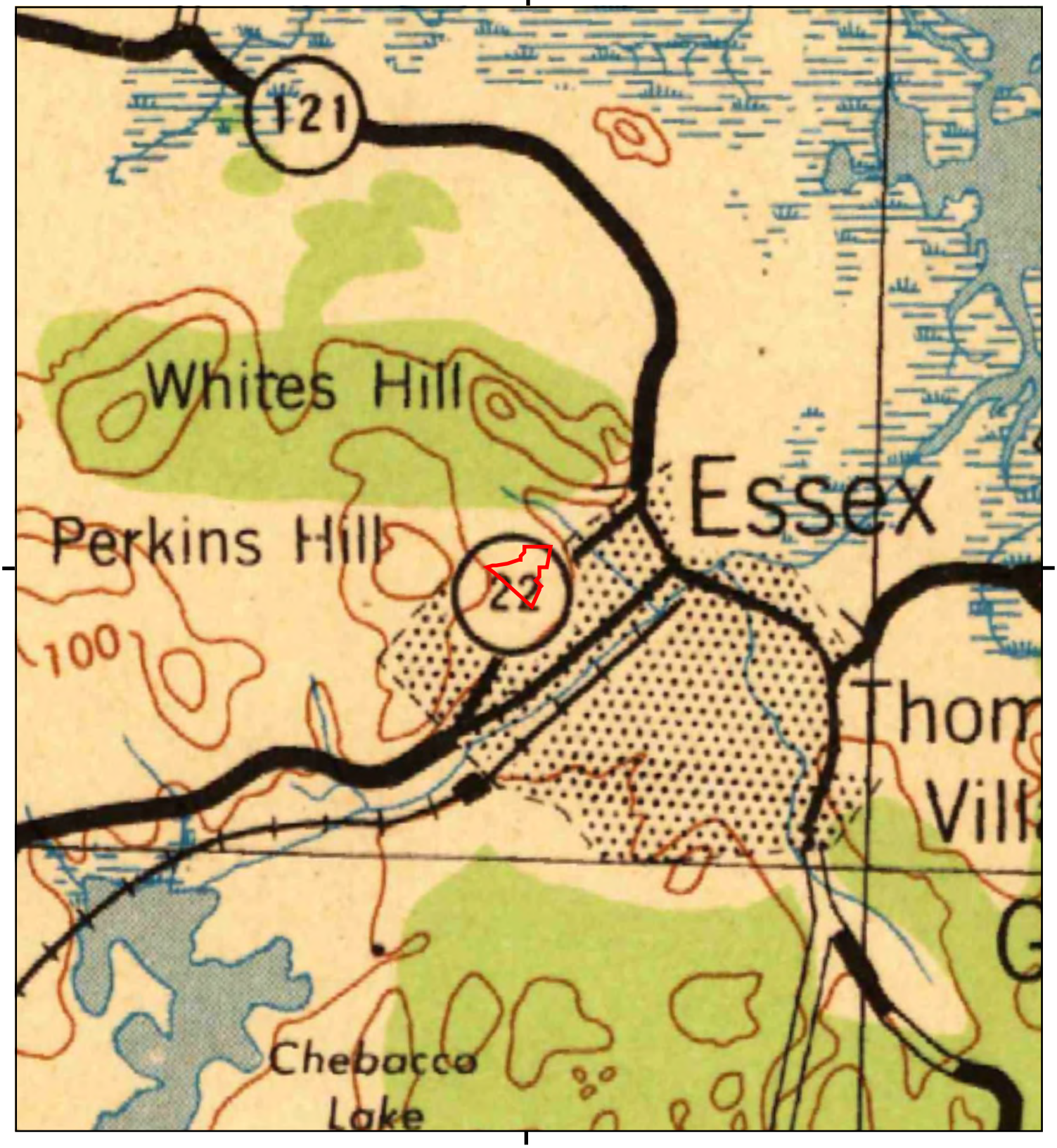
0 Miles 0.25 0.5 1 1.5



TP, Ipswich, 1945, 7.5-minute
S, Marblehead North, 1945, 7.5-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

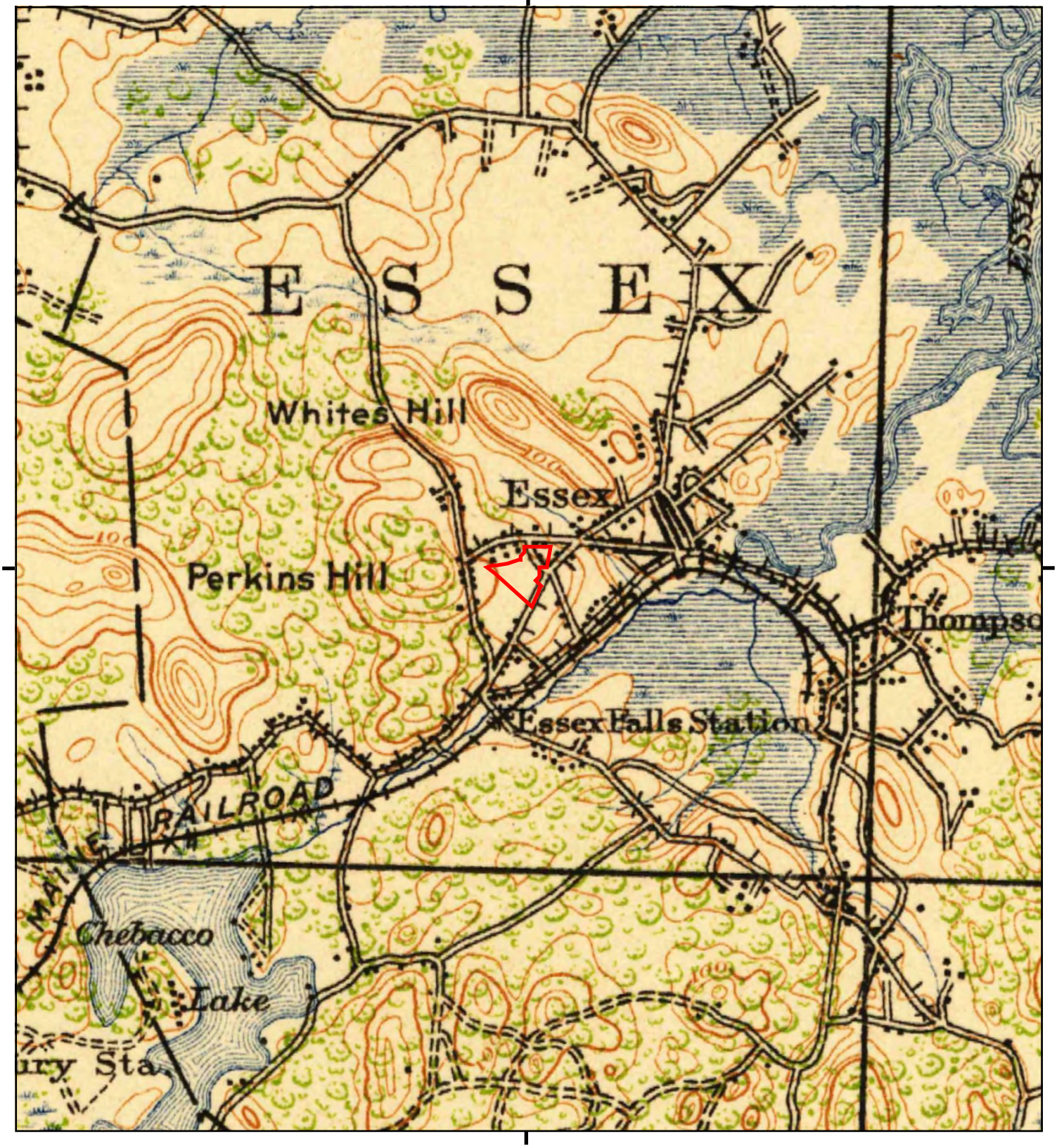
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Cape Ann, 1943, 30-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Salem, 1919, 15-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

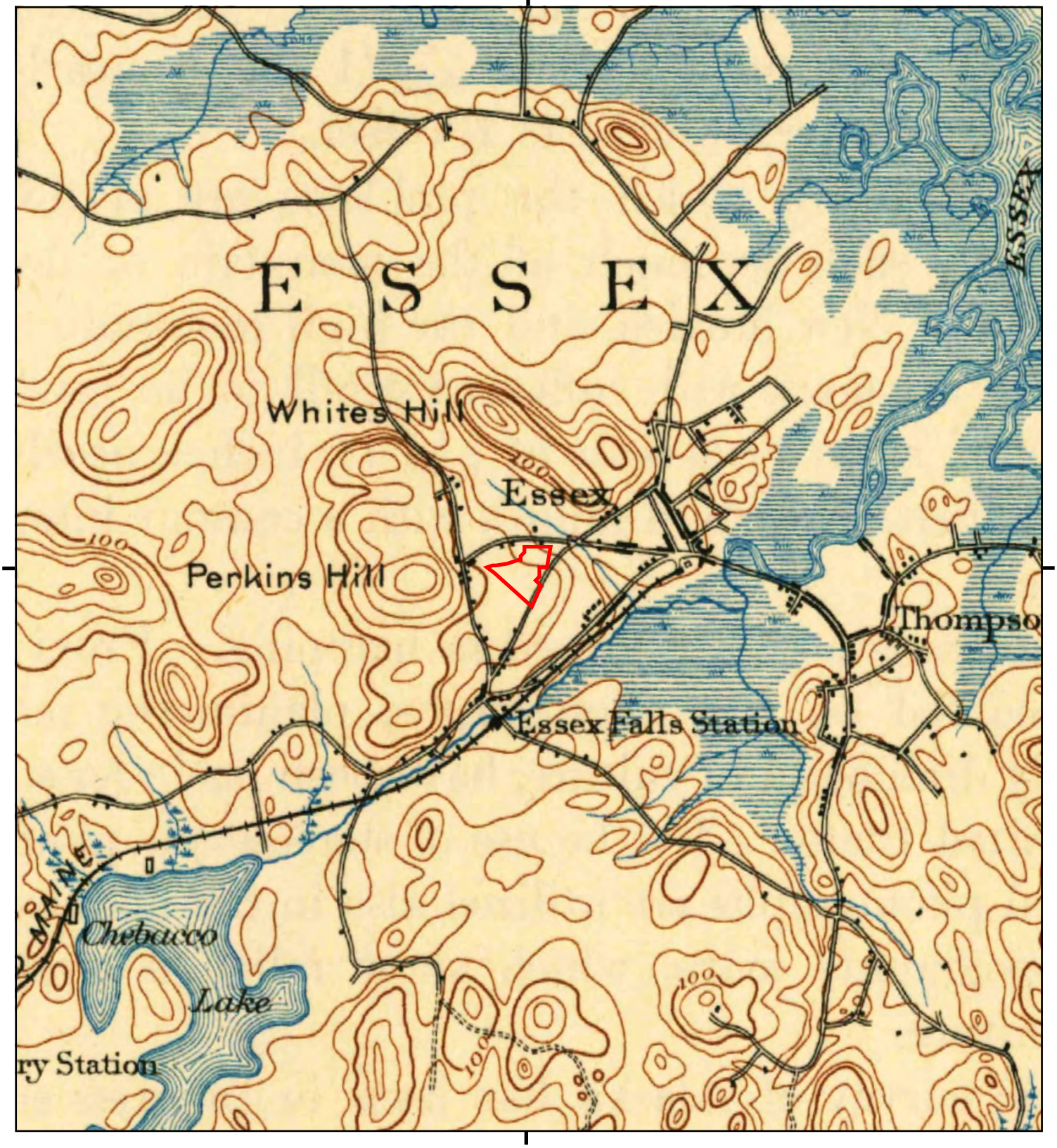
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, SALEM, 1915, 15-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

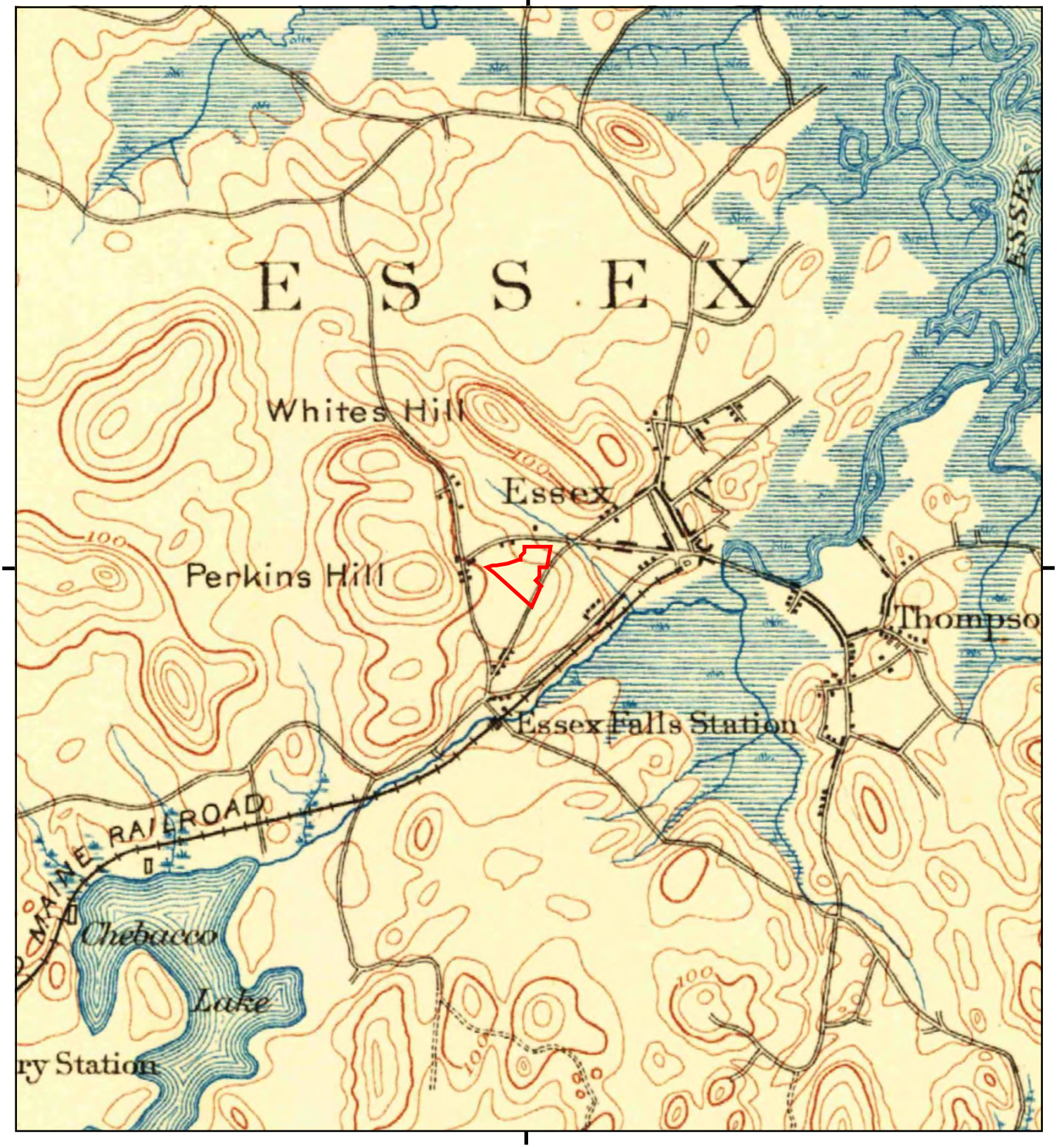
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Salem, 1893, 15-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Salem, 1888, 15-minute

SITE NAME: 12 Story Street
ADDRESS: 12 Story Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N

12 Story Street

12 Story Street

Essex, MA 01929

Inquiry Number: 8109475.8

September 16, 2025

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

09/16/25

Site Name:

12 Story Street
12 Story Street
Essex, MA 01929
EDR Inquiry # 8109475.8

Client Name:

Mabbett & Assoc.
105 Central Street, Suite 4100
Stoneham, MA 02180
Contact: Cassidy Way

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2023	1"=500'	Flight Year: 2023	USDA/NAIP
2018	1"=500'	Flight Year: 2018	USDA/NAIP
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1995	1"=500'	Acquisition Date: March 29, 1995	USGS/DOQQ
1986	1"=500'	Flight Date: April 01, 1986	USDA
1978	1"=500'	Flight Date: April 23, 1978	USGS
1972	1"=500'	Flight Date: May 13, 1972	USGS
1965	1"=500'	Flight Date: April 04, 1965	USGS
1960	1"=500'	Flight Date: May 01, 1960	USGS
1952	1"=500'	Flight Date: August 26, 1952	USDA
1938	1"=500'	Flight Date: November 05, 1938	USGS

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Disclaimer - Copyright and Trademark Notice

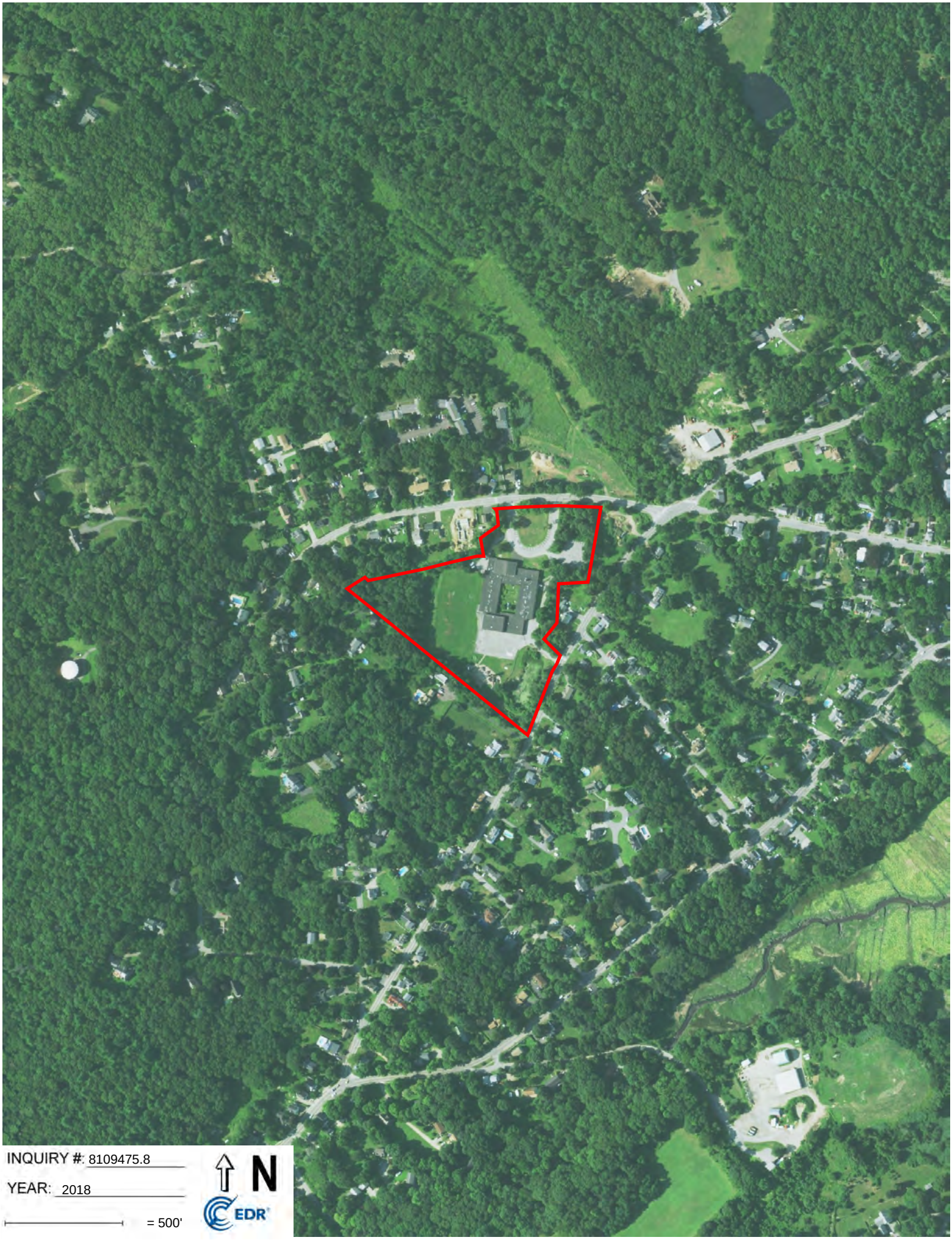
This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT.

Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2025 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.


INQUIRY #: 8109475.8
YEAR: 2023
= 500'
N
EDR


INQUIRY #: 8109475.8
YEAR: 2018
= 500'
N
EDR


INQUIRY #: 8109475.8
YEAR: 2014
= 500'
N
EDR


INQUIRY #: 8109475.8
YEAR: 2010
= 500'
N
EDR


INQUIRY #: 8109475.8
YEAR: 2006
= 500'
N
EDR


INQUIRY #: 8109475.8
YEAR: 1995
= 500'
N
EDR


INQUIRY #: 8109475.8
YEAR: 1986
= 500'
N
EDR

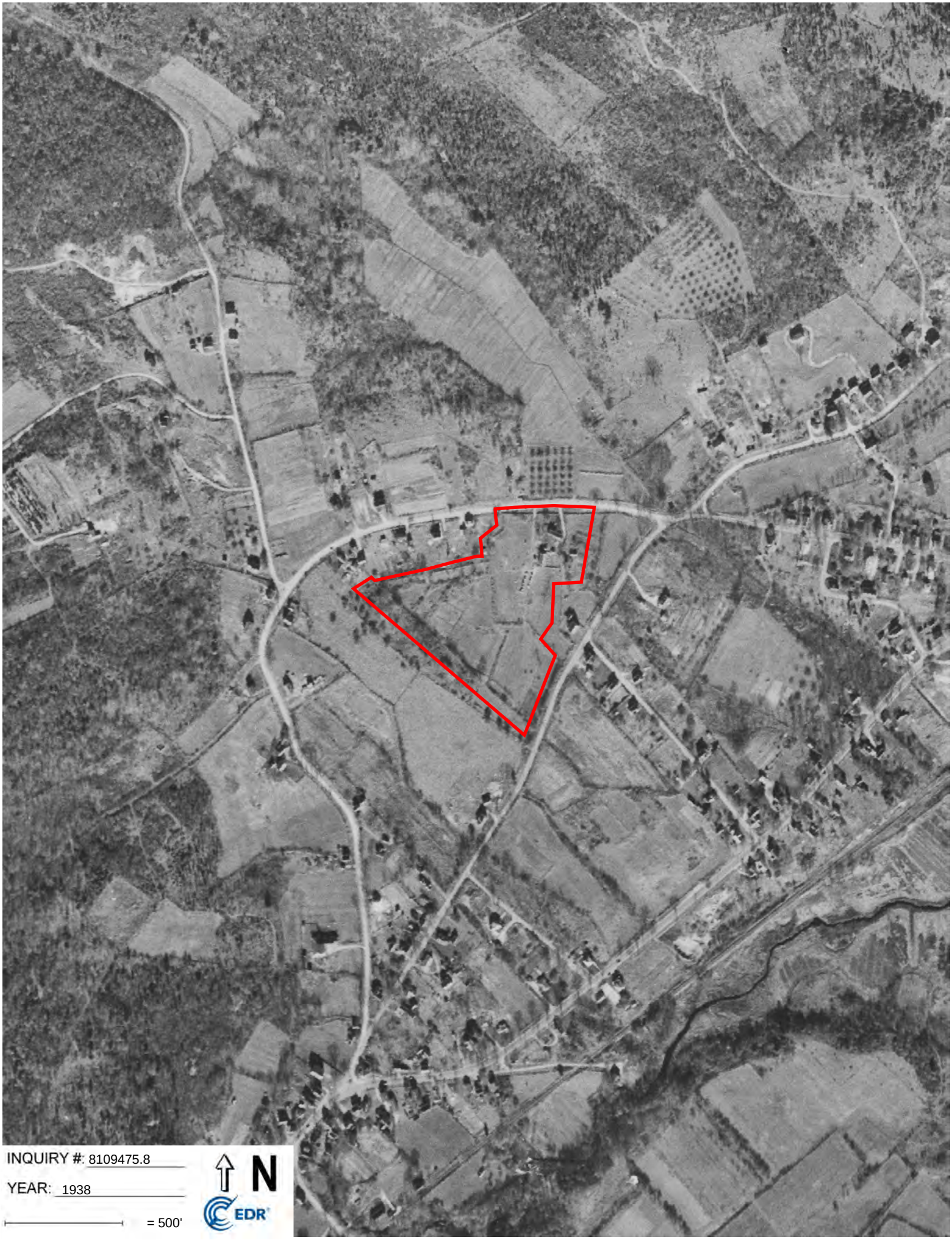

INQUIRY #: 8109475.8
YEAR: 1978
= 500'
N
EDR


INQUIRY #: 8109475.8
YEAR: 1972
= 500'
N
EDR


INQUIRY #: 8109475.8
YEAR: 1965
= 500'
N
EDR


INQUIRY #: 8109475.8
YEAR: 1960
= 500'
N
EDR


INQUIRY #: 8109475.8
YEAR: 1952
= 500'
N
EDR


INQUIRY #: 8109475.8
YEAR: 1938
= 500'
N
EDR

12 Story Street
12 Story Street
Essex, MA 01929

Inquiry Number: 8109475.5
September 18, 2025

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. **NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT.** Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2023 by Environmental Data Resources, LLC. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, LLC, or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	*Target Street*	*Cross Street*	*Source*
2022	☑	☑	EDR Digital Archive
2017	☑	☑	Cole Information
2014	☑	☑	Cole Information
2010	☑	☑	Cole Information
2005	☑	☑	Cole Information
2000	☑	☑	Cole Information
1995	☑	☑	Cole Information
1992	☑	☑	Cole Information
1988	☑	☑	Cole Criss-Cross Directory
1984	☐	☐	Cole Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

12 Story Street
Essex, MA 01929

Year	*CD Image*	*Source*	
STORY ST			
2022	pg A2	EDR Digital Archive	
2017	pg A10	Cole Information	
2014	pg A12	Cole Information	
2010	pg A17	Cole Information	
2005	pg A22	Cole Information	
2000	pg A27	Cole Information	
1995	pg A32	Cole Information	
1992	pg A37	Cole Information	
1988	pg A41	Cole Criss-Cross Directory	
1988	pg A42	Cole Criss-Cross Directory	
1984	-	Cole Criss-Cross Directory	Street not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
WESTERN AVE			
2022	pg. A5	EDR Digital Archive	
2017	pg. A11	Cole Information	
2014	pg. A14	Cole Information	
2010	pg. A19	Cole Information	
2005	pg. A24	Cole Information	
2000	pg. A29	Cole Information	
1995	pg. A34	Cole Information	
1992	pg. A39	Cole Information	
1988	pg. A43	Cole Criss-Cross Directory	
1988	pg. A44	Cole Criss-Cross Directory	
1984	-	Cole Criss-Cross Directory	Street not listed in Source

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

STORY ST 2022

12	ADRIENNE MACNEILL
	ESSEX ELEMENTARY
	ESSEX ELEMENTARY SCHOOL
	ESSEX TOWN OF
	ESSEX, TOWN OF
	JENNIFER ROBERTS
	JOAN ENDICOTT
	JOHN KWIATEK
	KANITAH CONLEY
	LINDA PARADY
	MANCHESTER ESSEX REG SCHOOL DISTRICT
	MANCHESTER ESSEX REGIONAL HIGH SCHOOL
	MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT
15	BRENDON IZOWER
	JODI IZOWER
	JOSEPH GRAVES
	KAREN GREENE
	SPORTS TEAM
17	BLAKE STORY
	CHRISTINE STORY
	MARGARETE STORY
19	ANDREA LEVY
	WILLIAM LEVY
20	DAVID SAVORY
21	WILLIAM PORTER
22	BARBARA HAIGHT
	NORMA YOUNG
	RICHARD YOUNG
23	ALBERT BROWN
	ALDEN BURNHAM
	ALETA ANTONUCCI KLEIN
	ALISHA MCKAY
	BETHANY VAHN
	BRITTANEY ELLIS
	CARL BROWN
	CAROL GETTY
	CATHY STANDLEY
	CATIE MCKAY
	CHARLOTTE MACINTYRE
	DORIS SCULLEY
	EILEEN MC KENNEY
	FRANCES BROWN
	GORDON WRIGHT
	JAMES MCKAY
	JOSEPH AMIRAULT
	KAREN MURDOCK
	KEITH WOODMAN
	KIMBERLY PEWS
	KLARA GREGORY
	LACEY TURYN

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

STORY ST 2022 (Cont'd)

23	LOIS MCKAY
	MARY EHLERS
	MATTHEW CURLEY
	MERSADES BYBEE
	MICHAEL PALKHIWALA
	NEAL NICHOLSON
	NEIL MARSHALL
	PRISCILLA SABEAN
	RACHEL ZACCHIGNA
	RICHARD WINNINGHAM
	ROBERT GETTY
	ROBERT GONET
	ROBERT SABEAN
	SEAN MCKENNEY
	STEPHANIE CIULLA
	STEPHANIE PERHAM
	SUSAN BROWN
	SUSAN WILFAHRT
	SUZANNA TURYN
	TYLER MASON
24	CHESTER KONOPKA
	SUSAN STPIERRE
25	JEFF LANE
26	BROOKE FRIEDRICH
27	ARLENE PIZZO
28	DAVID HENRICK
	KATHERINE HENRICK
	SARAH HENRICK
30	CONSTANCE SWEET
	CYNTHIA SWEET
	JAY SWEET
	MARGARET SWEET
31	LLOYD WESCOTT
	MATTHEW WESCOTT
33	COLBY DOANE
	COURTNEY DOANE
	DAVID DOANE
	JULIE DOANE
36	DAVID KEMPSKIE
	MICHELLE KEMPSKIE
37	WILLIAM EISENHAUR
38	KEVIN FLAHERTY
	PAMELA FLAHERTY
39	CAMERON AIELLO
42	BUILDING PLACE THE 42 STORY
	JONATHAN PLACE
	KEVIN PLACE
	MARY PLACE
43	ERIC WANTA
	JAMES GUIDOTTI

STORY ST 2022 (Cont'd)

43	STEPHANIE WANTA
44	DAVID KEMPSKIE
49	JONATHAN ANDREWS
51	JENNIFER CORT
	JONATHAN CORT
54	LORRAINE THOMPSON
	PAUL MACCARTHY
58	ADELAIDE DAVIS
	JOSEPH DAVIS
	KYLE DAVIS
	WENDY DAVIS
60	INGRID LYNCH
	NICHOLAS LYNCH
61	EMILY STANLEY
	MICHAEL SHEA
62	MARGARET LYNCH
	THOMAS WALDEN
63	DONNA DEWITT
	JODI DEWITT
	TARA DEWITT
	TIMOTHY DEWITT
	TRESCOTT DEWITT
66	DEBORAH PERKINS
	EDWIN PERKINS
	JOYCE PERKINS
69	BENJAMIN DOTT
	KENDRA DOTT
73	ANNE LANDRY
	DAVID LANDRY

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

WESTERN AVE 2022

7	SAMUEL FREJ
8	BERNIE HOLMES
	ERIN HOLMES
9	JEROME CHASE
	LAURENCE CHASE
11	SHANE FRASER
15	EDWARD NEAL
	JAN NEAL
	JENNIFER NEAL
	NEALS AUTOMATIC TRANSMISSION
17	KELLY CRAWFORD
19	CHARLES KOOP
	ELIZABETH KOOP
	LIZANNE KOOP
	MARY KOOP
	STEPHEN KOOP
21	DAVID STENBERG
	DUNCAN TREE LANDSCAPE & CONSTRUCTION CO
	JOHN DUNCAN
22	ASHLEY WRIGHT
	BRUCE WRIGHT
	DAVID WRIGHT
	LAURA WRIGHT
	PATRICIA WRIGHT
	PAUL WRIGHT
24	THOMAS KEBLISH
28	KURT WILHELM
	MARY WILHELM
32	JANE WOODMAN
	KYLE WOODMAN
	MCKENZIE WOODMAN
38	KIMBALL KOPANON
42	PETER KOPANON
46	ARDRITH BROPHY
	FAYE BROPHY
	ROBERT BROPHY
47	APRIL MATOOK
48	LARISSA CARTER
50	DINA DIFLURI
52	LAURA ROBERT
	PATRICIA ROBERT
56	GABRIEL BLAIS
	HIGH ROAD DESIGN
	LYNN TAMMARO
	MARTHA TAYLOR
	NICKIA DASILVA
	ROBERT COHEN
	TAMMARO
57	ANTHONY CIARAMETARO
	CAPT VINCE INC

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

WESTERN AVE 2022 (Cont'd)

57	TROY CIARAMETARO
58	BRYAN SHEILDS
	BRYAN SHIELDS
59	CAITLIN ROLLER
	DEREK ROLLER
60	STEPHEN STONE
62	ALFRED DENTE
	ALLANA DENTE
	CHRIS DENTE
	ELLEN DENTE
	MEGHAN DENTE
63	ERIN ARNASON
	EVA ARNASON
	STEPHEN ARNASON
64	CAITLIN RUMPH
66	BARBARA NICHOLS
67	IAN RIOPEL
	JENNIFER RIOPEL
70	TIMOTHY WONSON
71	EMILY YAKUBOWSKAS
	JEFFREY YAKUBOWSKAS
	KELLEY YAKUBOWSKAS
	MATTHEW YAKUBOWSKAS
73	LUKE QUINE
	PETER QUINE
74	IAN MURPHY
	LAN MURPHY
	LINDSAY MURPHY
	PAIGE MURPHY
75	ALEXANDRA KORWIN
76	HONEY COLLINS
	HULL COLLINS
	LENORA COLLINS
	MATTHEW COLLINS
77	JAMES MUISE
78	CHARLES TALBOT
	SUSAN TALBOT
79	JOHN CAYER
80	CLARK PEARCE
	ELI PEARCE
83	GARRY TURNER
85	JOANNE SOUTHGATE
	RICHARD SOUTHGATE
87	CRRISTOPHER WILSON
	MARY EMMONS
91	MARGARET JOSEPH
	WALTER JOSEPH
93	JULIA WHITTEN
	MELISSA WHITTEN
	SCOTT WHITTEN

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

WESTERN AVE 2022 (Cont'd)

94	CONNIE PERRIGO
	EMILY PERRIGO
	JOAN PERRIGO
95	LORI BAKER
	WILLIAM BAKER
98	LESA DANE
	MARY TETZLOFF
101	BERNIER, KAREN
	CAROLINE BERNIER
	CHRISTOPHER BERNIER
	COLDWELL BANKER
	JAMIE BERNIER
	KAREN BERNIER
	KATHARINE BERNIER
	PATRICIA HATCH
	PETER HATCH
103	DANIEL LAMORE
105	JEFFREY ALLSOPP
106	ANDREW BREWIN
	ANDREW HILTON
	CARPENTER & MAC NEILLE
	CARPENTER & MACNEILLE
	CARPENTER & MACNEILLE ARCHITEC
	CARPENTER & MACNEILLE ARCHITECTS & BUILDERS INC
	CARPENTER & MACNEILLE ARCHITECTS AND BUILDERS INC
	CARPENTER & MACNEILLE ARCHITECTS AND BUILDERS, INC
	DERRICK DUNBAR
	DONNA LAKEMAN
	ESSEX FALLS COACH HOUSE
	GRAY MICHAEL
	GULLWING SERVICE CO
	JACK STYLES
	JOHN COLE
	MAC NEILLE
	MARK RICHEY WOODWORKING
	MARK RICHEY WOODWORKING & DESIGN INC
	PAUL RUSSELL
	PAUL RUSSELL & CO
	PAUL RUSSELL AND COMPANY
	RUSSELL PAUL & COMPANY
	STEVE HARRINGTON
	SUSAN BARNET
109	BENJAMIN HURD
110	DARON THAYER
114	COREY MATTHEWS
	SHANE MATTHEWS
115	BONNIE REBA
	JOY ROSS
	LYNNE REBA
	MARK ROSS

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

WESTERN AVE 2022 (Cont'd)

115	NOELLE ROSS
	PAUL ROSS
116	JAMES DUDA
	PATRICIA DUDA
119	DAVID THOMPSON
	GORDON THOMPSON
	MARTHA THOMPSON
121	ANNEMARIE LUCAS
	BENJAMIN LUCAS
127	BETTY MARKHAM
	MARKHAM TREE SERVICE
	ROBERT TYACK
	SETH ROBERTS
135	DEBORAH FULLER
	DEBORAH O'BRIEN
	JESSICA O'BRIEN
	KAYLEIGH O'BRIEN
	PRINT LOGIC INCORPORATED
	ROBERT O'BRIEN
138	CPC LANDSCAPE CONTRACTORS
	DOUGLAS CAMP
	KRISTY GABLE-CAMP
140	BOB BRADFORD
	BRYAN NIGRO
	BUILDING CENTER
	BUILDING CENTER INC OF GLOUCESTER
	BUILDING CENTER OF GLOUCESTER
	GLOUCESTER COAL AND LUMBER COMPANY
	ROB MCKEAN
	SCOTT FABIAN
143	ANOTHER CYCLE APPLIANCE REPAIR
	CHRISTOPHER OSBORNE
	DEBORAH OSBORNE
	EMILY OSBORNE
145	BRENDAN DRISCOLL
	DAVID DRISCOLL
	GINGER DRISCOLL
	JULIETTE DRISCOLL
146	ELEANOR JOSEPH
	LOUISE JOSEPH-KAY
	ROBERT JOSEPH
149	ANNA CANILLAS
	JOHN CANILLAS
	THOMAS CANILLAS
152	ESSEX HOUSE ROOFING SYSTEMS
	ESSEX REPLACEMENT
	GAYBROOK GARAGE
	MICHAEL CROWLEY
153	FRENCHIES REPAIR
	PRIDES CRSG CRAFTSMAN

WESTERN AVE 2022 (Cont'd)

153 TOM CHAPMAN
WILLIAM FRENCH
158 ALLISON FORTUNA
AMY COUTURE
HERE COMES THE SUN DESIGNS
JAYNA BARRY
LARRY PEATFIELD
PAMELA DEVLIN
RUTH FISHER
TREVOR MATTOX
160 MICHAEL JORDAN
RITA JORDAN
RUSSELL JORDAN
162 CHARLES YOUNGER
DANIELLE YOUNGER
164 JO JORDON
171 KEVIN KIRBY
TAMMY KIRBY
174 AARON CONWAY
MEZZANINE SAFETY
UNITED STORAGE SYSTEMS
177 STEPHANIE MC KINNEY
180 EMMANUEL COMMUNITY CHURCH
JAMES LAFONTAIN
JAYNA LAFONTAIN
JULIE LAFONTAIN
WILLIAM BARTHOLOMEW
184 JULIAN BALILI
187 BARBARA NICHOLS
STEPHEN NICHOLS
191 BLENDED METALS BY MISSY
JETO ENGINEERING INC
THOMAS WEINBURG
192 DIX TREE & LANDSCAPING
HENRY DIX
HENRY DIXSER
196 KATIE DONOVAN
197 ATLANTIC INDUSTRIAL MODELS
DAVIS FAMILY
DOE FOSSA
GLASS DIMENSIONS INC
GLASS DIMENSIONS INCORPORATED
LEEROY NEWMAN
LIQUID FRAME WORKS
MICHAEL DAVIS
PERKINS DAVID
TRAVIS PARIGI
198 RICHARD CROWELL
199 GINA WARD
REGINA WARD

Target Street	Cross Street	Source
✓	-	Cole Information

STORY ST 2017

12	TOWN OF ESSEX
18	SAVORY, DAVID K
22	NORTHERN ESSEX TREE S
23	KOBBY REALTY

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 2017

15	NEALS AUTOMATIC TRANSMISSION
21	DUNCAN TREE LANDSCAPE & CONSTRUCTION
106	ATLANTIC INDUSTRIAL MODELS
	CARPENTER & MACNEILLE ARCHITECTS AND
	MARK RICHEY WOODWORKING & DESIGN INC
	RUSSELL PAUL & COMPANY
	STEPHEN TERHUNE WOODWORKING
127	MARKHAM LUMBER COMPANY
135	PRINT LOGIC INCORPORATED
140	ESSEX BUILDING CENTER
152	GAYBROOK GARAGE
153	FRENCHIES
	PRIDES CROSSING CRAFTSMAN
191	JETO ENGINEERING INC
192	DIX TREE & LANDSCAPE
197	ATLANTIC INDUSTRIAL MODELS
	GLASS DIMENSIONS

Target Street	Cross Street	Source
✓	-	Cole Information

STORY ST 2014

12	MANCHESTER ESSEX REGIONAL SCHOOL DIS
	TOWN OF ESSEX
15	GREENE, RAYMOND G
	LEEDS, CASEY
	MCKAY, JAMES C
17	STORY, BLAKE W
19	LEVY, ANDREA B
20	DUNN, ZERENITA G
21	RICCI, KATHLEEN E
22	HAIGHT, MALCOLM R
	MCMANUS, MARK R
	NORTHERN ESSEX TREE S
	OCCUPANT UNKNOWN,
23	BLAKE, TYLER J
	BROWN, ALBERT L
	COPELAND, DORIS A
	DUMOND, LISA
	FEENER, EUGENE H
	GABEL, SUZANNE
	GETTY, ROBERT A
	GONET, ROBERT F
	JOHNSON, WAYNE S
	KAY, CHARLES M
	KWEDOR, KERYN M
	MACINTYRE, CHARLOTTE B
	MCFARLAND, LESLIE K
	MOORE, BARRY S
	OCCUPANT UNKNOWN,
	OSBORN, JONATHAN C
	POBIEDZINSKI, ASHLEY
	PORPER, MICHAEL J
	SCULLEY, DORIS L
	SILVA, DAVID
	SMITH, JOSEPH D
	STANDLEY, RICHARD C
	STANWOOD, GINA A
	THOMAS, RONME
	TRIPOLI, MARSHALL A
	WHITE, CHRISTOPHER J
24	KONOPKA, CHESTER F
25	OLIVER, ARTHUR H
26	FRIEDRICH, DAVID B
27	PIZZO, ARLENE H
28	BARRETT, DAVID
	HENRICK, DAVID A
	STAVROS, GEORGE
	STORY, KENDRA D
29	OCCUPANT UNKNOWN,
30	SWEET, MARGARET
31	WESCOTT, LLOYD G

Target Street	Cross Street	Source
✓	-	Cole Information

STORY ST 2014 (Cont'd)

33	DOANE, DAVID H
35	DOANE, DAVID
36	KEMPSKIE, DAVID M
	OCCUPANT UNKNOWN,
	VERA, GARY
37	EISENHAUER, LAUREL A
38	FLAHERTY, KEVIN M
	OCCUPANT UNKNOWN,
39	GINN, JOSEPH A
42	KNOWLTON, LINDSAY
	PLACE, KEVIN M
43	SHEPARD, KARLA
44	KEMPSKIE, DAVID E
	OCCUPANT UNKNOWN,
	PHILHOWER, SUSAN V
	SCHILD, MARISA
	SPOFFORD, ANDREW P
48	ANDREWS, EFFIE M
49	ANDREWS, JONATHAN T
51	CORT, JONATHAN H
54	THOMPSON, DAVID R
58	DAVIS, JOSEPH T
60	REEVES, STEPHEN A
61	WILSON, CHRISTOPHER U
62	LYNCH, MARGRET A
	LYNCH, NICHOLAS K
63	DEWITT, TRESCOTT L
66	PERKINS, EDWIN C
69	DOTT, BENJAMIN E
73	LANDRY, DAVID A

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 2014

7	VALLIS, CONSTANCE D
8	DIX TREE & LANDSCAPE
	OCCUPANT UNKNOWN,
9	CHASE, JEROME L
11	FRASER, SHANE C
15	JACOBSEN, DARA E
	NEAL ED
	NEAL, EDWARD T
	NEALS AUTOMATIC TRANSMISSION
	OCCUPANT UNKNOWN,
17	MILLER, ALICE T
19	KOOP, STEPHEN D
21	DUNCAN JOHN C
	DUNCAN TREE LANDSCAPE & CONSTRUCTION
22	WRIGHT, PAUL B
28	WILHELM, KURT A
32	WOODMAN, KYLE W
38	OCCUPANT UNKNOWN,
42	KOPANON, KIMBALL P
46	BROPHY, ROBERT A
47	OCCUPANT UNKNOWN,
48	CARTER, JAMES
	LARISSA, CARTER M
50	DIFLURI, DINA M
52	ROBERT, PATRICIA F
56	DAWSON, LUKE
57	CIARAMITARO, ANTHONY P
58	JAREMSEK, ROBERT R
59	CLARKE, RICHARD W
60	ALL AMERICAN WINDOW & GUTTERS CLEANI
	STONE, RUTH R
62	DENTE, ALFRED A
63	RUIZ, MARIA
64	OCCUPANT UNKNOWN,
67	TWOMBLY, TOD W
70	WONSON, TIMOTHY D
71	YAKUBOWSKAS, JEFF A
73	QUINE, PETER M
74	MURPHY, IAN B
75	CAMERON, ROBERT A
76	COLLINS, MATTHEW W
77	MUISE, JAMES R
78	TALBOT, SUSAN S
79	CAYER, JOHN G
80	PEARCE, CLARK G
83	TURNER, GARRY N
85	SOUTHGATE, RICHARD W
87	ALEXANDER, LESLIE
91	AUGUSTINE, ANTHONY
93	WHITTEN, SCOTT M

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 2014 (Cont'd)

94	PERRIGO, ROBERT W
95	JAY, HUNTER G
97	AZADIAN, JEFFREY D
98	TAMMY, PROCTOR B
101	HATCH, PETER L
103	LAMORE, DANIEL T
106	CARPENTER & MACNEILLE ARCHITECTS & B
	MARK RICHEY WOODWORKING & DESIGN INC
	RUSSELL PAUL & COMPANY
	STEPHEN TERHUNE WOODWORKING
109	DUNN, DAVID A
110	OCCUPANT UNKNOWN,
114	VIGGIANO, MICHAEL C
115	PRESTON, FRANCES W
116	DUDA, JAMES A
119	THOMPSON, GORDON W
120	DUFFY, SHIRLEY S
121	JERMAIN, DAVID A
127	MARKHAM TREE SERVICE
	TYACK, NATE W
135	CONNOLLY, EDWARD C
	PRINT LOGIC INCORPORATED
138	CAMP, DOUGLAS B
	CPC LANDSCAPE CONTRACTORS
140	BUILDING CENTER OF ESSEX
143	OSBORNE, CHRISTOPHER A
145	DRISCOLL, DAVID M
146	OCCUPANT UNKNOWN,
149	ZAKAS, NICHOLAS
152	GAYBROOK GARAGE
153	FRENCHIES
158	CHAPUT, JAMES P
	DALTON, ALLEN W
	DEVLIN, LISA R
	GALLIGAN, ELIZABETH W
	GARON, MELISSA
	JAMES, J
	LAWLOR, PATRICK
	MATTOX, TREVOR S
	MULLEN, ANDREW C
	QUILICI, MICHAEL
	TAYLOR, JACLYN
	TOLIOS, TIMOTHY
	VILENCHIK, YEHIEL
	WAGNER, KATLIN
	WILDES, GORDON J
160	JORDAN, RUSSELL R
162	PELLEGRINI, STEPHEN J
164	JORDAN, MARK A
171	KIRBY, KEVIN J

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 2014 (Cont'd)

174	MEZZANINE SAFETIGATES
177	MCKINNEY, STEPHANIE D
180	LAFONTAINE, JAMES S
184	SHANKS, LAWRENCE A
186	SHANKS, TIMOTHY L
187	NICHOLS, STEPHEN W
191	JETO ENGINEERING INC
192	DIX, HENRY J
	WILLIAM, DIX
197	DAVIS, MICHAEL F
	GLASS DIMENSIONS INC
198	CARTER, ROBERTA M
199	GROSS, RICHARD F
	SMITH, BRADLEY P

Target Street	Cross Street	Source
✓	-	Cole Information

STORY ST 2010

12	ESSEX ELEMENTARY SCHOOL
	ESSEX SCHOOL SUPERINTENDENT
15	LEEDS, KAREN S
17	STORY, BLAKE W
19	LEVY, WILLIAM P
20	DUNN, JOHN R
21	RICCI, KATHLEEN E
22	MCMANUS, MARK R
23	BALILI, JULIAN
	BOSSE, MICHAEL P
	BRENNER, JOEL R
	BURNHAM, CHARLES A
	CURLEY, MATTHEW
	DOWNS, PHYLLIS A
	DUMOND, LISA
	GABEL, CRAIG
	GETTY, ROBERT A
	GILLIS, SEAN A
	GONET, ROBERT F
	GOODHUE, DONALD S
	JACOBSEN, DAVID A
	JOHNSON, JAMIE
	KOBBY REALTY
	LOW, STEVEN M
	MACINTYRE, CHARLOTTE B
	MADEY, JOSEPH B
	MAHMUD, WAHID U
	MCKAY, LOIS P
	MOORE, BARRY S
	MORSE, JEFFREY
	OSBORN, JONATHAN C
	PERRY, JEFFREY
	PORPER, MICHAEL
	SCULLEY, DORIS
	SEABLOM, DANIEL
	SMITH, BRADLEY P
	SMITH, JOSEPH D
	STANDLEY, RICHARD C
	STEVENS, JASON R
	TRIPOLI, MICHELLE A
	VAHN, BETHANY
	WHITE, RONALD E
	WONSON, ASHLEY N
	WRIGHT, GORDON
24	KONOPKA, GERALDINE A
25	OLIVER, ARTHUR H
26	ALGER, DAVID C
27	PIZZO, FRANK S
28	PARADY, ROSS E
	STORY, KENDRA D

Target Street	Cross Street	Source
✓	-	Cole Information

STORY ST 2010 (Cont'd)

29	BEAN, RONALD W
30	SWEET, JAY J
31	WESCOTT, LLOYD G
33	DOANE, DAVID H
36	ADVANCED EDUCATIONAL TECH
	KEMPSKIE, DAVID E
38	FLAHERTY, KEVIN M
39	GINN, JOSEPH A
42	BUILDING PLACE
	HENDERSON, JAMES
	PLACE, KEVIN M
43	BRADFORD, SCOTT D
44	EBERLY, CATHERINE
	KEMPSKIE, MICHELE A
	PHILHOWER, ELWOOD W
48	ANDREWS, WALTER W
49	ANDREWS, JONATHAN T
51	CORT, JONATHAN H
54	THOMPSON, DAVID R
58	DAVIS, JOSEPH P
61	FRANCIS, KRISTEN J
	WILSON, CHRISTOPHER U
62	LYNCH, MARGRET A
	LYNCH, NICHOLAS K
63	BARRETT, NANCY L
66	PERKINS, EDWIN C
73	LANDRY, DAVID A

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 2010

8	CICORIA, MARK A
9	CHASE, JEROME L
11	FRASER, SHANE C
15	JACOBSEN, DARA E
	NEALS AUTOMATIC TRANSMISSION
17	MILLER, ALICE T
18	TOUSEY, J
19	KOOP, MARY
21	DUNCAN TREE LANDSCAPE & CONSTR
	DUNCAN, JOHN C
24	MUNIZ, NANCY M
28	WILHELM, KURT A
32	WOODMAN, KYLE W
42	KOPANON, KIMBALL P
46	BROPHY, ROBERT A
48	LANTZ, PAUL
50	FRIEDRICH, DAVID B
52	ROBERT, PATRICIA F
56	DASILVA, NICKIA
57	CIARAMITARO, ANTHONY P
58	JAREMSEK, ROBERT R
59	CLARKE, RICHARD W
60	ALL AMERICAN WINDOW CLEANING
	STONE, STEPHEN J
62	DENTE, ALFRED A
64	TURNER, GISELA
66	NICHOLS, WILLIAM E
67	TWOMBLY, TOD W
70	WONSON, TIMOTHY D
71	YAKUBOWSKAS, JEFF A
73	QUINE, PETER M
74	MURPHY, IAN B
75	CAMERON, ROBERT J
76	COLLINS, MATTHEW W
77	MUISE, JAMES R
78	TALBOT, CHARLES M
79	DIETRICHSON, JUERGEN
	WAYPOINT CONSTRUCTION
80	PEARCE, CLARK G
83	TURNER, GARRY N
85	SOUTHGATE, RICHARD W
91	JOSEPH, WALTER J
93	WHITTEN, SCOTT M
94	PERRIGO, JOAN M
95	COOSE, CHARLES H
97	AZADIAN, JEFFREY D
	AZADIAN, KLA
98	BLAUVELT, TAMMY P
101	HATCH, PETER L
103	LAMORE, DANIEL

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 2010 (Cont'd)

105	MARSHALL, BRUCE R
106	CARPENTER & MAC NEILLE ARCHT
	GULLWING SERVICE CO
	LYNNFIELD MOTORSPORTS
	MARK RICHEY WOODWORKING
	PAUL RUSSELL & CO
	STEPHEN TERHUNE WOODWORKING
109	DUNN, DAVID A
110	CUNNINGHAM, CARROLL L
114	PERREAULT, COLLEEN M
115	PRESTON, FRANCES W
116	DUDA, JAMES A
117	DONOGHUE, ROBERT
119	THOMPSON, GORDON L
120	DUFFY, SHIRLEY S
121	HARDING, KEVEN B
127	MARKHAM LUMBER & TREE SVC CO
	TYACK, NATE W
135	CONNOLLY, EDWARD C
138	CAMP, DOUGLAS B
	CPC LANDSCAPE CONTRACTORS
143	RODI, THOMAS
144	HASKELL, TY
145	DRISCOLL, DAVID M
149	ZAKAS, ARISTOLE
152	GAYBROOK GARAGE
153	FRENCHIES
	PRIDES CROSSING CRAFTSMAN
158	BROWN, MELANIE
	DALTON, ALLEN W
	DEVLIN, LISA R
	HOWLETT, RICH
	JAMES, J
	MACPHERSON, CHERYL A
	MARSHALL, MARY T
	MARTIN, L
	SWETT, KATIE
	TOLIOS, TIMOTHY
	VILENCHIK, YEHIEL
	WILDES, GORDON J
160	JORDAN, RUSSELL R
162	PELLEGRINI, STEPHEN J
164	JORDAN, MARK A
171	KIRBY, KEVIN J
174	SPEEDRACK DISTRIBUTION INC
	UNITED STORAGE SYSTEMS
177	ODONOGHUE, ROBERT E
180	EMMANUEL COMMUNITY CHURCH
	LAFONTAINE, JAMES S
184	SHANKS, LAWRENCE A

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 2010 (Cont'd)

186 SHANKS, TIMOTHY L
187 BOUTCHIE, DAMON W
191 JETO ENGINEERING INC
192 DIX TREE & LANDSCAPE
DIX, HENRY J
196 HOWARD, WILLIAM J
197 GLASS DIMENSIONS INC
JARMOLOWICZ, DARREN S
198 CARTER, RANDALL G
199 GROSS, RICHARD F

Target Street	Cross Street	Source
✓	-	Cole Information

STORY ST 2005

15	GREENE, RAYMOND G
17	STORY, BLAKE W
19	LEVY, WILLIAM P
20	DUNN, JOHN R
22	GERMAIN, PETER P
	YOUNG, RICHARD S
23	BOSSE, MICHAEL
	BRENNER, JOEL R
	BROWN, EMILY
	CAVERLY, A
	CHASE, LAWRENCE
	CRAIGEN, A
	DOBSON, N
	DOYLE, ROBERT W
	EHLERS, MICHAEL J
	FEDER, HARRIS J
	GILLISS, SEAN A
	GONET, ROBERT F
	GOODHUE, DONALD S
	HART, LAURA
	JACOBSEN, ART S
	JACOBSEN, DAVID A
	KNOWLTON, M G
	KOBBY REALTY
	KOCH, JESSICA
	LEITON, CHRIS
	LOW, STEVEN M
	MACINTYRE, P
	MADEY, JOSEPH B
	MELCHER, ROSE M
	MOOERS, DANIEL T
	MOORE, BARRY S
	MOORES, D
	OSBORN, JONATHAN C
	PERREAULT, THOMAS L
	PERRIGO, LEANNE J
	PUTUR, ANDREA R
	ROY, JOHN
	SCULLEY, DORIS
	STANDLEY, RICHARD C
	STRZESAK, GAIL A
	SWISHER, N
	THARP, KENDALL M
	TIBBETTS, SABINE
	TRIPOLI, DONNA
	TRUMBULL, MATTHEW H
	VAHN, BETHANY
	VERHOEKS, EMILY
	WOLFE, ROBERT E
	WRIGHT, GORDON

Target Street	Cross Street	Source
✓	-	Cole Information

STORY ST 2005 (Cont'd)

25	OLIVER, ARTHUR H
26	DOHERTY, SHANNON D
28	PARADY, ROSS E
	STORY, KENDRA D
29	BEAN, RONALD W
30	SWEET, JAY
31	WESCOTT, LLOYD G
33	DOANE, DAVID H
36	KEMPSKIE, ROBIN M
37	EISENHAUER, TERESA L
38	BUCKLEY, RICHARD G
39	GINN, JOSEPH A
42	BUILDING PLACE THE
	HENDERSON, KAREN J
43	ATHANS, PETER G
44	GORMAN, LORI
	HODGKINS, RUSSELL E
	MULCAHY, R
48	ANDREWS, WALTER W
49	BLUM, HOLLY L
54	THOMPSON, DAVID R
58	DAVIS, JOSEPH P
60	LYNCH, NICHOLAS K
61	WILSON, CHRISTOPHER U
62	LYNCH, MARGARET A
	WEILBACHER, ELIZABETH M
63	BARRETT, JAMES B
65	NICKERSON, WILLIAM L
66	PERKINS, EDWIN C

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 2005

7	LATHAM, NANCY L
8	CICORIA, MARK A
9	CHASE, JEROME K
11	FRASER, SHANE C
15	JACOBSEN, DARA E
17	LARSON, NORMAN A
18	TOUSEY, J
19	KOOP, STEPHEN D
22	WRIGHT, HELEN M
24	MUNIZ, NANCY M
28	WILHELM, KURT A
38	KOPANON, PETER M
46	BROPHY, ROBERT V
48	JOHNSON, JULIE A
	KAUSEL, JESSICA S
	LAEL-HAMMON, BROOKE
50	FRIEDRICH, DAVID R
52	ROBERT, PATRICIA F
56	COHEN, ROBERT R
57	KNOWLTON, JAMES K
58	JAREMSEK, ROBERT R
59	CLARKE, RICHARD W
60	ALL AMERICAN WIN & GTTR CLG
	ALL AMERICAN WINDOW CLEANING & GUTTE
	STONE, STEPHEN J
62	DENTE, ALFRED A
64	FENIMORE, DANIEL S
	MAXFIELD, DOUG
	TURNER, BRUCE R
66	NICHOLS, WILLIAM E
67	TWOMBLY, TOD W
70	WHITTEMORE, DAVID E
71	MANIATES, STEPHEN W
73	DOANE, DAVID A
74	GAUDIANO, PAOLO
75	CAMERON, ROBERT J
76	COLLINS, MATTHEW W
77	MUISE, JAMES R
79	AMES, FREDERIC L
	RANTA, BROOKE L
80	PEARCE, CLARK G
83	TURNER, GARRY N
85	SOUTHGATE, RICHARD W
87	GRAMLING, ALEX D
91	JOSEPH, MARGARET M
94	BARBRE, BRIAN
	PERRIGO, JOAN M
95	COOSE, CHARLES H
97	AZADIAN, JEFFREY D
98	BLAUVELT, TAMMY P

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 2005 (Cont'd)

101	BERNIER, CHRISTOPHER W
103	LAMORE, DANIEL
105	MARSHALL, BRUCE R
106	MARK RICHEY WOODWORKING & DESIGN INC
	MARK, RICHEY W
109	DUNN, DAVID A
110	FEENER, EUGENE H
114	PERREAULT, COLLEEN M
115	PRESTON, FRANCES W
116	DUDA, JAMES A
117	DONOGHUE, ROBERT
120	DUFFY, SHIRLEY S
121	HARDING, KEVEN B
127	MARKHAM LUMBER CO
	MARKHAM, FREDERICK W
135	HOOD, GLENN C
138	CAMP, DOUGLAS B
143	OSBORNE, CHRISTOPHER A
145	DRISCOLL, DAVID M
149	ZAKAS, NICHOLAS
153	FRENCHIES
	PRIDES CROSSING CRAFTSMAN
158	APPLETON, MICHAEL
	CHANDLEY, S
	COPLAI, T
	CORBIN, IAN
	DALTON, ALLEN W
	FLEMING, SCOTT
	FOURNIER, CHRIS J
	GEORGE, JEFFREY M
	HIGGINS, PAUL
	LASONDE, ROBERT L
	MARSHALL, DIANNA M
	MARSHALL, MARY T
	NICOLL, DAVID N
	SMITH, RUSSELL W
	SYMONDS, MICHAEL R
	TANSKI, D
	TROMBLEY, CASEY
	WHITE, JAMES R
	WITHERS, A
160	JORDAN, RUSSELL R
162	PELLEGRINI, STEPHEN J
164	JORDAN, MARK A
171	KIRBY, KEVIN J
	THE SNACK SHOP
174	SPEEDRACK DISTRIBUTION INC
180	BARTHOLOMEW, CAROLYN R
184	PIMENTEL, JOYCE P
186	SHANKS, TIMOTHY L

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 2005 (Cont'd)

187 BOUTCHIE, DAMON W
192 DIX, HENRY J
196 HOWARD, WILLIAM J
197 DAVIS, NATALINA
GLASS DIMENSIONS INC
198 CARTER, RANDALL G

Target Street	Cross Street	Source
✓	-	Cole Information

STORY ST 2000

12	ESSEX TOWN OF SCHOOL DEPARTMENT
	TOWN OF ESSEX SCHOOL DEPARTMENT
15	GREENE, RYAN
	JOHNSTON, D V
19	LEVY, WILLIAM P
22	YOUNG, D
23	BRENNER, A
	CARR, SETH A
	CEA, ANTHONY C
	CHAPMAN, KENNETH C
	CHASE, L
	CONNOR, PAMELA
	DALEY, RONALD
	DOWARD, TRACY
	EDWARDS, ROSS F
	ELWELL, ANN
	ELWELL, JOSHUA
	ERIESIAN, GLENN
	GILLIS, DEBORAH
	JACOBSEN, DAVID
	JOHNSON, A K
	KEENER, REBECCA
	KING, ROBERT P
	KIRKLEY, SHALENE M
	KNOWLTON, M G
	KNUDSON, DARRELL
	LAPHAM, MARK
	LEITON, C
	LUMLEY, GARETH
	MACINTYRE, P
	MADEY, J B
	MARSHALL, RICHARD
	MELCHER, ROSE M
	PLATT, JAMES E
	PORPER, ROBERT
	PUTUR, ANDREA
	REED, JAMES L
	RIDEOUT, M
	SULLIVAN, MIKE
	SUMMIT, RONALD
	TAYLOR, JUDY
	TRIPOLI, M A
	VEGA, C L
	WADSWORTH, ROBERT
	WHEELER, PAT
	WITHAM, JOSEPH F
	WOLFE, ROBERT E
24	KONOPKA, CHESTER F
26	GEMMELLARO, S P
	POLIVKA, P

Target Street	Cross Street	Source
✓	-	Cole Information

STORY ST 2000 (Cont'd)

28	PARADY, ROSS
30	STENSON, ED
31	HAMMOND, RAYMOND K
	WESCOTT, LLOYD
33	DOANE, JULIE D
38	BUCKLEY, RICHARD G
	ROGERS, SUSAN W
39	SULLIVAN, NEIL F
42	BUILDING PLACE THE
	HENDERSON, AUSTIN J
	PLACE, KEVIN
43	CLEWLEY, JEFFREY
44	HODGKINS, RUSSELL E
	MCGLOUGHLIN, C
49	ANDREWS, J
	BLUM, HOLLY
54	THOMPSON, DAVID
58	DAVIS, JOSEPH
60	SOTOMAYOR, INGRID M
62	LYNCH, M A
63	BARRETT, NANCY L
66	PERKINS, EDWIN
73	FISHER, J
	LANDRY, DAVID

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 2000

8	YONKER, AARON P
15	CONLEY, J
	NEAL, ED
	NEALS AUTOMATIC TRANSMISSION
17	KARLEN, JEAN
18	TOUSEY, K
19	JEFFREY, MICHELE
21	DUNCAN TREE LANDSCAPE & CONSTRUCTION COMPANY
	DUNCAN, JOHN C
	MITCHELL, MAUREEN
22	WRIGHT, PAUL B
24	ELWELL, J R
	WHITE, DANA
28	WILHELM, KURT A
32	WOODMAN, KYLE
46	BROPHY, ROBERT
47	CHAMPION, M
48	HANCOCK, JARLYTH
50	STAVROS, JULIE
52	ROBERT, PATRICI
56	COHEN, ROBERT R
57	KNOWLTON, JAMES
59	CLARKE, RICHARD W
60	RICCI, K E
62	DENTE, ALFRED
63	DRAKE, CHARLES H
64	GOODIN, JEFF
66	NICHOLS, WILLIAM E
67	HIGGINS, MELVIN F
73	DOANE, ROSELYN L
74	GAUDIANO, PAOLO
75	CAMERON, ROBERT J
76	LYMAN, LESLIE S
78	TALBOT, SAM
79	AMES, F L
	MINOT, C
80	PEARCE, CLARK
	REDMOND, E
83	RING, EDWARD A
85	SOUTHGATE, ANDY
	SOUTHGATE, RICHARD W
87	HOLT, HENRY
	PATRICK, WILLIAM
	SAVARESE, CAROLYN
91	JOSEPH, WALTER
94	BARBRE, BRIAN
97	AZADIAN, JEFFREY
98	DANE, PETER D
101	BERNIER, ARTHUR T
	BERNIER, C

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 2000 (Cont'd)

101	ELLIOTT, JARED
	HATCH, PETER L
106	GULLWING SERVICE CO
	GULLWING SERVICE COMPANY
	LYNNFIELD MOTORSPORTS PROPERTIES
	MARK RICHEY WOODWORKING & DESIGN INCORPORATED
	RICHEY WOODWORKING & DESIGN
	RUSSELL PAUL & COMPANY
	SHAWMUT DESIGN AND CONSTRUCTION
	TRYGON INCORPORATED
109	DUNN, DAVID A
110	FEENER, EUGENE H
114	OSBORN, MARK
	PERREAULT, COLLEEN
115	ROSS, MICHAEL
120	DUFFY, S S
121	HARDING, K
127	RIGHTMIRE, SHERRIE P
135	HOOD, GLENN C
138	GABEL, KRISTY
143	OSBORNE, CHRIS
145	DRISCOL, DAVID
146	DRISCOLL, DAVID M
149	ZAKAS, NICHOLA
152	GAYBROOK GARAGE
153	FRENCHIES
	PRIDES CROSSING CRAFTSMAN
158	AMBROSE, DAVID S
	BARROS, L C
	HENDERSON, DENNIS
	KIRIM, KYLE
	KLAUCKE, ROBERT
	LEVIE, J
	MEDSCRIPT
	MELLO, RODRIGO
	MULRY IV, EDWARD J
	SAVOIE, L
	SMITH, RUSSELL W
	SYMONDS, MICHAEL
	WHITE, JAMES R
164	MEZZANINE SAFETI GATES INCORPORATED
171	KOPECKY, WILLIAM J
174	SPEEDRACK DISTRIBUTION INCORPORATED
	UNITED STORAGE SYSTEMS
177	ODONOGHUE, ROBERT
180	ANDERSON, RALPH
	FAIR HAVEN CHAPEL PARSONAGE
	LAFONFAINE, JAMES
184	PIMENTEL, DAVID M
	SHANKS, L A

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 2000 (Cont'd)

187 BOUTCHIE, DAMON W
191 TURNER & WALIMA MANUFACTURING COMPANY
192 DIX, HENRY J
196 HOWARD, WILLIAM J
197 DAVIS, N
GLASS DIMENSIONS INCORPORATED
JARMOLOWICZ, MARY
198 CARTER, RANDALL
199 ANTIQUES AND ELDERLY THINGS

Target Street	Cross Street	Source
✓	-	Cole Information

STORY ST 1995

12	ESSEX TOWN OF-SCHOOL DEPT-ELEMENTARY SCHOOL-OFCC
15	GREENE, RYAN
	JOHNSTON, D VINCENT
17	STORY, BRIAN
19	LEVY, WM P
23	BROWN, SCOTT
	CHAPMAN, KENNETH C F
	CRAVATIS, KEVIN
	CROTEAU, L T
	D'ISABEL, D
	DIPIETRO, ROBERT & MICHELLE
	DOHERTY, ERIN M
	EASON, JAS A
	ELWELL, ANN
	EMERY, J A
	GILLIS, DEBORAH
	HATCH, PETER L
	JACOBSEN, DAVID
	JOHNSON, A K
	JOHNSON, CLARENCE & RUTH
	JUHASZ, C
	KNOWLTON, M G
	MADEY, J BRIAN
	MARESCALCHI, KEITH & JEANNA
	MARIANO, JOHN
	MELCHER, ERNEST
	MOORE, THOS
	MOREIRA, M IRENE
	NEIDELL, S
	PARISI, MICHAEL
	PORPER, ROBERT
	SAZIN, SCOTT
	SHAW, DEBRA L
	SHEA, DAVID
	SUMMIT, RONALD
	TAYLOR, JUDY
	THIBODEAU, JASON
	WADSWORTH, ROBERT
	WITHAM, JOS F
	WOLFE, ROBT E
24	LECK, LILLIAN J
28	PARADY, ROSS
	PATRICAN, K
30	SMITH, B
31	O'MALEY, C MICHAEL
36	BUCKLIN, J
38	BUCKLEY, RICHARD G & JANET E
	ROGERS, SUSAN W
39	SULLIVAN, NEIL F
42	HENDERSON, AUSTIN J

Target Street	Cross Street	Source
✓	-	Cole Information

STORY ST 1995 (Cont'd)

42	HENDERSON, LOWELL
	HENDERSON, PAINTING
	IMPETT, WM, JR
	PLACE, MARY ANN & KEVIN
43	PLEGGE, R
44	HODGKINS, RUSSELL E
	KELLEHER, C
49	ANDREWS, NANCY A
54	THOMPSON, LORRAINE & DAVID
58	DAVIS, JOS & WENDY
60	SOMERS, S R
62	PIERSON, REBECCA
	SOMERS, GARY
66	PERKINS, EDWARD & JOYCE
69	ARMSTRONG, MICHAEL F
73	FRANCOEUR, DAVID L & KRISTIN
	LANDRY, DAVID & ANN

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 1995

8	EDWARDS, R L & H V
9	HALL, MARJORIE
11	FRASER, ARTHUR D
	KARLEN, ARNOLD L
15	NEAL'S AUTOMATIC TRANSMISSION
	NEAL, ED
18	TOUSEY, K
19	JEFFREY, MICHELE
	KOOP, MARY & STEVE
21	DUNCAN JOHN C
	DUNCAN TREE LANDSCAPE & CONSTRUCTION CO
	WARNECKE, C
22	WRIGHT, HELEN
	WRIGHT, PAUL B
24	ELLIS, ARNOLD F, JR
	ELWELL, J R
28	WILHELM, KURT A
46	BROPHY, ROBT & ARDRITH
47	BARTHOLOMEW, WM S & BARBARA K
48	BRAND, TRACY
50	FRANKLIN, DOROTHY
52	PALUMBO, ANTHONY
57	KNOWLTON, JAS
58	JAREMSEK, ROBT R
59	CLARKE, RICHARD W
63	DRAKE, CHAS H & MARJORIE R
64	DESMOND, PAUL & ALISON
	HILDEBRANDT, BRUCE & DONNA
66	NICHOLS, WM E
67	MCAULIFFE, JAYE
76	LYMAN, LESLIE S & R JEFFREY
	PASQUINA, C K & L
77	MUISE, JAS R
78	TALBOT, SUSAN
79	AMES, FREDERICK L
80	PEARCE, CLARK
	REDMOND, ELIZABETH
83	HEATH, JOHN W
85	SOUTHGATE, RICHARD W, JR
	SOUTHGATE, RICHARD W, JR-CHILDREN'S TELEPH
87	PATRICK, WM
	SAVARESE, CAROLYN
91	JOSEPH, WALTER
94	BARRETT, ROBT
95	STEWARD, WM & PAMELA
97	AZADIAN, JEFFREY & KATHY
98	DANE, PETER D
101	DALEY, RONALD & DENISE
	TOWNE, ERIC
	YULLING, FRANK

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 1995 (Cont'd)

106	CUTTING EDGE SPORTS INC
	ESSEX FALLS CAR BARN
	GULLWING SERVICE COMPANY
	MARK RICHEY WOODWORKING & DESIGN INC
	MURDOCH & COMPANY
	PEABODY SCIENTIFIC
	RICHEY WOODWORKING & DESIGN
	RUSSELL, PAUL & COMPANY
	TRYGON INC
	XION
109	DUNN, DAVID A
110	FEENER, EUGENE H
114	ANDREWES, ROBT W
	PERREAULT, COLLEEN
115	ROSS, MICHAEL
119	THOMPSON, GORDON & MARTHA
120	DUFFY, S S
121	HARDING, K
	TOFURI, COLLEEN & RICHARD
135	HOOD, GLENN C
138	DOODY, STEWARD
143	OSBORNE, CHRIS & DEBORAH
145	KUFFELL, NICHOLAS & DEBORAH
152	GAYBROOK GARAGE
153	FRENCHIES
	PRIDES, CROSSING CRAFTSMAN
158	ANGELSON, BRETT
	DALTON, ALLEN W
	DALTON, CHAS C
	ELLIS, MICHAEL & KRISTA
	GILMORE, DAVID E & JENNIFER
	GORDON, M
	GOSBEE, C M
	GUERIN, MICHELLE
	LEGALLO, JOHN
	MACAULEY, L C
	PINKHAM, TIMOTHY W
	RANDHAHN, ANDREAS
	ROSSI, DEAN
	RUDOLPH, MARY K
	RUST, MARCIA E
	SYMONDS, MICHAEL
	WHITE, JAS R
162	MUNNELLY, ROSAMONDE
171	KOPECKY, JOHN
177	O'DONOGHUE, ROBT
180	BROWN, LLOYD
	FAIR, HAVEN CHAPEL PARSONAGE
184	PIMENTEL, DAVID MSGT
	SHANKS, LAWRENCE A & JANET A

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 1995 (Cont'd)

187 BOUTCHIE, DAMON W
191 GUEST, ROBT L & SUSAN
PERRY, F HILTON
TURNER & WALIMA MANUFACTURING CO
192 DIX, HENRY J
196 HOWARD, WM J, JR
197 DAVIS, N
GLASS DIMENSIONS INC
JARMOLOWICZ, M
198 CARTER, RANDALL & ROBERTA
199 ANTIQUES AND ELDERLY THINGS

Target Street	Cross Street	Source
✓	-	Cole Information

STORY ST 1992

12	CAPE ANN COLLABORATIVE
15	GETTY, BOB
23	AKIN, R H
	BLODGETT, MICHELE
	BRADLEY JIMMIE
	BUCKLEY, M D
	BURKE, KEVIN P
	CHAPMAN, KENNETH C F
	CROTEAU, L T
	DELEO, JOS A
	DOUCETTE, JIM & JULIE
	ENTWISTLE, K A
	FABREGHT, ADOLFO
	GOODROW, B & L
	GRANT, DAVID
	HARDENSTINE, JEFFREY
	JOHNSON, A K
	KAISER, N
	KNOWLTON, M G
	LORENZ, JOHN L
	MOORE, THOS
	NEIDELL, S
	OLSON, BRIAN
	PERL, JOSEPH
	PIKE, GLENN R & DEBORAH
	PORPER, ROBERT
	PROVOST, LEE
	SHAW, DEBRA L
	SMITH, BRUCE & MICHELLE
	STANTON, ALFRED K, JR
	STOTTLEMYER, ROBT M
	TUTINO, PHILLIP L
	WADSWORTH, ROBERT
	WITHAM, JOS F
	WOLFE, ROBT E
24	LECK, LILLIAN J
28	MACINTYRE, HEIDI
	PARADY, ROSS
30	SMITH, B
31	O'MALEY, C MICHAEL
36	BUCKLIN, J
38	BUCKLEY, RICHARD G & JANET E
	ROGERS, SUSAN W
39	SULLIVAN, NEIL F
42	GRIMES, G
	HOLLISTER, JAY
	PRICE, MICHELLE
43	PLEGGE, R
44	DOUCETTE, MILDRED L
	HODGKINS, RUSSELL E

Target Street	Cross Street	Source
✓	-	Cole Information

STORY ST 1992 (Cont'd)

44	WASHBURN, D
49	ANDREWS, MILES S
54	BURNHAM, D
58	BERGMANN, NANCY
	ROGERS, KRISTINA
60	SOMERS, S R
62	BOUTHILLIER, G
	SOMERS, GARY
66	PERKINS, EDWARD & JOYCE
69	ARMSTRONG, MICHAEL F
73	LANDRY, DAVID & ANN

Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 1992

8	EDWARDS, BOB
	EDWARDS, R L & H V
9	HALL, MARK
11	FRASER, ARTHUR D
	KARLEN, ARNOLD L
15	NEAL'S AUTOMATIC TRANSMISSION
	NEAL, ED
19	JEFFREY, MICHELE
	KOOP, MARY & STEVE
21	DUNCAN JOHN C
	DUNCAN TREE LANDSCAPE & CONSTRUCTION CO
22	WRIGHT, MORTIMER J
	WRIGHT, PAUL B
24	ELLIS, ARNOLD F, JR
	ELWELL, J R
28	WILHELM, KURT A
46	BROPHY, ROBT & ARDRITH
47	BARTHOLOMEW, WM S & BARBARA K
48	NYLANDER, JIM & JENNA
50	FRANKLIN, DOROTHY
52	PALUMBO, ANTHONY
57	KNOWLTON, JAS
58	JAREMSEK, ROBT R
	JAREMSEK, ROBT R-CHILDRENS TELEPH
59	CLARKE, RICHARD W
62	HUTCHINSON, TERRY
	TRIPP, DEAN
63	DRAKE, CHAS H & MARJORIE R
64	DESMOND, PAUL & ALISON
	HILDEBRANDT, BRUCE & DONNA
66	NICHOLS, WM E
67	MCAULIFFE, JAYE
76	ELWELL, ANN & KIRK
77	MUISE, JAS R
78	TALBOT, CHAS & SUSAN
79	RENAISSANCE DIRECT
	STONE, WM & DEBORAH
83	HEATH, JOHN W
	HEATH, M
85	SOUTHGATE, RICHARD W, JR
87	ANDERHOLM, JEFFREY & TERRI
91	JOSEPH, WALTER
93	PRATT, P
94	PERRIGO, CATHY
95	BUCKLEY, MICHAEL F
97	AZADIAN, JEFFREY & KATHY
98	DANE, PETER D
101	DALEY, RONALD & DENISE
	YULLING, FRANK
106	ESSEX FALLS CAR BARN

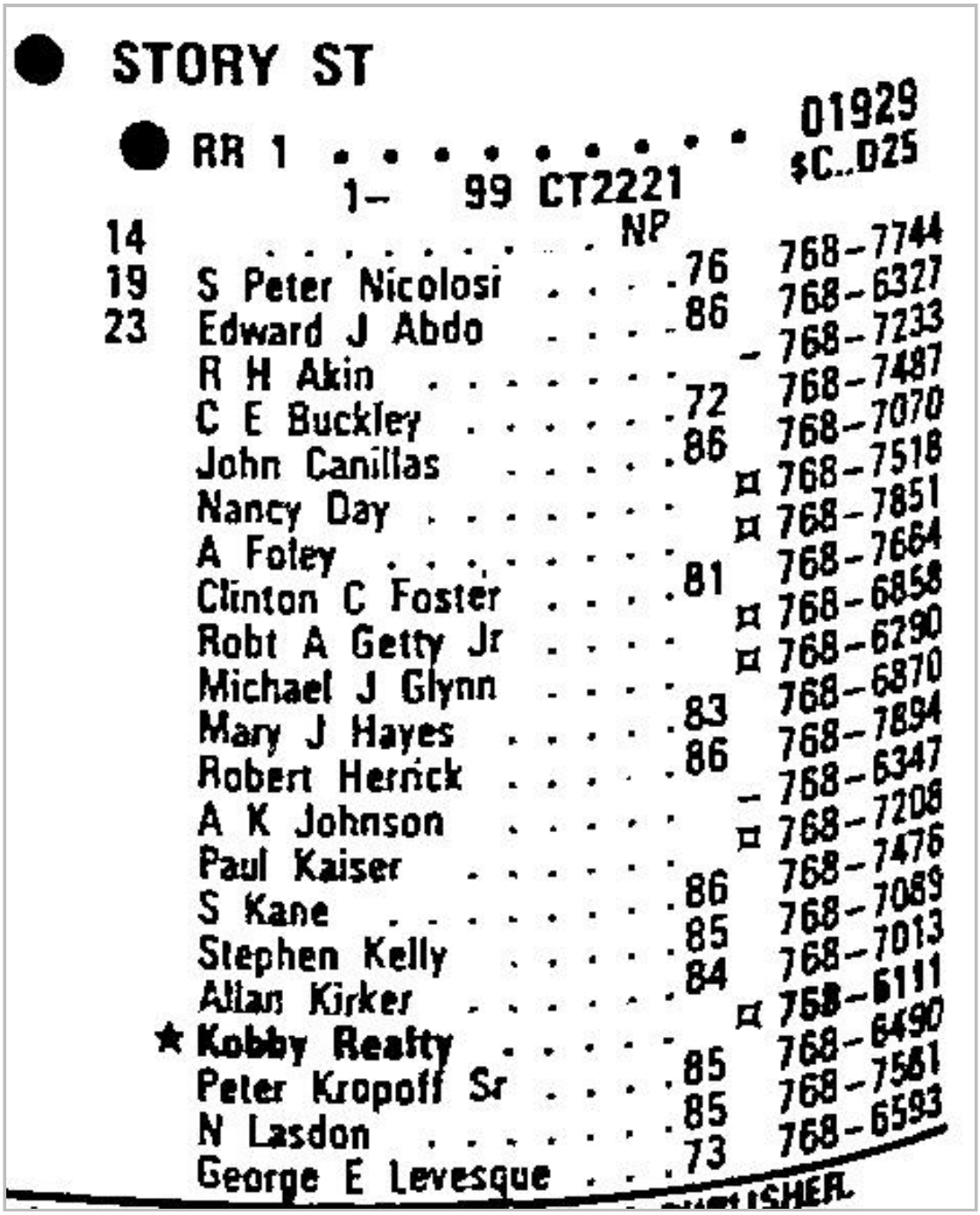
Target Street	Cross Street	Source
-	✓	Cole Information

WESTERN AVE 1992 (Cont'd)

106	GULLWING SERVICE CO
	OLD HOUSE JOURNAL
	SCANDITRONIX INC
	TRYGON INC
109	DUNN, DAVID A
110	FEENER, EUGENE H
114	HASKELL, MARK M
	PERREAULT, COLLEEN
115	ROSS, JOY E & MARK
119	THOMPSON, GORDON & MARTHA
120	DUFFY, S S
121	HARDING, K
127	KUFFELL, NICHOLAS & DEBORAH
135	HOOD, GLENN C
138	DOODY, STEWARD
152	GAYBROOK GARAGE
153	FRENCHIES
	JEAN & JOAN'S SALON 22
	PRIDES, CROSSING CRAFTSMAN
158	BACHMAN, MICHAEL
	DALTON, ALLEN W
	FRANKLIN, KARL
	GOSBEE, C M
	HENLEY, BRUCE C
	KAUFMAN, STUART A
	LANE, MARK
	MACAULEY, L C
	MACEACHERN, WM H
	MARSHALL, DAN P
	MCKAY, ERNEST
	MELANSON, KELLIE M
	SYMONDS, MICHAEL
	WILLARD, M
	WING, ANN M
162	MUNNELLY, ROSAMONDE
171	KOPECKY, JOHN
174	PIKE L E GENERAL CONTRACTORS
177	O'DONOGHUE, ROBT
180	MURRAY, DAVID H
184	PIMENTEL, DAVID MSGT
187	BOUTCHIE, DAMON W
191	GUEST, ROBT L & SUSAN
	PERRY, F HILTON
	TURNER & WALIMA MANUFACTURING CO
192	DIX, HENRY J
196	HOWARD, WM J, JR
197	GLASS DIMENSIONS INC
198	CARTER, RANDALL & ROBERTA
199	ANTIQUES AND ELDERLY THINGS

Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

STORY ST 1988



STORY ST

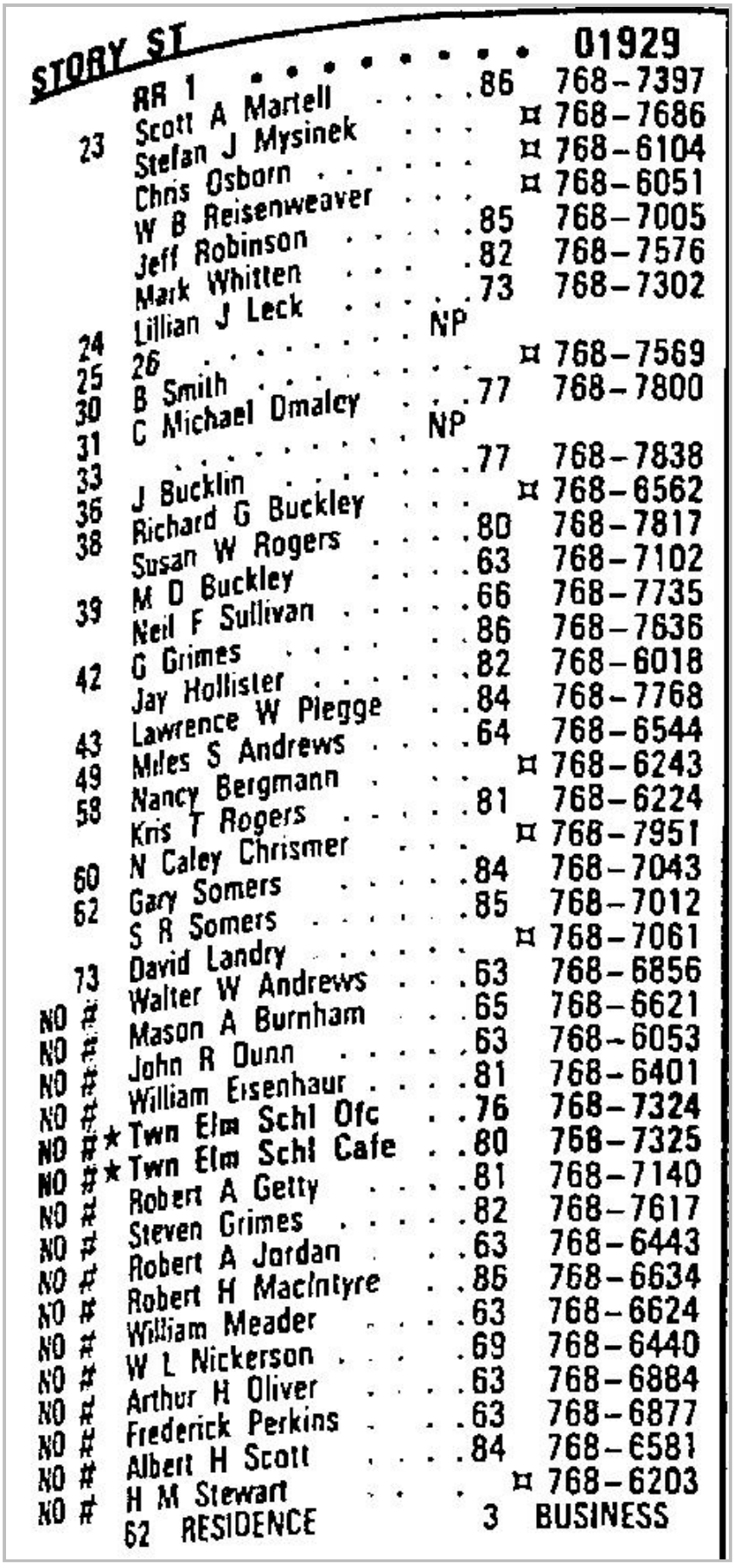
RR 1 01929
1- 99 CT2221 $C..025

14	. . . . .	NP	
19	S Peter Nicolosi . . .	76	768-7744
23	Edward J Abdo	86	768-6327
	R H Akin		768-7233
	C E Buckley	72	768-7487
	John Canillas	86	768-7070
	Nancy Day		¤ 768-7518
	A Foley		¤ 768-7851
	Clinton C Foster	81	768-7664
	Robt A Getty Jr		¤ 768-6858
	Michael J Glynn		¤ 768-6290
	Mary J Hayes	83	768-6870
	Robert Herrick	86	768-7894
	A K Johnson		768-6347
	Paul Kaiser		¤ 768-7208
	S Kane	86	768-7476
	Stephen Kelly	85	768-7089
	Allan Kirker	84	768-7013
	★ Kobby Realty		¤ 768-6111
	Peter Kropoff Sr	85	768-6490
	N Lasdon	85	768-7561
	George E Levesque . . .	73	768-6593

PUBLISHER

Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

STORY ST 1988

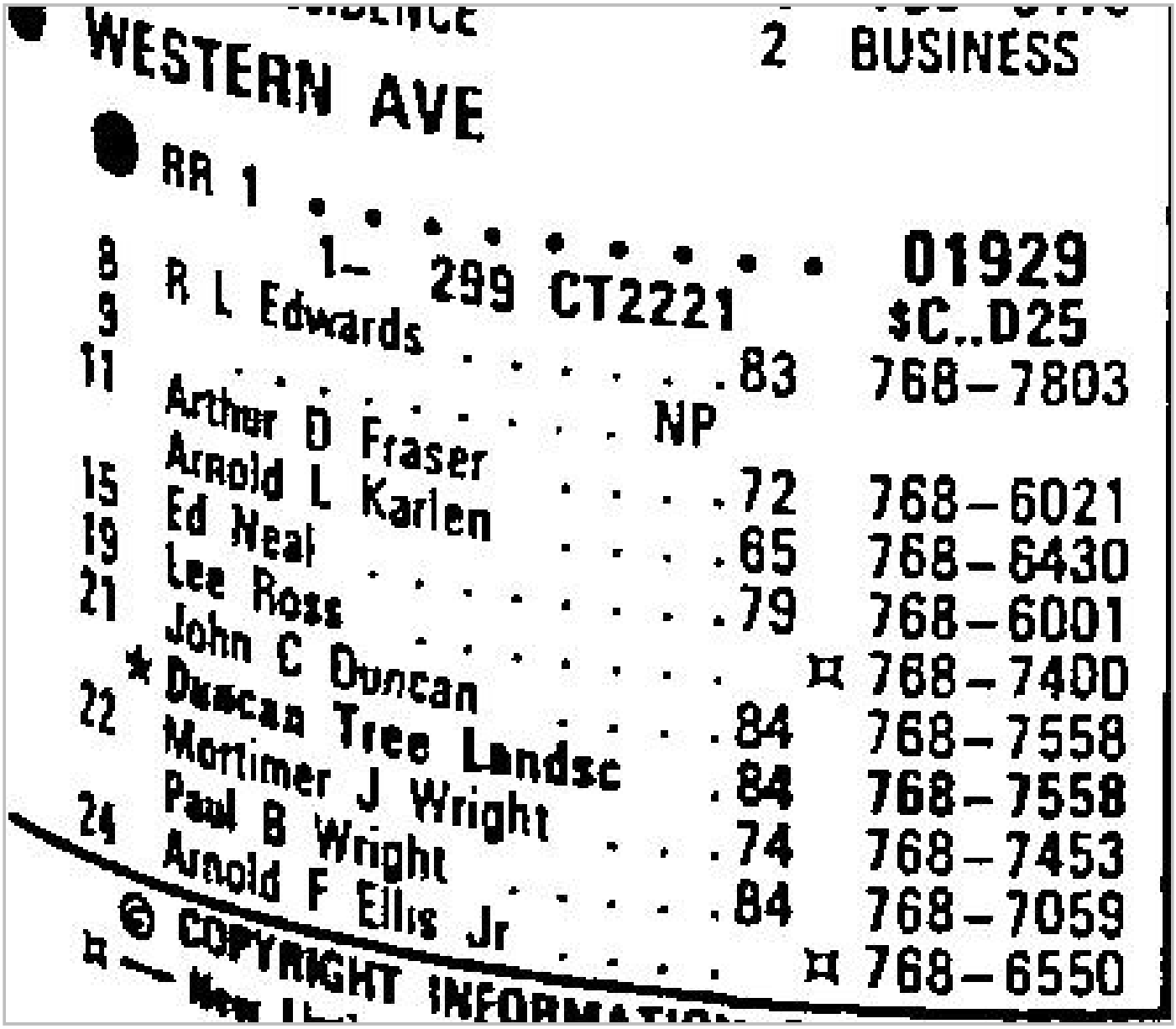


STORY ST 01929

	RR 1	.86	768-7397
23	Scott A Martell	¤	768-7686
	Stefan J Mysinek	¤	768-6104
	Chris Osborn	¤	768-6051
	W B Reisenweaver	.85	768-7005
	Jeff Robinson	.82	768-7576
	Mark Whitten	.73	768-7302
	Lillian J Leck	NP	
24	26	¤	768-7569
25	B Smith	.77	768-7800
30	C Michael Dmaley	NP	
31		.77	768-7838
33	J Bucklin	¤	768-6562
36	Richard G Buckley	.80	768-7817
38	Susan W Rogers	.63	768-7102
	M D Buckley	.66	768-7735
39	Neil F Sullivan	.86	768-7636
	G Grimes	.82	768-6018
42	Jay Hollister	.84	768-7768
	Lawrence W Plegge	.64	768-6544
43	Miles S Andrews	¤	768-6243
49	Nancy Bergmann	.81	768-6224
58	Kris T Rogers	¤	768-7951
	N Caley Chrismer	.84	768-7043
60	Gary Somers	.85	768-7012
62	S R Somers	¤	768-7061
	David Landry	.63	768-6856
73	Walter W Andrews	.65	768-6621
NO #	Mason A Burnham	.63	768-6053
NO #	John R Dunn	.81	768-6401
NO #	William Eisenhaur	.76	768-7324
NO #	★Twn Elm Schl Ofc	.80	768-7325
NO #	★Twn Elm Schl Cafe	.81	768-7140
NO #	Robert A Getty	.82	768-7617
NO #	Steven Grimes	.63	768-6443
NO #	Robert A Jordan	.86	768-6634
NO #	Robert H MacIntyre	.63	768-6624
NO #	William Meader	.69	768-6440
NO #	W L Nickerson	.63	768-6884
NO #	Arthur H Oliver	.63	768-6877
NO #	Frederick Perkins	.84	768-6581
NO #	Albert H Scott	¤	768-6203
NO #	H M Stewart	3	BUSINESS
	62 RESIDENCE		

Target Street	Cross Street	Source
-	✓	Cole Criss-Cross Directory

WESTERN AVE 1988



WESTERN AVE 2 BUSINESS

RA 1

1 299 CT2221 01929

8 R L Edwards $C..D25

11 83 768-7803

Arthur D Fraser NP

15 Arnold L Karlen 72 768-6021

19 Ed Neal 65 768-6430

21 Lee Ross 79 768-6001

John C Duncan ¤ 768-7400

22 * Duncan Tree Landsc 84 768-7558

Mortimer J Wright 84 768-7558

24 Paul B Wright 74 768-7453

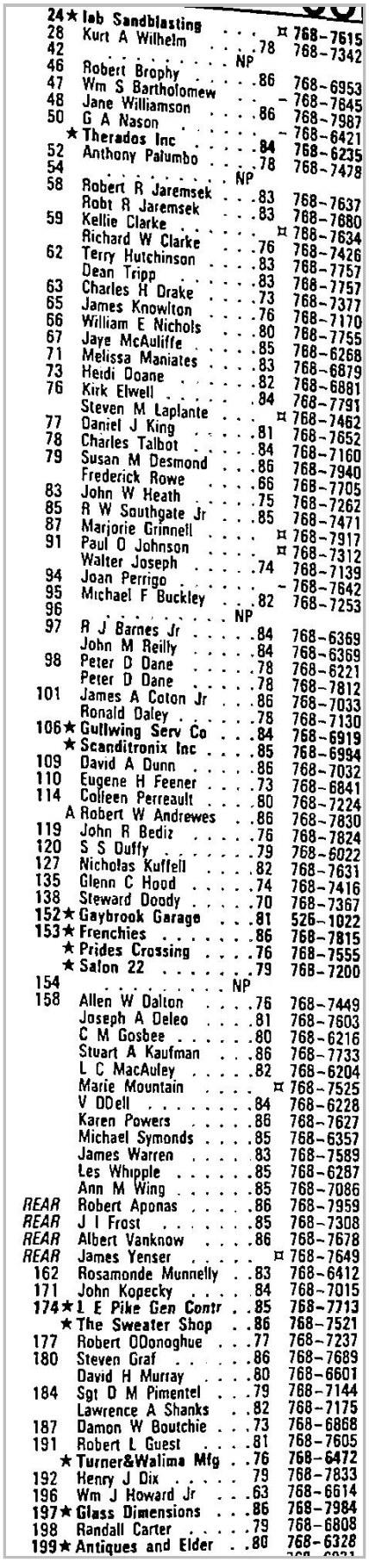
Arnold F Ellis Jr 84 768-7059

¤ 768-6550

© COPYRIGHT INFORMATION

Target Street	Cross Street	Source
-	✓	Cole Criss-Cross Directory

WESTERN AVE 1988



24★ lab Sandblasting ¤ 768-7615
28 Kurt A Wilhelm .78 768-7342
42 NP
46 Robert Brophy .86 768-6953
47 Wm S Bartholomew - 768-7645
48 Jane Williamson .86 768-7987
50 G A Nason - 768-6421
★ Therados Inc .84 768-6235
52 Anthony Palumbo .78 768-7478
54 NP
58 Robert R Jaremsek .83 768-7637
Robt R Jaremsek .83 768-7680
59 Kellie Clarke ¤ 768-7634
Richard W Clarke .76 768-7426
62 Terry Hutchinson .83 768-7757
Dean Tripp .83 768-7757
63 Charles H Drake .73 768-7377
65 James Knowlton .76 768-7170
66 William E Nichols .80 768-7755
67 Jaye McAuliffe .85 768-6268
71 Melissa Maniates .83 768-6879
73 Heidi Doane .82 768-6881
76 Kirk Elwell .84 768-7791
Steven M Laplante ¤ 768-7462
77 Daniel J King .81 768-7652
78 Charles Talbot .84 768-7160
79 Susan M Desmond .86 768-7940
Frederick Rowe .66 768-7705
83 John W Heath .75 768-7262
85 R W Southgate Jr .85 768-7471
87 Marjorie Grinnell ¤ 768-7917
91 Paul O Johnson ¤ 768-7312
Walter Joseph .74 768-7139
94 Joan Perrigo - 768-7642
95 Michael F Buckley .82 768-7253
96 NP
97 R J Barnes Jr .84 768-6369
John M Reilly .84 768-6369
98 Peter D Dane .78 768-6221
Peter D Dane .78 768-7812
101 James A Coton Jr .86 768-7033
Ronald Daley .78 768-7130
106★ Gullwing Serv Co .84 768-6919
★ Scanditronix Inc .85 768-6994
109 David A Dunn .86 768-7032
110 Eugene H Feener .73 768-6841
114 Colleen Perreault .80 768-7224
A Robert W Andrewes .86 768-7830
119 John R Bediz .76 768-7824
120 S S Duffy .79 768-6022
127 Nicholas Kuffell .82 768-7631
135 Glenn C Hood .74 768-7416
138 Steward Doody .70 768-7367
152★ Gaybrook Garage .81 525-1022
153★ Frenchies .86 768-7815
★ Prides Crossing .76 768-7555
★ Salon 22 .79 768-7200
154 NP
158 Allen W Dalton .76 768-7449
Joseph A Deleo .81 768-7603
C M Gosbee .80 768-6216
Stuart A Kaufman .86 768-7733
L C MacAuley .82 768-6204
Marie Mountain ¤ 768-7525
V ODell .84 768-6228
Karen Powers .86 768-7627
Michael Symonds .85 768-6357
James Warren .83 768-7589
Les Whipple .85 768-6287
Ann M Wing .85 768-7086
REAR Robert Aponas .86 768-7959
REAR J I Frost .85 768-7308
REAR Albert Vanknow .86 768-7678
REAR James Yenser ¤ 768-7649
162 Rosamonde Munnelly .83 768-6412
171 John Kopecky .84 768-7015
174★ L E Pike Gen Contr .85 768-7713
★ The Sweater Shop .86 768-7521
177 Robert ODonoghue .77 768-7237
180 Steven Graf .86 768-7689
David H Murray .80 768-6601
184 Sgt D M Pimentel .79 768-7144
Lawrence A Shanks .82 768-7175
187 Damon W Boutchie .73 768-6868
191 Robert L Guest .81 768-7605
★ Turner&Walima Mfg .76 768-6472
192 Henry J Dix 79 768-7833
196 Wm J Howard Jr .63 768-6614
197★ Glass Dimensions .86 768-7984
198 Randall Carter .79 768-6808
199★ Antiques and Elder .80 768-6328

12 Story Street

12 Story Street

Essex, MA 01929

Inquiry Number: 8109475.3

September 16, 2025

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

09/16/25

Site Name:

12 Story Street
12 Story Street
Essex, MA 01929
EDR Inquiry # 8109475.3

Client Name:

Mabbett & Assoc.
105 Central Street, Suite 4100
Stoneham, MA 02180
Contact: Cassidy Way

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Mabbett & Assoc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 6708-4B6F-954F

PO # NA

Project P2025201

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 6708-4B6F-954F

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

Mabbett & Assoc. (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT. Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2025 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

ASTM PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Manchester Memorial Elementary School
43 Lincoln Street
Manchester-by-the-Sea, MA 01944

October 2025

Prepared For:

Manchester Essex Regional School District
36 Lincoln Street
Manchester-by-the-Sea, MA 01944

Under Contract To:

JCJ Architecture
120 Huyshope Avenue, Suite 400
Hartford, CT 06106

Mabbett & Associates, Inc. **www.mabbett.com**
105 Central Street, Suite 4100
Stoneham, MA 02180-1260
T. 781-275-6050
F. 781-954-5155
Massachusetts | Virginia | Rhode Island | New York

© 2025, Mabbett & Associates, Inc.

ACKNOWLEDGEMENT

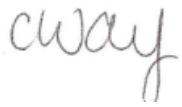
Mabbett & Associates, Inc. (Mabbett®) prepared this ASTM International *Standard Practice for Phase I Environmental Site Assessments E1527-21* Phase I Environmental Site Assessment (Phase I ESA) of the approximately 11.31-acre subject property identified as the Manchester Memorial Elementary School addressed 43 Lincoln Street in Manchester-by-the-Sea, Essex County, Massachusetts. Mabbett prepared this report under subcontract to JCJ Architecture (JCJ) for the Essex Elementary School Architectural Feasibility Study.

This Phase I ESA has been prepared for use by JCJ and the Manchester Essex Regional School District. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; Mabbett does not accept any responsibility for the consequences of such use(s). Furthermore, reliance by any party not identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to Mabbett.

Mabbett prepared this Phase I ESA report using reasonable efforts to identify Recognized Environmental Conditions (RECs) associated with hazardous substances or petroleum products in, on, or at the subject property. Findings contained within this report are based on information collected from observations made on the day of the subject property reconnaissance and from reasonably ascertainable information obtained from selected public agencies and other referenced sources.

Mabbett declares that, to the best of our professional knowledge and belief, the Mabbett staff who performed this Phase I ESA meet the definition of *Environmental Professional* as defined in §312.10 of 40 Code of Federal Regulations (CFR) 312, and these Mabbett staff have the specific qualifications based on education, training, and experience to assess a *property* of its nature, history, and setting. Mabbett has developed and performed all of the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

This Phase I ESA Report has been prepared by:



Mabbett & Associates, Inc.
Cassidy Way, QEP, CHMM
Project Environmental Scientist/Project Manager

This Phase I ESA Report has been internally reviewed and approved for submittal by:



Mabbett & Associates, Inc.
Michael L. Bloom, PG, CPG
Practice Lead, Site Assessment & Restoration, Northeast

CEW/MLB

TABLE OF CONTENTS

SECTION **PAGE**

EXECUTIVE SUMMARY **ES-1**

1.0 INTRODUCTION **1**

1.1 Purpose 1

1.2 Detailed Scope of Services 2

1.3 Significant Assumptions 2

1.4 Limitations and Exceptions 2

1.5 Special Terms and Conditions (User Reliance) 3

2.0 SUBJECT PROPERTY DESCRIPTION **4**

2.1 Location and Legal Description 4

2.2 Current Use and Improvements at the Subject Property 4

2.3 Surrounding Area General Characteristics 4

2.4 Physical Setting 4

2.4.1 Topography 4

2.4.2 Geology 4

2.4.3 Wetlands and Surface Water 4

2.4.4 Groundwater 5

2.4.5 Flood Zone 5

2.4.6 Soils 5

3.0 SITE RECONNAISSANCE **6**

3.1 Methodology 6

3.2 Observations of Subject Property Improvements 6

3.2.1 Buildings 6

3.2.2 Stormwater 6

3.2.3 Water Supply 6

3.3 Underground Storage Tanks 7

3.4 Aboveground Storage Tanks 7

3.5 Hazardous Substance Use, Storage, and Disposal 7

3.6 Non-Hazardous Solid Wastes and Disposal 7

3.7 Electrical Equipment and Polychlorinated Biphenyls (PCBs) 7

3.8 Stained Surfaces and Distressed Vegetation 7

3.9 Underground Structures 7

3.10 Per- and Poly-fluoroalkyl Substances (PFAS) 7

4.0 USER PROVIDED INFORMATION 9
4.1 Owner, Property Manager, and Occupant Information 9
4.2 Title Records 9
4.3 Environmental Permits and/or Violations 9
4.4 Specialized Knowledge or Experience of the Owner 9
4.5 Significant Valuation Reduction for Environmental Issues 9
4.6 Reason for Performing Phase I ESA 9
4.7 Other Owner-Provided Documents 9
5.0 RECORDS AND DATABASE REVIEW 11
5.1 Standard Environmental Records 11
5.1.1 Findings for the Subject Property 12
5.1.2 Findings for Adjoining and Surrounding Properties 12
5.1.3 Aerial Photographs 14
5.1.4 Historical USGS Topographic Maps 15
5.1.5 Historical City Directories 15
5.1.6 Sanborn Fire Insurance Maps 15
5.1.7 Municipal Records 16
5.1.8 Other Historical Sources 16
6.0 SUBSURFACE VAPOR MIGRATION 17
7.0 INTERVIEWS 18
8.0 OTHER ENVIRONMENTAL CONDITIONS 19
8.1 Lead Based Paint 19
8.2 Asbestos Containing Materials 19
9.0 CONCLUSIONS AND RECOMMENDATIONS 20
10.0 REFERENCES 21

TABLES

Table 5-1 11
Table 5-2 13
Table 7-1 18

FIGURES

Figure 1-1 Subject Property Locus Map
Figure 1-2 Subject Property Plan

APPENDICES

Appendix A Supporting Documents
- Property Record Card
- USFWS Wetlands Map
- FIRMette Panel
- MassDEP Phase I Site Assessment Map
- NRCS Web Soil Survey Map
- MMES Phase I and II ESA

Appendix B Photograph Log
Appendix C Environmental Site Assessment User Questionnaire
Appendix D Database Search Report: EDR Radius Map™ Report with GeoCheck®
Appendix E Additional EDR Reports:
- Historical USGS Topography Maps
- Historical Aerial Photographs
- Historical City Directories
- Certified Sanborn Map Report

LIST OF ACRONYMS

AAI	All Appropriate Inquiries
AOC	Area of Concern
ACM	Asbestos Containing Materials
AST	Aboveground Storage Tank
ASTM	ASTM International
BER	Business Environmental Risk
bgs	Below Ground Surface
CFR	Code of Federal Regulations
COCs	Chemicals of Concern
DoD	Department of Defense
ECHO	Enforcement and Compliance History Online
EDR	Environmental Data Resources, LLC
EPH	Extractable Petroleum Hydrocarbons
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FINDS	Facility Index System
LBP	Lead-Based Paint
LF	Linear Feet
LUST	Leaking Underground Storage Tank
MassDEP	Massachusetts Department of Environmental Protection
NonGen/NLR	Non-Generator/No Longer Reporting
NR	Not Required
NWI	National Wetlands Inventory
PCBs	Polychlorinated Biphenyl
PFAS	Per- and Polyfluoroalkyl Substances
PP13	Priority Pollutant 13 Metals
QEP	Qualified Environmental Professional
RCRA	Resource Conservation and Recovery Act
RECs	Recognized Environmental Conditions
RTN	Release Tracking Number
SHWS	State Hazardous Waste Site
SVOC	Semi-Volatile Organic Compound
TP	Target Property
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tank
VEC	Vapor Encroachment Condition
VOC	Volatile Organic Compound
VPH	Volatile Petroleum Hydrocarbons

© 2025, Mabbett & Associates, Inc.

EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment (ESA) Report presents the results of non-intrusive environmental due diligence activities performed by Mabbett & Associates, Inc. (Mabbett) on behalf of JCJ Architecture (JCJ) to support the Manchester Essex Regional School District decision making regarding capital investments at Essex Elementary School. The subject property for this Phase I ESA is the Manchester Memorial Elementary School (MMES) addressed 43 Lincoln Street, which encompasses approximately 11.31 acres of land in Manchester-by-the-Sea, Massachusetts.

Subject Property Description

MMES contains one main 91,450 square foot school building constructed in 2019. The site is owned by Manchester Memorial School, and the subject property is developed with athletic fields and playground in addition to the school.

Subject Property History

The subject property was undeveloped land between at least 1888 and 1893. By 1915, Lincoln Street had been constructed, along with at least one two-story dwelling located on the Summer Street side of the subject property.

The subject property was developed with the original 66,573 square foot school building in 1951, with additions having been added in 1954 and 1965. The subject property remained predominantly unchanged between 1966 and 2019, when it was redeveloped with the current MMES.

Surrounding Areas

The area surrounding the subject property is predominantly composed of residential and educational use lands and athletic fields.

Conclusions

The Phase I ESA included a reconnaissance at the subject property by Mabbett on September 24, 2025. Mabbett obtained information about environmental conditions that could potentially be considered a Recognized Environmental Condition (REC); reviewed historical maps of the subject property and vicinity; interviewed the maintenance supervisor for the school district Steve Hunt, who was familiar with current and recent environmental history at the subject property; reviewed environmental database listings for the subject property and vicinity; performed a review of available files from the Massachusetts Department of Environmental Protection (MassDEP); and reviewed documents provided by MMES. This information was used to develop an opinion with regard to the presence or absence of RECs at the subject property.

The Phase I ESA findings are summarized in the following list:

- **RECs**

  No RECS were identified on or affecting the subject property.

- **Historical Recognized Environmental Conditions (HRECs)**

  The south adjacent property addressed 76 Summer Street was identified as a State Hazardous Waste Site (SHWS) under release tracking numbers (RTNs) 3-2657 in 1990 and 3-21362 in 2001 for contamination resulting from leaking underground storage tanks (LUSTs). The property was formerly used as a gas station. RTN 3-21362 was later linked to RTN 3-2657. MassDEP received a Partial Class A-2 Response Action Outcome (RAO) Statement (now referred to as a Permanent Solution) for RTN 3-21362 on June 5,

2003 for the 74 Summer Street portion of the site. The remainder of the site was closed under a Class C RAO (now called a Temporary Solution).

The subject property was historically mapped within the groundwater contaminant plume at this release site. As many as 18 groundwater monitoring wells were historically installed at this property that were reportedly destroyed during the redevelopment of the subject property in 2019. No petroleum constituents had been detected in the subject property wells since the late 1990s. As RTNs 3-2657 and 3-21362 have achieved regulatory closure under the MCP, the historical extension of this contaminant plume onto the subject property represents an HREC.

- **Controlled Recognized Environmental Conditions (CRECs)**

  No CRECs were identified on or affecting the subject property.

- **Data Gaps**

  No significant data gaps were identified during this Phase I ESA.

- **Business Environmental Risks (BERs)**

  No BERs were identified on or affecting the subject property.

1.0 INTRODUCTION

This Phase I Environmental Site Assessment (ESA) report presents the results of non-intrusive environmental due diligence activities performed according to the ASTM International *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E1527-21) at the subject property, identified as the approximately 11.31-acre property at 43 Lincoln Street in Manchester-by-the-Sea, Essex County, Massachusetts. A Subject Property Locus Map is provided as Figure 1-1. A Subject Property Plan is provided as Figure 1-2.

1.1 Purpose

The purpose of performing a Phase I ESA is to render an opinion, to the extent practical, as to whether current or historical evidence indicates the presence of Recognized Environmental Conditions (RECs) at the subject property. The Phase I ESA findings are intended to help KBA with decision making regarding potential environmental liabilities at the subject property. The Phase I ESA was completed following the guidelines of ASTM International Standard Practice E1527-21 (ASTM E1527-21), the United States Environmental Protection Agency's (USEPA) All Appropriate Inquiries (AAI) Rule, and industry standard practice. The following paragraphs describe the different types of RECs defined by ASTM E1527-21.

ASTM E1527-21 defines a REC as:

- the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment;
- the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or
- the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

The term REC is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment, and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

ASTM E1527-21 defines a Historical REC as:

> *"A previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (i.e., activity and use limitations or other property use limitations)."*

ASTM E1527-21 defines a Controlled REC as:

> *"A REC affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (i.e., activity and use limitations or other property use limitations)."*

ASTM E1527-21 defines a Business Environmental Risk (BER) as:

> *"A risk that can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to those environmental issues required to be investigated in this practice. Consideration of business environmental risk issues may involve addressing one or more non-scope considerations."*

Although the subject property is not considered "commercial real estate," the identification of BERs is considered relevant to this assessment because non-scope environmental concerns at the subject property could have cost implications on potential future development efforts by the Manchester Essex Regional School District.

1.2 Detailed Scope of Services

This Phase I ESA was completed with a level of care and skill ordinarily practiced by the environmental consulting professional currently providing similar services under comparable circumstances in accordance with the provisions of ASTM E1527-21. Any significant additions, deletions, or exceptions to ASTM E1527-21 are noted below, or in the corresponding sections of this report. The scope of this assessment included an evaluation of the following:

- Physical setting characteristics of the subject property through a review of referenced sources such as topographic maps and geologic, soils and hydrologic reports;
- Use of the subject property, adjoining properties, and surrounding area through a review of referenced historical sources such as land title records, fire insurance maps, city directories, aerial photographs, prior reports, and interviews;
- Observations regarding current usage and conditions include: the use, treatment, storage, disposal or generation of hazardous substances, petroleum products, hazardous wastes, nonhazardous solid wastes, and wastewater;
- Use of adjoining and surrounding area properties and the likely impact of known or suspected releases of hazardous substances or petroleum products from those properties in, on, or at the property;
- Information in referenced environmental agency databases and local environmental records, within the specified approximate minimum search distance from the subject property;
- Potential for subsurface vapor migration in, on, or at the subject property; and
- Potential PFAS at the subject property.

1.3 Significant Assumptions

No significant assumptions were made during the preparation of this Phase I ESA.

1.4 Limitations and Exceptions

Mabbett prepared this Phase I ESA report using reasonable efforts to identify RECs associated with hazardous substances or petroleum products in, on, or at the subject property. Findings contained within this report are based on information collected from observations made on the day of the site reconnaissance and from reasonably ascertainable information obtained from selected public agencies and other referenced sources.

No exceptions to ASTM E1527-21 were noted during this assessment.

The ASTM E1527-21 recognizes inherent limitations for Phase I ESAs, including, but not limited to:

- Uncertainty Not Eliminated: A Phase I ESA cannot wholly eliminate uncertainty regarding the potential for RECs associated with a property since no actual environmental samples are collected for analysis.
- Not Exhaustive: A Phase I ESA is not an exhaustive assessment of the environmental conditions on a property.
- Past Uses of the Property: A Phase I ESA does not require review of standard historical sources at less than five-year intervals. Therefore, past uses of the property may not be discovered.

Other limitations are as follows:

- The observations described in this report were made under the conditions stated herein. Observations were based solely upon the non-intrusive services described herein.

Users of this report may refer to ASTM E1527-21 for further information regarding these and other limitations.

Mabbett makes no representation or warranty that the past or current operations at the subject property are, or have been, in compliance with all applicable federal, state, and local laws, regulations, and codes. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Regardless of the findings stated in this report, Mabbett is not responsible for consequences or conditions arising from facts not fully disclosed to Mabbett during the assessment.

Per ASTM E1527-21, Section 6, User Responsibilities, the User of this assessment has specific obligations for performing tasks during this assessment that will help identify the possibility of RECs associated with the subject property. Failure by the User to fully comply with the requirements may impact their ability to use this report to help qualify for Landowner Liability Protections under the Comprehensive Environmental Response, Compensation, and Liability Act. Mabbett makes no representations or warranties regarding a User's qualification for liability protection under any federal, state, or local laws or regulations.

In accordance with ASTM E1527-21, this report is presumed to be valid for a 6-month period. If the report is older than 6 months, the following information must be updated for the report to be valid: (1) regulatory review, (2) subject property reconnaissance, (3) interviews, (4) specialized knowledge, and (5) environmental liens. Reports older than one year may not meet ASTM E1527-21 requirements and, therefore, the report must be updated to reflect current conditions and property-specific information. Other limitations and exceptions that are specific to the scope of this report may be found in the corresponding sections.

1.5 Special Terms and Conditions (User Reliance)

This report is for the use and benefit of and may be relied upon by the JCJ, the Manchester Essex Regional School District, or third parties authorized in writing by JCJ. Any third party agrees by accepting this report that any use or reliance on this report shall be limited by the exceptions and limitations in this report, and with the acknowledgment that actual subject property conditions may change with time, and that hidden conditions may exist at the property that were not discovered within the authorized scope of the assessment. Any use by or distribution of this report to third parties, without the express written consent of the JCJ, is at the sole risk and expense of such third party.

Mabbett makes no other representation to any third party except that it has used the degree of care and skill ordinarily exercised by environmental consultants in the preparation of the report and in the assembling of data and information related thereto. No other warranties are made to any third party, either express or implied.

2.0 SUBJECT PROPERTY DESCRIPTION

The subject property description was researched and developed by Mabbett representative Cassidy Way, QEP, CHMM, who meets ASTM's *Environmental Professional* qualification as defined in ASTM E1527-21 and who performed a site reconnaissance of the subject property on September 24, 2025. A Subject Property Locus map is provided as Figure 1-1. A detailed Subject Property Map depicting current subject property features is provided as Figure 1-2.

2.1 Location and Legal Description

43 Lincoln Street (the subject property) was identified by the Town of Manchester-by-the-Sea Assessor as Parcel 47-0-6 and encompassed approximately 11.31 acres owned by the Manchester Memorial School. The subject property was zoned within a Zona G (General District) within the Town of Manchester-by-the-Sea.

2.2 Current Use and Improvements at the Subject Property

The subject property was developed with a 91,450 square foot elementary school that was constructed in 2019. Other features of the subject property included paved driveways and tennis courts. The subject property was accessible from Lincoln Street to the northeast and Summer Street to the south.

2.3 Surrounding Area General Characteristics

The subject property was in a suburban area that was developed with residential neighborhoods, a conservation area, and a golf course. The land use adjacent to the subject property included the following:

North/Northeast: Manchester Essex Regional Middle High School and the Essex Country Club

East: Residential and Manchester Gas and Service Station

South: Residential neighborhoods and conservation land

West: Sports facilities and residential neighborhoods.

2.4 Physical Setting

2.4.1 Topography

Based on the U.S. Geological Survey (USGS) 7.5-Minute Series Marblehead North Topographic Quadrangle map, dated 2024, the elevation of the ground surface at the subject property is approximately 10 to 40 feet above mean sea level. The subject property was sloped downwards toward the northwest. This information was confirmed during Mabbett's site reconnaissance on September 24, 2025.

2.4.2 Geology

According to the USGS Bedrock Geologic Map of Massachusetts, bedrock underlying the general area of the subject property was characterized Cape Ann Complex. No bedrock outcrops were observed at the subject property during Mabbett's site reconnaissance on September 24, 2025.

2.4.3 Wetlands and Surface Water

According to the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Map Viewer, freshwater emergent wetland was present on the southernmost portion of the subject property. Additionally, riverine was located on the northern portion of the subject property. The wetlands map is included in Appendix A. This information was confirmed during Mabbett's site reconnaissance on September 24, 2025.

According to the MassDEP Phase I Site Assessment Map, the subject property is mapped within a Zone II Protection Area and Medium Yield Non-Potential Drinking Water Source Area. This map is included in Appendix A.

2.4.4 Groundwater

Based on a Phase II Limited Subsurface Investigation, Performed by CDW Consultants on behalf of JCJ Architects in March 2019, Groundwater is located approximately 13-21 feet below ground surface. A groundwater elevation survey was performed as part of this assessment that determined groundwater flows in a northerly direction on the subject property.

Actual groundwater flow direction underlying the subject property may vary due to the topography, presence of underground utilities such as sewers, storm drains, and heterogeneous subsurface soil conditions. Measuring the actual depth to groundwater and flow direction is beyond the scope of an ASTM E1527-21 Phase I ESA.

2.4.5 Flood Zone

The subject property was located on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map FIRMette panel 25009C0434H dated July 8, 2025. According to FEMA, the subject property was located primarily within an area of minimal flood hazard (Zone X), but the north/northwestern portions of the subject property were mapped within a flood zone (Zone A). The flood zones on the subject property were adjacent to the Sawmill Brook/Causeway Brook. A copy of the FIRMette is provided in Appendix A.

2.4.6 Soils

The soil at the subject property underlying the buildings were classified by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service as Scitico silt loam (14B), Udorthents smoothed (651), Boxford silt loam (220B), and Sudbury fine sandy loam (260B). The Udorthents was mapped beneath the school building. A copy of the USDA soil map is provided in Appendix A.

Subject property soils that were not covered with hardscape were vegetated with grass, shrubs, and trees. No significant soil erosion or stained soil was noted during the site reconnaissance.

3.0 SITE RECONNAISSANCE

A site reconnaissance was performed to obtain information about environmental conditions at the subject property and at adjacent properties that could impact the subject property.

3.1 Methodology

On September 24, 2025, Mabbett representative Cassidy Way, QEP, CHMM, who meets the ASTM's *Environmental Professional* qualification, met with Steve Hunt, Maintenance Supervisor at Manchester Essex Schools. Mr. Hunt answered questions from Mabbett prior to Mabbett's site reconnaissance. Mabbett was unescorted during the site reconnaissance, which did not include the interiors of the schools, apart from select common areas. Information provided by Mr. Hunt is incorporated throughout this report.

Mabbett walked the subject property with the purpose of assessing potential RECs, BERs, and *de minimis* conditions. The site reconnaissance efforts consisted of making visual observations of conditions on the ground surface, building exteriors, and select building interiors at the subject property. The focus of the site reconnaissance was on areas where hazardous substances or petroleum products are or may have been stored, used, treated, discharged, or disposed. Mabbett toured the exterior grounds, observing all sides of the building. Mabbett also observed the adjoining properties from public thoroughfares. No intrusive activities were performed during the site reconnaissance.

The following sections present a summary of observations made during the site reconnaissance. Representative photographs are provided in Appendix B.

3.2 Observations of Subject Property Improvements

3.2.1 Buildings

The subject property contains one main 91,450 square foot school building constructed in 2019. The school grounds consisted of playgrounds, tennis courts, and paved driveways. Wetlands and the Sawmill/Causeway Brook were observed on the northern portion of the subject property.

According to Mr. Hunt, the subject property was heated via natural gas and hot water boilers. Air chillers to cool the school were present on the roof.

3.2.2 Stormwater

There are several storm drain catch basins and drainage swales noted around the subject property.

3.2.3 Water Supply

MMES obtained its potable water from Town of Manchester-by-the-Sea, who obtains its water from Gravelly Pond, a surface water reservoir, in Hamilton, as well as the Lincoln Street Well located next to the Manchester Essex Regional Middle High School to the north of the subject property, and Round Pond in Hamilton. Water is then treated at the Gravelly Pond Water Treatment Facility.

No potable water wells were observed on the subject property during the site reconnaissance. According to the Massachusetts Department of Environmental Protection (MassDEP) well database, monitoring wells were installed in 2019 at the subject property.

3.3 Underground Storage Tanks

According to records uncovered during a 2017 Phase I ESA, two 10,000 gallon fuel oil USTs were removed from the property in July 1991. No UST closure sampling information was found, and a Phase II was conducted within the vicinity of the former USTs. No contamination was found during the Phase II ESA. Of note, Mabbett was unable to locate these records at the Manchester Fire Department.

No USTs are currently present at the subject property.

3.4 Aboveground Storage Tanks

No evidence of aboveground storage tanks (ASTs) was observed nor historically recorded for the subject property.

3.5 Hazardous Substance Use, Storage, and Disposal

According to Mr. Hunt, the subject property did not maintain a designated hazardous waste storage area to temporarily store waste. Chemicals at the subject property consisted of cleaning chemicals.

No improperly used, stored, or disposed of hazardous substances were observed during the site reconnaissance.

3.6 Non-Hazardous Solid Wastes and Disposal

Non-hazardous solid waste generated during routine MMES operations was contained in dumpsters on the subject property. According to Mr. Hunt, these receptacles are emptied weekly or as needed. No improper handling of non-hazardous solid waste was observed during Mabbett's site reconnaissance.

3.7 Electrical Equipment and Polychlorinated Biphenyls (PCBs)

Electrical transformers and hydraulic reservoirs observed at the subject property visually appeared to be in good condition with no signs of leakage. Based on their suspected age due to the recent redevelopment of the subject property, these transformers are not anticipated to contain PCBs.

3.8 Stained Surfaces and Distressed Vegetation

Mabbett did not observe any stained or distressed vegetation at the subject property.

3.9 Underground Structures

Mabbett did not observe any underground structures at the subject property.

3.10 Per- and Poly-fluoroalkyl Substances (PFAS)

Mabbett conducted an assessment of potential sources of PFAS at or near the subject property. PFAS environmental contamination may come from a number of sources; including, but not limited to firefighting foam, waterproofing materials, wetting agents, and other industrial and consumer products. Department of Defense (DoD) facilities have also been associated with high levels of PFAS in groundwater due to training and firefighting activities, as well as other facility activities that are part of the DoD's mission. As a result, PFAS are nearly ubiquitous and have been found in rainwater and encountered in many environments and media including groundwater, soils, surface water, sediment, and human and animal tissues.

Mabbett found no reference to the use of PFAS-containing materials, historical fires, or firefighting responses at the subject property or adjacent properties. Mabbett found no specific potential sources of PFAS at the subject property or adjacent properties, or indications of past property uses associated with PFAS use from the historical data as summarized in Section 5.1.4 through 5.1.6 of this report. PFAS have historically been detected at the

Manchester-by-the-Sea Department of Public Works between 2021 and 2025. The available information reviewed by Mabbett did not identify historical releases of PFAS at the subject property.

4.0 USER PROVIDED INFORMATION

The following section summarizes the Phase I ESA User Questionnaire completed by the MMES maintenance supervisor for the school district Steve Hunt (Mr. Hunt). The completed User Questionnaire is provided in Appendix C.

4.1 Owner, Property Manager, and Occupant Information

The subject property is owned and managed by the TMS and occupied by the Manchester Memorial High School High School.

4.2 Title Records

Mr. Hunt was not aware of any deed restrictions, environmental land use restrictions, environmental liens, or activity and use limitations on file for the subject property.

4.3 Environmental Permits and/or Violations

Mr. Hunt was not aware of any state- or municipal-issued violations for the subject property.

4.4 Specialized Knowledge or Experience of the Owner

Mr. Hunt did not have any specialized knowledge of the subject property.

4.5 Significant Valuation Reduction for Environmental Issues

Mr. Hunt was not aware of significant valuation reduction due to environmental issues at the subject property.

4.6 Reason for Performing Phase I ESA

This Phase I ESA is being completed in support of Manchester Essex Schools feasibility studies for the Essex Elementary School.

4.7 Other Owner-Provided Documents

Mabbett was provided with a Phase I ESA performed by CDW Consultants, Inc. (CDW) in October 2017 and a Phase II ESA that was performed by CDW in March 2019.

According to the Phase I ESA, the subject property had one main 66,573 square foot school building constructed in 1951 with two additions – one in 1954 and 1965. The subject property was owned by the Town of Manchester-by-the-Sea. The Phase I ESA identified the following RECs and HREC:

- Potential contamination from the two 10,000 gallon fuel oil USTs removed in 1997 represented an HREC.
- Potential contamination from the old transformer removed from the electric room in the basement may have had PCBs in the transformer fluids, representing an HREC.
- Potential contamination from the exterior pad mounted transformer as it was unknown whether PCBs were in the transformer fluids represented a REC.
- The potential dumping of ash from an incinerator represented a REC.
- Potential asbestos debris within the dirt floor portion of the crawlspace represented a REC.

Based on these findings, CDW recommended a Phase II investigation including Soil borings, soil sampling and analysis, the installation of four groundwater monitoring wells, and groundwater sampling and analysis. The investigation was conducted February to March 2019. Four monitoring wells (MW-1 to MW-4) were installed using

a hollow stem auger drill rig. MW-1 was drilled on the eastern portion of the site building, MW-2 was installed on the northern portion of the site, MW-3 was installed on the western part of the alcove, and MW-4 was installed on the northern part between MW-1 and MW-2. Wells were installed to a depth of 20 feet below ground surface (bgs). Depth to water was measured approximately 14 feet bgs.

Soils from each boring were submitted for laboratory analysis of extractable petroleum hydrocarbons (EPH), volatile organic compounds (VOCs), volatile petroleum hydrocarbons (VPH), semi volatile organic compounds (SVOCs), and priority pollutant 13 (PP13) metals.

Groundwater samples were collected from each well and submitted for laboratory analysis of EPH, VOCs, SVOCs, and dissolved PP13 metals. All detected compounds were below Massachusetts Contingency Plan (MCP) RCS-1 Reportable Concentrations.

No VPH, EPH or VOCs were detected in groundwater above laboratory detection limits. SVOC compounds benzo(b)fluoranthene, chrysene, fluoranthene, phenanthrene and pyrene were detected above laboratory detection limits, but below MCP GW-1 Reportable Concentrations. The dissolved metals arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, thallium and zinc were detected in all four groundwater samples. The detected concentrations of metals are above the applicable Reportable Concentration for GW-1 classified groundwater. The detection of metals exceeding GW-1 Reportable Concentrations represented a 120-day reporting condition to MassDEP. However, due to the high levels of turbidity encountered in the groundwater, CDW recommended resampling the four monitoring wells within the 120-day reporting window to determine if the metals concentrations were an anomaly due to high turbidity.

In April 2019, CDW returned to resample MW-1 through MW-4. Groundwater samples exhibited less turbidity than during the original sampling event. Samples were submitted for laboratory analysis of dissolved metals and one sample was collected for total metals (not field filtered). In April 2019, no metals were detected exceeding MCP GW-1 Reportable Concentrations. CDW opined that the initial groundwater concentrations were an anomaly due to the turbidity and that there was no MCP reporting requirement based upon the results of the resample.

The aforementioned reports provided to Mabbett by JCJ are included in Appendix A.

5.0 RECORDS AND DATABASE REVIEW

Mabbett obtained and reviewed available environmental records for the subject property and adjoining properties. The records were reviewed to identify properties where chemical releases were reported to have occurred and to assess whether those releases create a REC at the subject property.

5.1 Standard Environmental Records

Mabbett contracted Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut, to conduct a search for available federal and state environmental records in compliance with ASTM E152721. EDR provided Mabbett with the database search results in an EDR Radius Report on September 22, 2025. EDR searched federal and state databases for records of properties with a history of a chemical release or chemical storage and located within the minimum search distance from the subject property as required by ASTM E1527-21. Records identified within these search distances from the subject property are summarized in Table 5-2. The databases for which no records were identified are presented in the full EDR report in Appendix D. The EDR report identified 5 "orphan" listings.

TABLE 5-1
Summary of Environmental Records Identified in the EDR Radius Report

Database	Records for the Subject Property	Search Distance (miles from the subject property)	Number of records within the search distance					Total Records Identified
			<1/8 mile	1/8 – 1/4 mile	1/4 – 1/2 mile	1/2 – 1 mile	>1 miles	
MA SHWS	**0**	1.0	1	1	9	10	NR	**21**
LAST	**0**	0.50	0	0	1	NR	NR	**1**
LUST	**0**	0.50	3	2	4	NR	NR	**9**
UST	**0**	0.25	2	0	NR	NR	NR	**2**
AST	**0**	0.25	1	0	NR	NR	NR	**1**
RCRA NONGEN/NLR	**0**	0.25	1	1	NR	NR	NR	**2**
FINDS	**1**	TP	NR	NR	NR	NR	NR	**1**
ECHO	**1**	TP	NR	NR	NR	NR	NR	**1**
PFAS ECHO	**0**	0.25	0	1	NR	NR	NR	**1**
UST FINDER	**0**	0.25	2	0	NR	NR	NR	**2**
UST FINDER RELEASE	**0**	0.50	1	0	3	NR	NR	**4**
E MANIFEST	**0**	0.25	1	6	NR	NR	NR	**7**
HW GEN	**0**	0.25	0	2	NR	NR	NR	**2**
ASBESTOS	**1**	TP	NR	NR	NR	NR	NR	**1**
EDR HIST AUTO	**0**	0.125	1	NR	NR	NR	NR	**1**
Totals	**3**	--	13	13	17	10	0	**56**

NOTES:
TP = Target Property (the *subject property* per ASTM E1527-21)
NR = Not Required by ASTM E1527-21

5.1.1 Findings for the Subject Property

The subject property was identified within the asbestos, Facility Index System (FINDS), and Enforcement and Compliance History Online (ECHO) databases. Permits for at least 32,000 linear feet (LF) of asbestos containing materials (ACM) was removed from the subject property between 2017 and 2021 during the redevelopment of the property with its current structure. ACM included floor tile, mastic, fire doors, glazing, flue, interior boiler, roofing materials, and pipe insulation.

The subject property was listed in the FINDS and ECHO databases for National pollutant Discharge Elimination System (NPDES) permits at the property for stormwater construction in 2019. This permit was terminated in 2022.

5.1.2 Findings for Adjoining and Surrounding Properties

Table 5-2 below describes properties identified in the EDR federal or state databases that are located within the ASTM E1527-21 search distances from the subject property. Table 5-2 organizes findings by the EDR Map ID number within 0.25 miles of the subject property.

As previously described in Section 2.4.3, groundwater flow at the subject property and immediate vicinity is inferred generally flow towards the north. Based on this groundwater flow direction, Mabbett was able to categorize the following properties identified in EDR databases as likely to be hydrologically upgradient, cross-gradient, or downgradient from the subject property. Contaminants released at upgradient or cross-gradient properties, and where the contaminants have reached groundwater, could have the potential to migrate in groundwater beyond the boundary of that property to reach the subject property. Contaminated groundwater that migrates beneath the subject property has the potential to impact environmental conditions.

Contaminants released to soil at upgradient or cross-gradient properties may migrate beyond the adjoining/surrounding property boundaries in sediment-laden stormwater. However, stormwater from these properties would not likely reach the subject property because of the many physical obstructions between the properties and the subject property; these obstacles include but are not limited to roads, curbs, and stormwater catch basins.

Contaminants released to groundwater at downgradient properties are assumed not to be a threat to environmental conditions at the subject property because the groundwater beneath these properties flows away from, and would not reach, the subject property.

TABLE 5-2
Records Identified in the EDR Radius Report

EDR Map ID(s)	Property Name(s) and Address	Database Listing(s)	Distance from Subject Property (feet)	Direction from Subject Property	Gradient Relative to Groundwater Flow in Area	REC? (Y/N)	Basis for REC Conclusion
3-4, 9	Texaco Station FMR 76 Summer Street	UST FINDER RELEASE, LUST, RELEASE, ENF	Adjacent	S	Upgradient	N	Temporary Solution in place that includes a portion of the subject property. No groundwater contamination found on the subject property in many years, and no contamination was encountered during the construction of the new school. This represents an HREC.
5-8	Manchester Gas and Service 96 Summer Street	UST FINDER, EDR HIST AUTO, UST, RCRA NonGen/NLR, E-MANIFEST	165 ft	E	Crossgradient	N	No reported releases.
10	AT Summer St 50 Brook Street	SHWS, RELEASE	421 ft	WSW	Upgradient	N	Release originated from 76 Summer Street; Temporary Solution in place for release.
11-12	Verizon Massachusetts 52 Summer Street	UST FINDER, LUST, UST, AST, RELEASE, TIER 2	659 ft	SSW	Upgradient		Contamination was localized; Closure achieved for this release.
13-14	Manchester Essex Regional Schools 36 Lincoln Street	E-MANIFEST, HW GEN	742 ft	NNW	Downgradient	N	No reported releases.

TABLE 5-2
Records Identified in the EDR Radius Report

EDR Map ID(s)	Property Name(s) and Address	Database Listing(s)	Distance from Subject Property (feet)	Direction from Subject Property	Gradient Relative to Groundwater Flow in Area	REC? (Y/N)	Basis for REC Conclusion
15-17	Various Owners 50 Summer Street	SHWS, LUST, RELEASE, HW GEN, TIER 2, PFAS ECHO, RCRA NonGen/NLR, US AIRS, FINDS, ECHO, E-MANIFEST	807 ft	SSW	Up-/ Crossgradient	N	Permanent Solution without Conditions submitted in 2020.
18	Mass Electric Company 20 Desmond Ave	E-MANIFEST	1,101 ft	WSW	Crossgradient	N	No reported releases.
19	Mass Electric Company Corner of School & Vine	E-MANIFEST	1,131 ft	W	Crossgradient	N	No reported releases.
20	Sacred Heart Church	LUST, RELEASE, SPILLS, ASBESTOS	1,254 ft	W	Crossgradient	N	Class A-2 RAO submitted in 1994.
21	Mass Electric Company 12 Desmond Ave	E-MANIFEST	1,261 ft	WSW	Upgradient	N	No reported releases.
22	Mass Electric Company 170 44 Summer Street	E-MANIFEST	1,266 ft	WSW	Crossgradient	N	No reported releases.

5.1.3 Aerial Photographs

Mabbett reviewed aerial photographs provided by EDR of the subject property and surrounding area. Aerial photographs were available for the years 1938, 1952, 1965, 1969, 1972, 1978, 1986, 1995, 2010, 2014, 2018, and 2023. Historical Aerial Photographs are provided in Appendix E. Certain details of the aerial photographs were difficult to ascertain due to the resolution and/or wide scale of the aerial photographs.

In the earliest aerial photograph dated 1938, the subject property was developed with a building located centrally on the property and appeared to be used for agricultural purposes. A stream was present on the northern portion of the subject property. Nearby land uses included residential dwellings, a baseball field, and a gold course.

Between 1995 and 2010, the Manchester Essex Regional Middle High School had been reconstructed to the north of the subject property. By 2010, a football field had been constructed to the west of the subject property, replacing the baseball fields. By 2014, three tennis courts had been added to the subject property.

By 2023, the subject property had been completely redeveloped with the current school building, playgrounds, and parking areas.

The review of aerial photographs did not definitively identify past uses indicating RECs in, on, or at the subject property or surrounding area.

5.1.4 Historical USGS Topographic Maps

Historical USGS topographic maps provided by EDR were available for the subject property, adjoining areas, and the surrounding area for the years 1888, 1893, 1915, 1919, 1943, 1945, 1949, 1956, 1970, 1977, 1984, 2005, 2012, 2015, 2018, and 2021. The Historical Topo Map Report is included in Appendix E.

In the earliest topographic maps dated 1888 and 1893, the subject property was depicted as undeveloped with the Sawmill/Causeway Brook on the northern portion of the property. Lincoln Street had not yet been constructed at this time. Train tracks were present to the south of the subject property.

No significant changes were noted on the subject property and in its vicinity until 1945, when a structure was depicted centrally on the subject property.

By 1956, the Memorial School and High School was depicted on the subject property. By 1970, a new High School was present to the north of the subject property. The western portion of the Memorial Elementary School had also been expanded by 1970. No other significant changes were noted in the remaining topographic maps.

The review of historical USGS topographic maps did not definitively identify past uses indicating RECs in, on, or at the subject property or surrounding area.

5.1.5 Historical City Directories

Historical City Directories provided by EDR were available for the subject property and for select addresses within the surrounding area for the years 1970, 1975, 1984, 1989, 1992, 1995, 2000, 2005, 2010, 2014, and 2022. A copy of the City Directory search is provided in Appendix E.

The subject property (43 Lincoln Street) was listed with the following occupants:

- 1970, 1975, 1984, 1989: Unlisted; Identified as a school with no street number
- 1992, 1995, 2000, 2005: Unlisted
- 2010, 2014, 2022: Memorial School

Notable nearby listings included the following:

- 96 Summer Street: Manchester Gas and Service – 2022; Baileys Service Station – 2000, 1992, 1989, 1984, 1975, 1970
- 76 Summer St: Motz Motors – 1975, 1970
- 76/77 Summer Street: Manchester Texaco – 1975, 1970

The Historical City Directory information did not definitively identify past uses indicating RECs in, on, or at the subject property or surrounding area.

5.1.6 Sanborn Fire Insurance Maps

Sanborn Fire Insurance maps were requested for the subject property from EDR but were not available for the subject property and surrounding areas. The Sanborn “Unmapped Property” document provided by EDR is provided in Appendix E.

5.1.7 Municipal Records

Mabbett requested current and historical environmentally pertinent information associated with the subject property from the Town of Manchester-by-the-Sea in September 2025. Departments contacted included the Fire Department, Town Clerk, Board of Heath, and the Building Department.

Permits available for 43 Lincoln Street included food establishment permits, road opening permits, gas permits, and building/electrical/plumbing permits from the construction of the new school in 2019. No other municipal records were readily available for review.

5.1.8 Other Historical Sources

No other readily available historical sources were available for review.

6.0 SUBSURFACE VAPOR MIGRATION

Mabbett conducted a qualitative screening for potential Vapor Encroachment Conditions (VEC) that may affect the subject property. The screening used information about the current and historical usage of the subject property available from the EDR Radius Report to evaluate Chemicals of Concern (COCs), including petroleum hydrocarbons and non-petroleum chemicals. A copy of the EDR report is provided in Appendix D.

ASTM E 2600-10 defines an area of concern (AOC) with a minimum search radius of 1,760 feet (0.3 mile) from the subject property boundary when identifying properties contaminated with non-petroleum COCs that could potentially present a vapor intrusion risk at the subject property. For sites contaminated with petroleum hydrocarbon COCs, the AOC minimum search radius is 528 feet (0.1 mile) from the subject property boundary.

Mabbett considered the nature and extent of on-site and nearby sources of potential subsurface vapor migration by evaluating the current and historical usage of the subject property, the physical setting, and the regulatory agency database information (summarized in Section 5.0). To pose a vapor encroachment risk, releases must have contaminants that have migrated to groundwater, and the groundwater must have the potential to flow beneath the subject property. Additionally, the contaminant released must have the potential to migrate upward from groundwater to soil gas and then to the atmosphere.

Neither the subject property nor hydrologically upgradient or cross-gradient properties were identified as having releases of petroleum and non-petroleum COCs meeting these criteria within proximity to the MMES building, apart from the south adjacent property addressed 76 Summer Street. However, no contaminants had been detected in on-site wells in the years prior to its redevelopment. Thus, the risk of subsurface vapor intrusion at the subject property is considered low.

7.0 INTERVIEWS

Mabbett interviewed the individuals listed in Table 7-1 for information regarding environmental conditions at the subject property. Information from the interview is incorporated throughout this Phase I ESA.

TABLE 7-1
Interviews Completed for this Phase I ESA

Role	Name	Title/Company	Years in Current Role	Interview Type
Maintenance Supervisor	Steve Hunt	Manchester Essex Schools	19+ years	User questionnaire

8.0 OTHER ENVIRONMENTAL CONDITIONS

8.1 Lead Based Paint

Lead-based paint (LBP) was commonly used prior to their ban in 1978. As such, it is possible that LBP is present on surfaces that were painted prior to 1978. No suspected LBP was observed during Mabbett's site reconnaissance.

8.2 Asbestos Containing Materials

Asbestos has historically been used in a wide range of building materials, including roofing shingles, ceiling and floor tiles, paper products, pipe insulation, asbestos cement products, and more. No suspected ACM was observed during Mabbett's site reconnaissance.

9.0 CONCLUSIONS AND RECOMMENDATIONS

Mabbett performed a Phase I ESA of the subject property at 43 Lincoln Street in Manchester-by-the-Sea, Essex County, Massachusetts in conformance with the scope and limitations of ASTM E1527-21. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report.

This Phase I ESA Report presents the results of non-intrusive environmental due diligence activities performed by Mabbett on behalf of the JCJ and the Manchester Essex Regional School District to support decision making about architectural feasibility at Essex Elementary School. The subject property for this Phase I ESA encompasses approximately 11.31 acres of land.

The Phase I ESA findings are summarized as follows:

- **Recognized Environmental Conditions (RECs)**

  No RECs were identified on or affecting the subject property.

- **Historical Recognized Environmental Conditions (HRECs)**

  The south adjacent property addressed 76 Summer Street was identified as a State Hazardous Waste Site (SHWS) under release tracking numbers (RTNs) 3-2657 in 1990 and 3-21362 in 2001 for contamination resulting from leaking underground storage tanks (LUSTs). The property was formerly used as a gas station. RTN 3-21362 was later linked to RTN 3-2657. MassDEP received a Partial Class A-2 Response Action Outcome (RAO) Statement (now referred to as a Permanent Solution) for RTN 3-21362 on June 5, 2003 for the 74 Summer Street portion of the site. The remainder of the site was closed under a Class C RAO (now called a Temporary Solution).

  The subject property was historically mapped within the groundwater contaminant plume at this release site. As many as 18 groundwater monitoring wells were historically installed at this property that were destroyed during the redevelopment of the subject property in 2019. No petroleum constituents had been detected in the subject property wells since the late 1990s. As such, the historical presence of this contaminant plume on the subject property represents an HREC.

- **Controlled Recognized Environmental Conditions (CRECs)**

  No CRECs were identified on or affecting the subject property.

- **Data Gaps**

  No significant data gaps were identified during this Phase I ESA.

- **Business Environmental Risks (BERs)**

  No BERs were identified on or affecting the subject property.

10.0 REFERENCES

ASTM E1527-21 - Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

EDR Aerial Photo Decade Package, September 22, 2025, Inquiry 8116131.8.

EDR Certified Sanborn Map Report, September 23, 2025, Inquiry 8116131.3.

EDR City Directory Image Report, September 24, 2025, Inquiry 81161315.

EDR Historical Topo Map Report, September 22, 2025, Inquiry 8116131.4.

EDR Radius Map Report with GeoCheck, September 22, 2025, Inquiry 8116131.2s.

Environmental Working Group (EWG), 2023. PFAS Contamination in the U.S. map application. Accessed at https://www.ewg.org/interactive-maps/pfas_contamination/map/, on October 6, 2025.

FEMA, Flood Map Service Center, FIRMette Tool, accessed at https://msc.fema.gov/portal/search, October 6, 2025.

MassDEP EEA Data Portal, https://eeaonline.eea.state.ma.us/portal#!/home.

Northeastern University, *PFAS Sites and Community Resources*, accessed at https://experience.arcgis.com/experience/12412ab41b3141598e0bb48523a7c940/page/Page-1/?views=Presumptive-Contamination, on October 6, 2025.

United States Department of Fish and Wildlife, 2018. Wetlands Mapper, accessed at https://www.fws.gov/wetlands/data/mapper.html, on October 6, 2025.

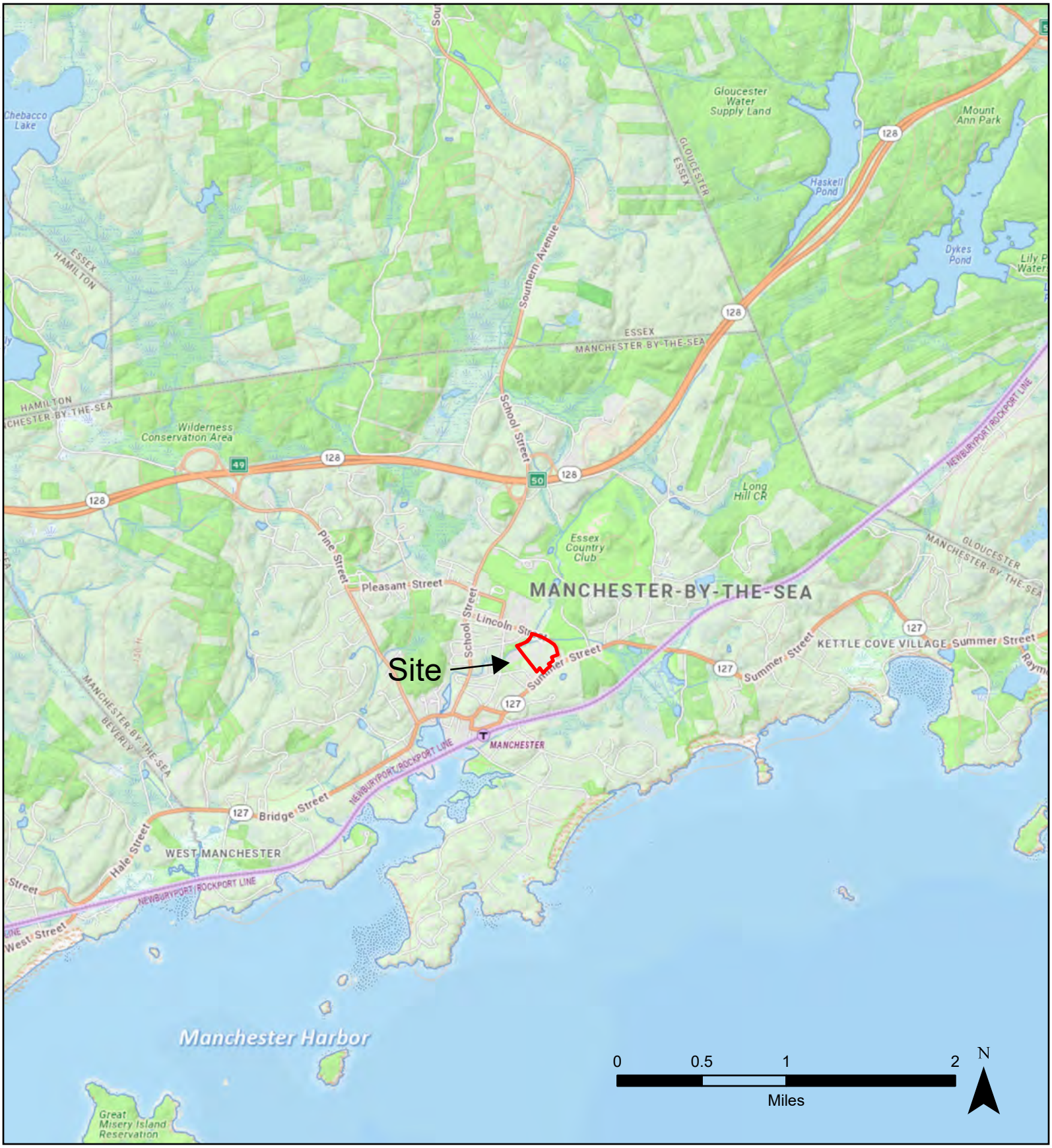
USEPA, accessed at https://awsedap.epa.gov/public/extensions/PFAS_Tools/PFAS_Tools.html, on October 6, 2025.

USGS Interactive Bedrock Map of the United States, accessed at https://mrdata.usgs.gov/geology/state/state.php?state=CA, on October 6, 2025.

USGS, 7.5 Minute Topographic Map, Brockton Quadrangle, accessed at https://store.usgs.gov/map-locator, on October 1, 2025.

FIGURES

C:\Users\EliBDining\Mabbett & Associates, Inc. (GCC)\Mabbett - Projects\Working Files\Design Documents\GIS\2025131.001\2025131.001.004.aprx



Mabbett
Scientists | Engineers | Program Managers
105 Central Street, Suite 4100
Stoneham, MA 02180
T. (781) 275-6050
www.mabbett.com
©2025 Mabbett & Associates. Inc.

SITE LOCUS

MANCHESTER MEMORIAL ELEMENTARY SCHOOL
43 LINCOLN STREET
MANCHESTER, MA 01944

FIGURE 1-1

Drawn By: EBD	Approved By: CEW
Projection: NAD 1983 StatePlane Massachusetts FIPS 2001 (Meters)	
Project Number: R2025131.001.004	Date: 9/22/2025

C:\Users\EliBDining\Mabbett & Associates, Inc. (GCC)\Mabbett - Projects\Working Files\Design



Mabbett
Scientists | Engineers | Program Managers
105 Central Street, Suite 4100
Stoneham, MA 02180
T. (781) 275-6050
www.mabbett.com
©2025 Mabbett & Associates. Inc.

SITE LAYOUT

MANCHESTER MEMORIAL ELEMENTARY SCHOOL
43 LINCOLN STREET
MANCHESTER, MA 01944

FIGURE 1-2

Drawn By: EBD	Approved By: CEW
Projection: NAD 1983 StatePlane Massachusetts FIPS 2001 (Meters)	
Project Number: R2025131.001.004	Date: 10/21/2025

Notes:
MassGIS

APPENDIX A

SUPPORTING DOCUMENTS

47	0	6	1 of 1	COMMERCIAL	Total Card / Total Parcel
Map	Block	Lot	CARD	***Town of ManchesterByT***	APPRAISED: 25,712,400/ 25,712,400
					USE VALUE: 25,712,400/ 25,712,400
					ASSESSED: 25,712,400/ 25,712,400

PROPERTY LOCATION

No	Alt No	Direction/Street/City
43		LINCOLN ST, MANCHESTER

OWNERSHIP

Unit #:

Owner 1:	MANCHESTER MEMORIAL SCHOOL
Owner 2:	
Owner 3:	
Street 1:	43 SCHOOL ST
Street 2:	
Twn/City:	MANCHESTER
St/Prov:	MA
Cntry:	
Own Occ:	N
Postal:	01944
Type:	

PREVIOUS OWNER

Owner 1:	
Owner 2:	
Street 1:	
Twn/City:	
St/Prov:	
Cntry:	
Postal:	

NARRATIVE DESCRIPTION

This parcel contains 11.313 ACRES of land mainly classified as IMPROVD EDU with a SCHOOL Building built about 2019, having primarily BRICK VENR Exterior and 91450 Square Feet, with 1 Unit, 0 Bath, 0 3/4 Bath, 20 HalfBaths, 0 Rooms, and 0 Bdrm.

OTHER ASSESSMENTS

Code	Descrip/No	Amount	Com. Int

IN PROCESS APPRAISAL SUMMARY

Use Code	Land Size	Building Value	Yard Items	Land Value	Total Value
934	11.313	22,651,000	92,000	2,969,400	25,712,400
Total Card	11.313	22,651,000	92,000	2,969,400	25,712,400
Total Parcel	11.313	22,651,000	92,000	2,969,400	25,712,400

Source: Market Adj Cost | Total Value per SQ unit /Card: 281.16 | /Parcel: 281.16

Legal Description

User Acct

GIS Ref

GIS Ref

Insp Date 06/24/22

Entered Lot Size

Total Land:

Land Unit Type:

Parcel ID 47 0 6

!1623!

PREVIOUS ASSESSMENT

Tax Yr	Use	Cat	Bldg Value	Yrd Items	Land Size	Land Value	Total Value	Asses'd Value	Notes	Date
2025	934	FV	19,797,200	89500	11.313	2,826,700	22,713,400		Year end	12/27/2024
2024	934	FV	17,720,300	89500	11.313	2,726,000	20,535,800		Year end	12/27/2023
2023	934	FV	17,027,900	89500	11.313	2,433,700	19,551,100		Year End Roll	12/19/2022
2022	934	FV	12,770,100	89500	11.313	2,270,400	15,130,000		Year End	12/28/2021
2021	934	FV	6,668,900	89500	11.313	2,188,700	8,947,100	8,947,100	Year End Roll	1/6/2021
2020	934	FV	4,963,700	90000	11.313	2,107,000	7,160,700		Year End Roll	12/18/2019
2019	934	FV	4,736,000	88500	11.313	2,107,000	6,931,500		Year End Roll	12/4/2018
2018	934	FV	4,736,000	88500	11.313	2,107,000	6,931,500		Year End Roll	12/14/2017

PRINT

Date	Time
09/24/25	14:22:45

LAST REV

Date	Time
07/26/22	13:48:25
apro	
1623	

SALES INFORMATION

TAX DISTRICT

PAT ACCT.

Grantor	Legal Ref	Type	Date	Sale Code	Sale Price	V	Tst	Verif	Notes
MANCHESTER MEMO	3507-137/138		2/5/1947	INVOLV CHARI	18,000	No	No		

USER DEFINED

Prior Id # 1:	
Prior Id # 2:	
Prior Id # 3:	
Prior Id # 1:	
Prior Id # 2:	
Prior Id # 3:	
Prior Id # 1:	
Prior Id # 2:	
Prior Id # 3:	
ASR Map:	
Fact Dist:	
Reval Dist:	
Year:	
LandReason:	
BldReason:	
CivilDistrict:	
Ratio:	

PROPERTY FACTORS

Item	Code	Description	%	Item	Code	Description
Z	G	G	100	water		
o				Sewer		
n				Electri		
Census:				Exmpt		
Flood Haz:						
D				Topo		
s				Street		
t				Gas:		

BUILDING PERMITS

Date	Number	Descrip	Amount	C/O	Last Visit	Fed Code	F. Descrip	Comment
2/24/2021	B-21-40		1,500	C				Hanging of Exhaust
2/14/2020	B-20-25			C				New Sheet Metal in
10/29/2019	B-19-255	NEW CONS	40,000,000	C				FULL CONSTRUCTION
9/26/2019	B-19-224		40,000,000	C				Full construction
9/26/2019	B-19-225		40,000,000	C				Full construction
7/22/2019	B-19-143	FOUNDATI	9,500,000	C				This scope of work
6/13/2019	B-19-142		9,500,000	C				This scope of work
6/11/2019	B-19-90	DEMOL	2,200,000	C				The scope of this
4/25/2019	B-19-89		2,200,000	C				The scope of this
8/18/2011	5748	RENOVATE	20,000	C				10` HIGH FENCE ARO

ACTIVITY INFORMATION

Date	Result	By	Name
6/24/2022	PERMIT VISIT	450	PETER K
8/2/2012	PERMIT VISIT	197	MIKE C
6/28/2011	PERMIT VISIT	197	MIKE C
5/17/2008	MEAS+INSPCTD	600	GINNY
6/30/2000	INSPECTED	600	GINNY
3/22/1979	MEASURED	999	CONVERSION

Sign: __/__/__

LAND SECTION (First 7 lines only)

Use Code	Description	LUC Fact	No of Units	Depth / PriceUnits	Unit Type	Land Type	LT Factor	Base Value	Unit Price	Adj	Neigh	Neigh Influ	Neigh Mod	Infl 1	%	Infl 2	%	Infl 3	%	Appraised Value	Alt Class	%	Spec Land	J Code	Fact	Use Value	Notes
934	IMPROVD EC		217800		SQUARE FE	SITE		0	14.7	0.75	EG			USE	50					2,401,245						2,401,200	
934	IMPROVD EC		6.313		ACRES	EXCESS		0	60,000.	1.50	EG			USE	50					568,170						568,200	

Total AC/HA:	11.31300	Total SF/SM:	492794	Parcel LUC:	934	IMPROVD EDU	Prime NB Desc	EARLY GD	Total:	2,969,415	Spl Credit		Total:	2,969,400

Disclaimer: This Information is believed to be correct but is subject to change and is not warranteed. Database: AssessPro - Manchester Terri123

EXTERIOR INFORMATION

Type:	58 - SCHOOL		
Sty Ht:	1 - 1		
(Liv) Units:	1	Total:	1
Foundation:	1 - CONCRETE		
Frame:	3 - CONCRETE		
Prime Wall:	8 - BRICK VENR		
Sec Wall:		%	
Roof Struct:	1 - GABLE		
Roof Cover:	11 - MEMBRANE		
Color:			
View / Desir:			

GENERAL INFORMATION

Grade:	A+ - EXCELLENT		
Year Blt:	2019	Eff Yr Blt:	
Alt LUC:		Alt %:	
Jurisdict:		Fact:	
Const Mod:			
Lump Sum Adj:			

INTERIOR INFORMATION

Avg Ht/FL:	STD		
Prim Int Wal	1 - DRYWALL		
Sec Int Wall:		%	
Partition:	T - TYPICAL		
Prim Floors:	5 - LINO/VINYL		
Sec Floors:		%	
Bsmnt Flr:			
Subfloor:			
Bsmnt Gar:			
Electric:	3 - TYPICAL		
Insulation:	2 - TYPICAL		
Int vs Ext:	S		
Heat Fuel:	2 - GAS		
Heat Type:	1 - FORCED H/A		
# Heat Sys:	1		
% Heated:	100	% AC:	100
Solar HW:	NO	Central Vac:	NO
% Com Wal	0	% Sprinkled	100

BATH FEATURES

Full Bath		Rating:	
A Bath:		Rating:	
3/4 Bath:		Rating:	
A 3QBth		Rating:	
1/2 Bath:	20	Rating:	GOOD
A HBth:		Rating:	
OthrFix:	10	Rating:	GOOD

OTHER FEATURES

Kits:	1	Rating:	GOOD
A Kits:		Rating:	
Frpl:		Rating:	
WSFlue:		Rating:	

CONDO INFORMATION

Location:	
Total Units:	
Floor:	1 - 1ST FLOOR
% Own:	
Name:	

DEPRECIATION

Phys Cond:	VG - Very Good	3.1	%
Functional:			%
Economic:			%
Special:			%
Override:			%
	Total:	3.1	%

CALC SUMMARY

Basic $ / SQ:	165.00
Size Adj.:	0.80874795
Const Adj.:	1.02928519
Adj $ / SQ:	137.351
Other Features:	226738
Grade Factor:	1.83
NBHD Inf:	1.00000000
NBHD Mod:	
LUC Factor:	1.00
Adj Total:	23375652
Depreciation:	724645
Depreciated Total:	22651007

COMMENTS

OCCUPANCY CERTIFICATES ISSUED 8/31/2021
B-21-40 & B-19-224. LEASE AGREEMENT
8/16/2004 BK 23261 PG 481.

RESIDENTIAL GRID

1st Res Grid	Desc:										# Units		
Level	FY	LR	DR	D	K	FR	RR	BR	FB	HB	L		O
Other													
Upper													
Lvl 2													
Lvl 1													
Lower													

Totals	RMs:	BRs:	Baths:	HB 20

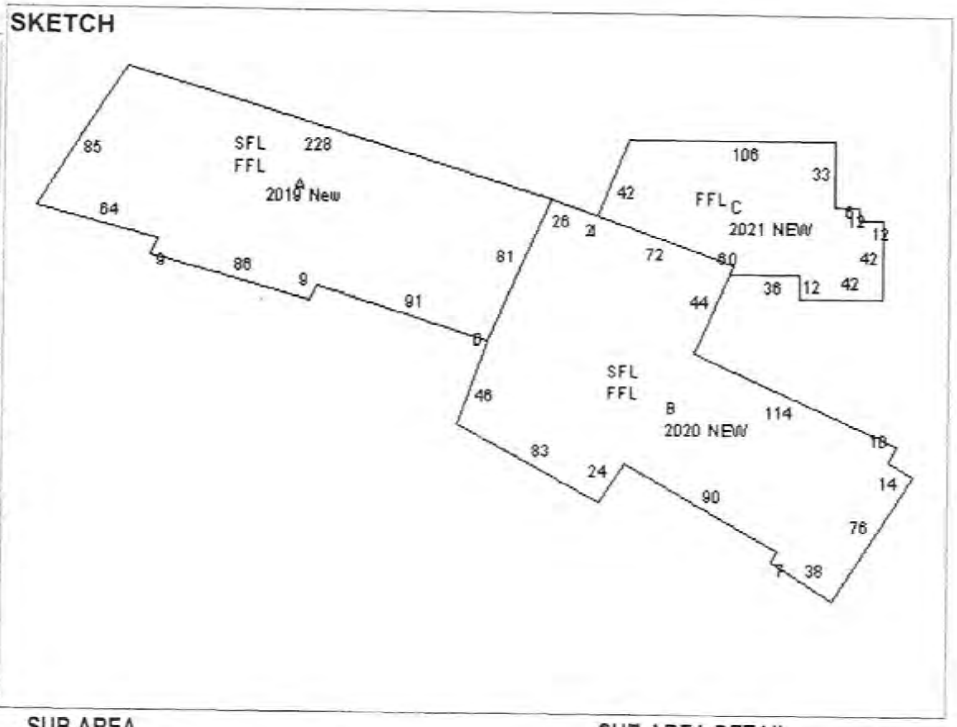
REMODELING

Exterior:	
Interior:	
Additions:	
Kitchen:	
Baths:	
Plumbing:	
Electric:	
Heating:	
General:	

RES BREAKDOWN

No Unit	RMS	BRS	FL
Totals			

SKETCH



SUB AREA

Code	Description	Area - SQ	Rate - AV	Undepr Value
FFL	1ST FLOOR	49,811	137.350	6,841,623
SFL	2ND FLOOR	41,639	137.350	5,719,195

SUB AREA DETAIL

Sub Area	% Usbl	Descrip	% Type	Qu	# Ten

COMPARABLE SALES

Rate	Parcel ID	Typ	Date	Sale Price

WtAv$/SQ:		AvRate:	Ind.Val
Juris. Factor:		Before Depr:	251.08
Special Features:	0	Val/Su Net:	247.69
Final Total:	22651000	Val/Su SzAd	247.69

Net Sketched Area:	91,450		Total:	12,560,818	
Size Ad	91450.290	Gross Area	91450	FinArea	91450

MOBILE HOME

Make:		Model:		Serial #		Year:		Color:	

SPEC FEATURES/YARD ITEMS

PARCEL ID 47 0 6

Code	Description	A	Y/S	Qty	Size/Dim	Qual	Con	Year	Unit Price	D/S	Dep	LUC	Fact	NB	Fa	Appr Value	JCod	JFact	Juris. Value
85	PAVING	D	Y	1	25000	A	AV	1967	2.21	T	40.8	934				32,700			32,700
27	TENNIS C	D	Y	3	1	A	AV	2011	20,000.00	T	11.2	934				53,300			53,300
90	FENCE-10	D	Y	1	216	A	AV	2011	20.00	T	11.2	934				3,600			3,800
88	FENCE-6	D	Y	1	216	A	AV	2011	11.50	T	11.2	934				2,200			2,200

IMAGE

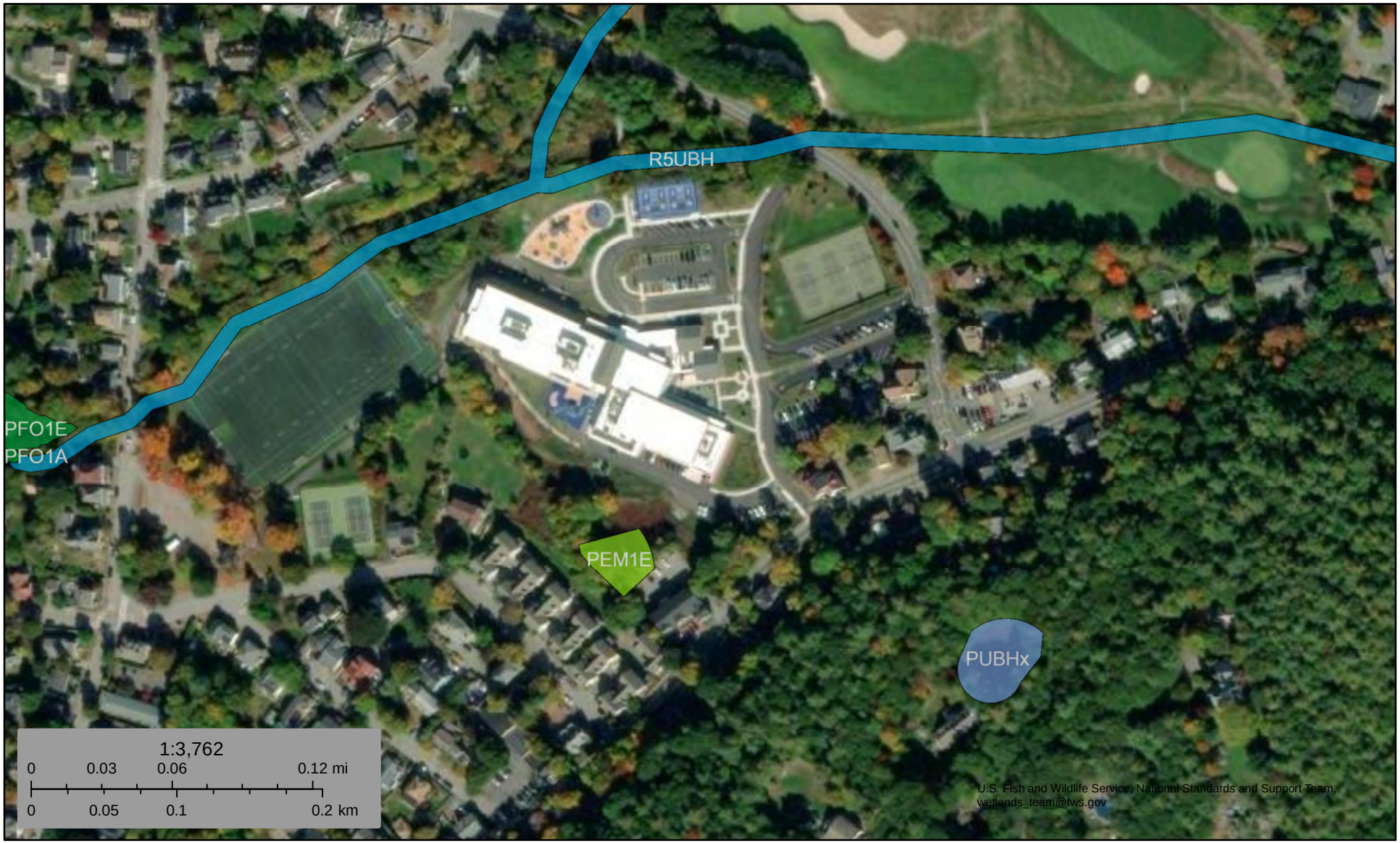
AssessPro Patriot Properties, Inc



More:	N	Total Yard Items:	92,000	Total Special Features:		Total:	92,000

U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands



October 6, 2025

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Flood Hazard Layer FIRMette

FEMA

70°46'9"W 42°34'58"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

70°45'32"W 42°34'32"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/6/2025 at 3:46 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

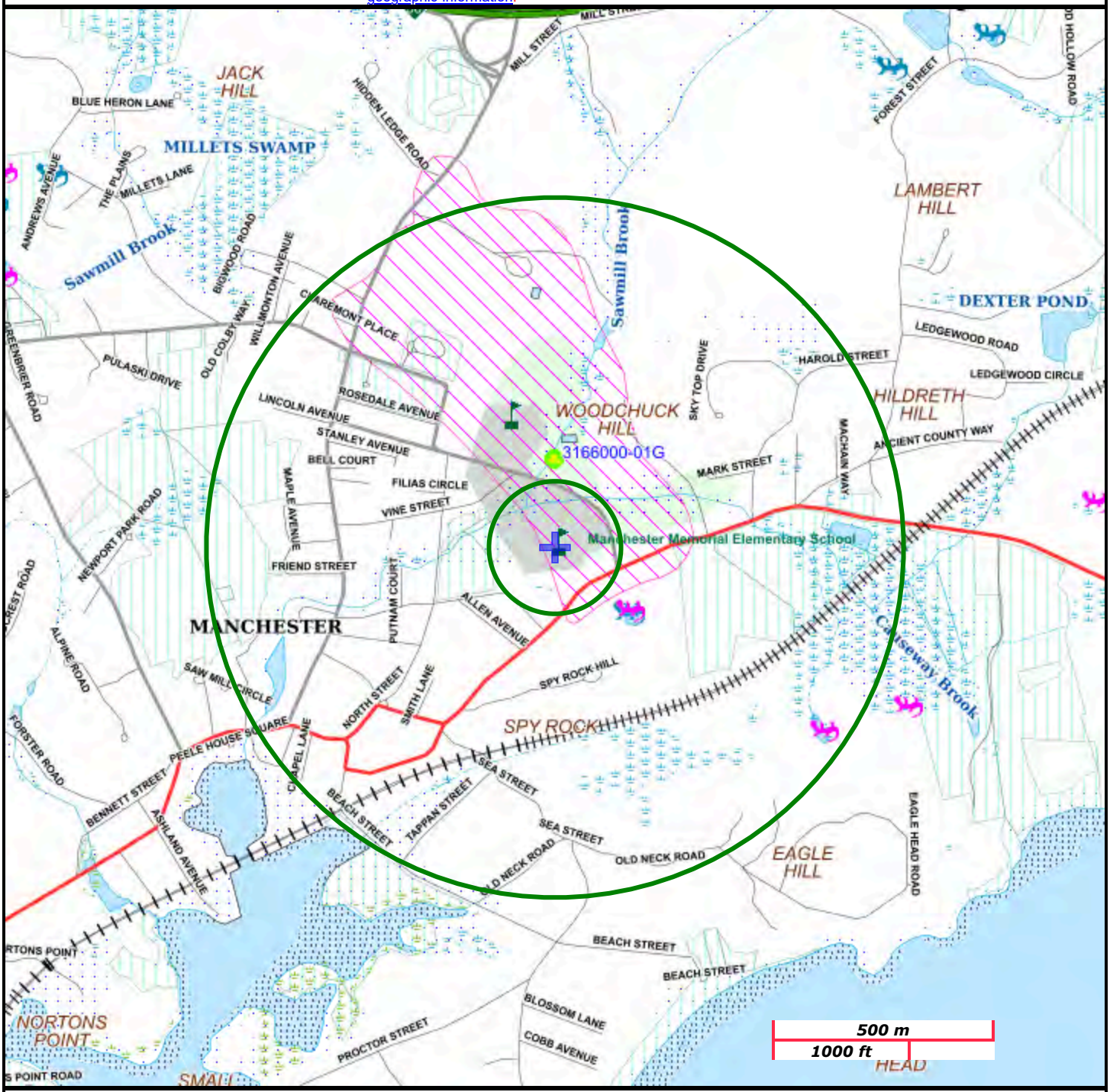
Site Information:

43 LINCOLN ST MANCHESTER, MA

NAD83 UTM Meters:
4715578mN , 355220mE (Zone: 19)
October 6, 2025

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: https://www.mass.gov/orgs/massgis-bureau-of-geographic-information.

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

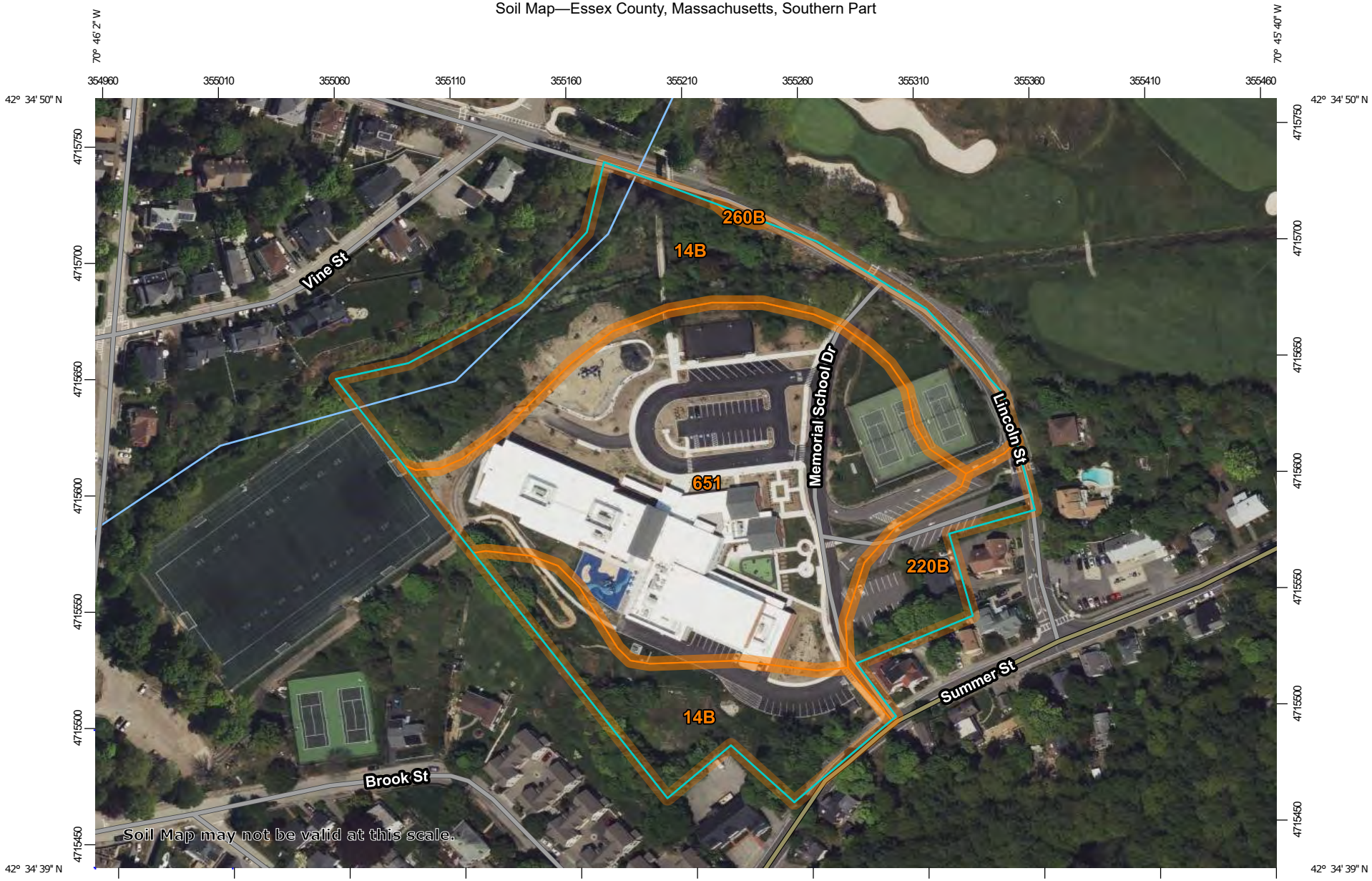
Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

NHESP Pri-Hab of Rare Species; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.



Map Scale: 1:2,330 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 30 60 120 180

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Essex County, Massachusetts, Southern Part
Survey Area Data: Version 22, Sep 8, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 22, 2022—Jun 5, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
14B	Scitico silt loam, 0 to 5 percent slopes	4.9	42.3%
220B	Boxford silt loam, 3 to 8 percent slopes	0.8	7.1%
260B	Sudbury fine sandy loam, 3 to 8 percent slopes	0.0	0.1%
651	Udorthents, smoothed	5.8	50.6%
Totals for Area of Interest		**11.5**	**100.0%**

CDW CONSULTANTS, INC.
CIVIL & ENVIRONMENTAL ENGINEERS

PHASE I ENVIRONMENTAL SITE ASSESSMENT
(ASTM E 1527-13)

Manchester Memorial Elementary
43 Lincoln Street
Manchester by the Sea, Massachusetts

October 2017

Prepared for:

JCJ Architects
One State Street, Suite 900
Boston, MA 02109

CDW Project #1587.00

6 Huron Drive, Natick, MA 01760 508-875-2657 FAX 508-875-6617
www.cdwconsultants.com

TABLE OF CONTENTS

I EXECUTIVE SUMMARY 1
II SITE DESCRIPTION 3
III USER-PROVIDED INFORMATION 4
IV SITE RECONNAISSANCE 5
1.0 General Exterior Observations 5
2.0 General Interior Observations of Building 5
3.0 Observations by Focus Area 6
4.0 Records Review 8
4.1 Standard Environmental Record Sources 8
4.1 Federal CERCLIS List 9
4.2 State-and tribal-equivalent- CERCLIS 9
4.3 State and tribal leaking storage tank lists 10
4.4 State and tribal registered storage tank lists 11
4.5 State and tribal institutional control / engineering control registries 12
4.6 EDR High Risk Historical Records 12
4.7 Other Databases 13
4.8 Additional Environmental Record Sources 15
4.8.1 Town of Manchester by the Sea Fire Department 15
4.8.2 Town of Manchester by the Sea Water and Sewer 15
4.8.3 Massachusetts Department of Environmental Protection 16
4.9 Physical Setting Sources 16
4.10 Other Historical Use Information 16
V FINDINGS 18
VI CONCLUSIONS 19
VII LIMITATIONS 21
1.1 Purpose 21
1.2 Detailed Scope of Services 22
1.3 Significant Assumptions 22
1.4 Limitations and Exceptions 22
1.5 Special Terms and Conditions 23
1.6 User Reliance 23
VIII REFERENCES 24

IX SIGNATURE AND QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL..... 25

FIGURES

Figure 1: Site Location Map
Figure 2: Massachusetts 21E Map
Figure 3: Priority Resource Areas Map
Figure 4: Hydrography Map
Figure 5: FEMA Map
Figure 6: Open Space Map
Figure 7: Natural Heritage Atlas Map

APPENDICES

Appendix A: User Questionnaire
Appendix B: UST Removal Documentation
Appendix C: Environmental Database Report Executive Summary
Appendix D: Sanborn Maps
Appendix E: Aerial Photos

I EXECUTIVE SUMMARY

CDW Consultants, Inc. (CDW) conducted an investigation of the Manchester Memorial Elementary School located at 43 Lincoln Street, Manchester by the Sea, Massachusetts (the Site; Figure 1). The Site includes 11.31 acres of land. The Site contains one main 66,573 square foot school building constructed in the 1951 with two additions, one in 1954 and 1965. The site is owned by the Town of Manchester by the Sea, and is listed as Book 3507-137, Page 138.

The Site investigation was conducted in September 2017 in accordance with the ASTM International (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E1527-13) and the Massachusetts General Laws (MGL) Part I, Title II, Chapter 21E: Massachusetts Oil and Hazardous Material Release Prevention and Response Act.

CDW personnel performed a Site reconnaissance to conduct a general visual inspection of the Site, observe the interior of the Site building, and document existing and observable uses of the Site and adjacent properties.

The investigation conducted by CDW personnel included a review of available federal, state, and local environmental agency records to identify the presence or likely presence of Recognized Environmental Conditions (RECs), Historical Recognized Environmental Condition (HRECs) and Controlled Recognized Environmental Condition (CRECs).

No CRECs were identified during the assessment. RECs and HRECs were identified during the assessment. They were:

- Potential contamination from the two 10,000-gallon fuel oil underground storage tanks removed in 1991. This represents a HREC.
- Potential Contamination from the old transformer removed from the electric room in the basement. It is unknown if polychlorinated biphenyls (PCBs) were in the transformer fluids. This represents a HREC.
- Potential contamination from the exterior pad mounted transformer. It is unknown if PCBs are in the transformer fluids.
- Potential dumping of ash from incinerator.
- Potential asbestos debris within the dirt floor portion of the crawlspace.

An asbestos survey was beyond the scope of this Phase 1 assessment. Due to the dates of construction, asbestos containing materials (ACM) may be located on the property. Suspect ACM

observed within the building included flooring, mastics, interior window glazing, pipe insulation, door caulk and window caulk. It is recommended that an ACM sampling and abatement plan be implemented prior to demolition, renovation or construction activities at the subject property.

II SITE DESCRIPTION

CDW conducted an investigation of the Manchester Memorial Elementary School located at 43 Lincoln Street, Manchester by the Sea, Massachusetts (the Site; Figure 1). The property is currently occupied by the Manchester Memorial Elementary School. The Site contains one main 66,573 square foot school building constructed in the 1951 with two additions, one in 1954 and 1965. The site is owned by the Town of Manchester by the Sea, and is listed as Book 3507-137, Page 138.

The Site is defined as the land and improvements within property boundaries, including the Site building. The Site building is connected to municipal water and sewer. The Site building is heated with natural gas. The Site is bound by athletic fields and causeway brook aqueduct to the north, Summer Street to the south with residential properties beyond, Lincoln Street to the east, and north and to the west by residential properties.

CDW personnel performed a Site reconnaissance to observe the interior of the existing building, conduct a visual inspection of the Site, and document existing and observable land uses of the Site and adjacent properties. The Site is located on the United States Geological Survey (USGS) Marblehead North 2012 Quadrangle Map at the following approximate location and elevation:

Universal Transverse Mercator (UTM) Zone 19 Coordinates	
4715387.5	UTM Y (Meters)
4715387.5	UTM X (Meters)
Latitude/Longitude	
42.5792560 - 42° 34’ 45.32’’	Latitude (North)
70.7642750 - 70° 55’ 51.39’’	Longitude (West)
Elevation	
32	Feet above sea level

III USER-PROVIDED INFORMATION

Mr. Jay Pagliarulo, Facilities Manager, provided the following information in a questionnaire (Appendix A).

- Mr. Pagliarulo reported no knowledge of contaminated fill bought to the site.
- Mr. Pagliarulo reported no knowledge of hazardous substances, petroleum products, or other chemicals dumped at the property.
- Mr. Pagliarulo reported that there is a nearby property that is used a gas station, known as Manchester Gas and Service Station, that had a spill in 1990. The spill attained regulatory closure with a response action outcome (RAO).
- Mr. Pagliarulo reported no knowledge of past or current spills or releases that have taken occurred at the property.
- Mr. Pagliarulo reported no knowledge of recorded environmental cleanup liens or violations that have occurred at the property.
- Mr. Pagliarulo reported no knowledge of contaminated fill being used at the Site.
- Mr. Pagliarulo reported no knowledge of pits, ponds or lagoons for waste treatment at the Site, nor any hazardous waste/landfill disposal.
- Mr. Pagliarulo reported no knowledge of Activity and Use Limitations on the Site.
- Mr. Pagliarulo reported that an oil storage tank was removed when the school converted from oil fired to natural gas fired boilers in 1991.
- Mr. Pagliarulo reported that there are ACM materials at the Site and are managed under an Asbestos Hazardous Emergency Response Action (AHERA) Management Plan.

IV SITE RECONNAISSANCE

On August 28, 2017, Susan Cahalan of CDW performed a walking inspection of the Site. CDW was provided access by the head custodian. The weather conditions were warm (80s (F)) and clear at the time of the Site inspection. Access was provided to about 90% of the Site building.

1.0 General Exterior Observations

The Site Building is a school with exterior brick and block masonry (original building) and brick veneer on block (additions) and are in good condition. Roofing is constructed out of single-ply fully adhered membrane with rigid insulation. Painted wood-framed window walls at the building are single glazed and in fair to poor condition with peeling paint.

The Site building is surrounded by paved parking areas, tennis court and play fields. Mature and young trees are located adjacent to the school. Gardens and shrubs are in the front and courtyard. A small portion of the school's north side parking lot is within Zone One for Saw Mill Brook, a water supply for Manchester by the Sea. The Memorial School is connected to the Manchester Essex Regional Middle High School by a footbridge and there are two recently constructed secondary school athletics facilities (outdoor tennis courts and a turf field) surrounding the elementary school to the east and west, respectively.

Gas, water, sewer and communications manholes are located around the Site building. Two solid waste dumpsters and one pad mounted transformer are located outside of the kitchen area. The transformer does not contain a no-PCB sticker.

No evidence of suspect waste disposal pits, waste lagoons or ASTs was observed during the Site inspection. The vegetation, appeared healthy and did not appear stressed.

2.0 General Interior Observations of Building

The basement consists of a janitorial storage room, boiler room, transformer room, fire suppression room, and heating ventilation air conditioning (HVAC) mechanical room. The janitorial storage room contains fluorescent light tubes and cleaning products. All of these items were properly stored. The crawlspace contains several pipe runs, covered with ACM insulation. The crawlspace is primarily used for storage of old school supplies and desks etc. The school has two gas-fired, hot water boilers that are approximately 25 years old. The units were converted from an original oil and steam system.

The boiler room also contains a groundwater sump pump, hot water heaters, expansion tanks and an incinerator in the chimney. Off the boiler room are HVAC units constructed of newer aluminum with rubber flex connectors. The pipes in the HVAC room are insulated with fiberglass. The electrical

room formally contained an original transformer which has since been removed. There is a small generator room with an older generator with battery backups. There was no sheen or odor from the water in the sump pump or no staining around the condensate drains on the day of inspection.

The main floor contains 26 classrooms, administrative offices, nurse's office, cafeteria, kitchen, auditorium, library and gym. There are no science laboratories. The floors are concrete slab-on grade and reinforced framed slab above crawl spaces. Flooring finishes are vinyl composition tile in corridors, classrooms and cafeteria, wood flooring in gym, ceramic tiles in bathrooms, quarry tile in lobby, terrazzo in Side C corridors and bathrooms. Walls are primarily painted concrete block. Glazed block is located in some bathrooms and corridors. Ceilings consist of exposed Tectum panel deck in gym, and curvilinear wood ceiling in Auditorium. The corridors, lobby and cafeteria have 2x2 acoustic tile ceilings. Most staff areas, side C classrooms and sloped roof decks of side A and B have 1x1 acoustic tile ceilings. Tiles in main entrance and lobby and splined acoustical ceiling.

3.0 Observations by Focus Area

Petroleum Products
There are no underground storage tanks (USTs) or above ground storage tanks (ASTs) in use at the Site. Natural gas supplies the building for the kitchens and boilers.

Hazardous Materials
Cleaning supplies are properly stored in the boiler room, kitchen and janitorial closets. Also, present but not directly observed are refrigerants for kitchens, water fountains, and HVAC systems.

Drums or Containers
There are no indications of other drums or containers of oil or hazardous materials located on the subject property.

Underground Storage Tanks/Aboveground Storage Tanks
At the date of this report there are no active USTs or ASTs. Two 10,000-gallon #2 fuel oil UST were removed on July 23, 1991. A copy of the Fire Department documentation is provided in Appendix B.

Intermodal Shipping Containers
There were no current indications of intermodal shipping containers at the subject property.

Indications of Polychlorinated Biphenyls
PCBs are a chemical component of many dielectric fluids, heat transfer fluids, hydraulic fluids, lubricating oils, paints, or coatings manufactured prior to 1979. It is not known if PCBs are associated with the transformer. PCB light ballasts were not directly observed, but may be located above ceilings in some areas.

Pits, Ponds & Lagoons
No evidence of waste pits, ponds and/or lagoons were noted on the subject property.

Odors
No significant odors were noted on the subject property.

Stained Soil or Pavement
No evidence of significantly stained soil or pavement was noted on the subject property.

Pools of Liquid
No unidentified pools of liquid were noted on the subject property.

Stressed Vegetation
No evidence of stressed vegetation, anticipated to be caused by contamination was noted on the subject property.

Solid Waste Disposal
No solid waste concerns were noted on the subject property.

Medical/biological wastes/X-ray or other radioactive activities
No medical or biological wastes were observed.

Drains and Sumps
There are several storm drain catch basins noted around the subject property. According to the Town of Manchester, catch basins discharge to a 12-inch line located in Lincoln and Summer Streets and discharge to Manchester Harbor. A sump pit for groundwater is located in the boiler room, which discharge into the subsurface. It is unknown if the discharge is tied into the drain line, however.

Septic Systems
No septic systems are in use on the subject property. The property is currently serviced by the Town of Manchester sewer system. An 8-inch diameter sewer main runs through the north side of the property.

Storm/Waste Water
Wastewater generated at the Site is limited to sinks and toilets and is disposed of via the municipal sewer system. Stormwater drainage is directed to the on-site catch basins.

Wells
No evidence of drinking water wells or dry wells was noted on the subject property.

4.0 Records Review

4.1 Standard Environmental Record Sources

Relevant, readily available and practically reviewable documents, records, and other information were obtained and reviewed as part of this Phase I ESA. This chapter provides a list of sources of information and supporting documents.

Federal Source Records and Information

- Environmental Data Resources (EDR), Inc. federal environmental record databases search report prepared for CDW. The EDR Executive Summary is provided in Appendix C.
- U.S. Geological Survey (USGS), Topographic Map of Marblehead North, Massachusetts, 7.5-minute series quadrangle

Commonwealth of Massachusetts Source Records and Information

- EDR, Inc. state environmental record databases search report prepared for CDW
- Records maintained by the Massachusetts Department of Environmental Protection; online database accessed at http://mass.gov/edep

Local (County and Municipal) Records and Information

- Assessor's parcel information
- Town of Manchester by the Sea Fire Prevention Division
- Town of Manchester by the Sea Board of Health
- Historical aerial photographs of the subject property and vicinity obtained from EDR, Inc.
- Historical Sanborn Fire Insurance maps of the subject property and vicinity researched by EDR Inc.

CDW engaged EDR, Inc. to scan both federal and state environmental record databases and provide a summary of facilities that are identified on any of the lists searched are as follows:

List	Standard Search Radius (Miles)
Federal National Priority List (NPL)	1.0
Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List	0.5
CERCLIS No Further Remedial Action Planned (NFRAP) List	0.5
Resource Conservation and Recovery Act (RCRA) Corrective Action Sites (CORRACTS)	0.5
RCRA Non-CORRACTS	0.5
RCRA Generators	0.25
State-Equivalent NPL	1.0
State Landfill and/or Solid Waste Disposal Site Lists	0.5
State Leaking Underground Storage Tank (UST) Lists	0.5
State Registered UST Lists	0.25

4.1 Federal CERCLIS List

Superfund or Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is a United States federal law designed to clean up sites contaminated with hazardous substances as well as broadly defined as pollutants or contaminants. There are no CERCLIS sites located within 0.5 miles of the Site.

4.2 State-and tribal-equivalent- CERCLIS

State/Tribal Sites are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund or NPL) are identified along with sites where cleanup will be paid for by potentially responsible parties. Four (4) State hazardous waste sites were identified within ½ miles of the Site. Information regarding hazardous waste sites, including associated Massachusetts Department of Environmental Protection (MassDEP) release tracking numbers (RTNs), is summarized below:

Name	Address	RTN/Status	Dist. (mi)/ Direction	Relative Elevation
Summer Street	50 Brook Street	3-0014131/DPS	0.101/SSW	Higher
Manchester Number 23 Substation	23 Summer Street	3-0031289/TIERII	0.0357/SSW	Lower

Name	Address	RTN/Status	Dist. (mi)/ Direction	Relative Elevation
Seabreeze Variety	8 Beach Street	3-0028168/RAO	0.422/SW	Lower
Town Hall Parking Lot	10 Central Street	3-0033184/TIERII	0.500/SW	Lower

- RAO (Response Action Outcome): A site/release where an RAO Statement was submitted to achieve regulatory closure. An RAO Statement asserts that response actions were sufficient to achieve a level of no significant risk or at least ensure that all substantial hazards were eliminated.
- RAONR: Response Action Outcome Not Required
- DPS (Downgradient Property Status): A site where a DPS Submittal to DEP has stated that contamination on the property is coming from an upgradient property.
- TIER 2: Site has been classified as Tier 2

Based on regulatory status and/or gradient from the Site, none of the above listed sites are considered a REC for the Site.

4.3 State and tribal leaking storage tank lists

The Leaking Aboveground Storage Tank (LAST) database is a list of confirmed or suspected releases from aboveground storage tanks that have been reported to the state. The state AST database is an inventory of all regulated ASTs. There is one (1) LAST located within a 0.5-miles of the Site. The LASTs are summarized below:

Name	Address	RTN/Status	Dist. (mi)/ Direction	Relative Elevation
Residence	24 Forest Street	3-0029448/RAO	0.462/ENE	Higher

The Leaking Underground Storage Tank (LUST) database is a listing of confirmed or suspected releases from underground storage tanks that have been reported to the state. The state UST database is an inventory of all regulated USTs. There are five (5) LUST Sites located within a 0.5-miles of the Site. The LUSTs are summarized below:

Name	Address	RTN/Status	Dist. (mi)/ Direction	Relative Elevation
Former Texaco Station	74-76 Summer Street	3-0021362/RAONR	0.091/S	Higher
Former Texaco Station	76 Summer Street	3-0002657/RAO	0.091/S	Higher

Name	Address	RTN/Status	Dist. (mi)/ Direction	Relative Elevation
Verizon Massachusetts	52 Summer Street	3-0011714/RAO	0.202/SSW	Higher
Sacred Heart Church	62 School Street	3-0004415/RAO	0.324/W	Higher
Property	1-3 Powder House Lane	3-0004233/RAO	0.478/WSW	Higher

Based on regulatory status and/or gradient from the Site, none of the above listed sites are considered a REC for the Site.

4.4 State and tribal registered storage tank lists

The Underground Storage Tank database contains registered USTs. USTs are registered under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Protection's Summary Listing of all the Tanks Registered in the State of Massachusetts. There are two (2) USTs located within a 0.25-miles of the Site. The USTs are summarized below:

Name	Address	Tank Status	Dist. (mi)/ Direction	Relative Elevation
Manchester Gas and Service	96 Summer Street	Tanks 1-4: Tanks Removed Tanks 5-6: In Use	0.115/ESE	Higher
Verizon Massachusetts	52 Summer Street	Tank Removed	0.202/SSW	Higher

The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Protection's Summary Listing of all the tanks registered in the State of Massachusetts. There is one (1) AST located within a 0.25-miles of the Site. The AST is summarized below:

Name	Address	RTN/Status	Dist. (mi)/ Direction	Relative Elevation
Verizon Massachusetts	52 Summer Street	5487	0.202/SSW	Higher

4.5 State and tribal institutional control / engineering control registries

Institutional Control: Activity and Use Limitations establish limits and conditions on the future use of contaminated property, and therefore allow cleanups to be tailored to these uses. A review of the Institutional Control List, as provided by EDR, has revealed that there are no Institutional Control sites within approximately 0.5 miles of the target property.

4.6 EDR High Risk Historical Records

EDR US Historical Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, Laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as High Risk Historical Records, or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches. There are no historical cleaner sites located within 0.5 miles of the Site.

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as High Risk Historical Records, or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches. A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are two (2) EDR Hist Auto sites within approximately 0.125 miles of the target property. The EDR Hist Auto Sites are summarized below:

Name	Address	Dist. (mi)/ Direction	Relative Elevation
Hotz Motor Company	76 Summer Street	0.091/S	Higher
Bailey Guy	96 Summer Street	0.113/ESE	Higher

4.7 Other Databases

NPL, Delisted NPL, CERCLIS & NFRAP Sites

The National Priority List (NPL) is the United States Environmental Protection Agency (USEPA) database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program. The Delisted NPL is the database of delisted Superfund sites. The Comprehensive Environmental Response List contains sites which are either proposed to be or on the NPL, and sites which are in the screening and assessment phase for possible inclusion on the NPL. No Further Remedial Action Planned (NFRAP) sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly, or the contamination was not serious enough to require federal Superfund action or NPL consideration.

No NPL, delisted NPL, CERCLIS or NFRAP sites were identified within the study radii.

FUSRAP: DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. A review of the FUSRAP list, as provided by EDR, has revealed that there are no FUSRAP sites within approximately 1 miles of the target property.

Mercury: A listing of locations, collecting and recycling for mercury-added products. Mercury is toxic to the human nervous system, as well as fish and animals. Mercury can enter the body either through absorption or through inhalation of mercury vapors. At room temperature, small beads of mercury will vaporize. A review of the mercury list, as provided by EDR, and dated 01/31/2017 has revealed that there is one (1) mercury sites within approximately 0.5 miles of the target property. The mercury site is summarized below:

Name	Address	Dist. (mi)/ Direction	Relative Elevation
Manchester Hardware	35 Beach Street	0.493/SW	Lower

RCRA Facilities

Regulated hazardous waste activity is tracked under the information system as defined by RCRA. Facilities that treat, store or dispose of hazardous waste are listed in the RCRA TSD database. Facilities that generate hazardous wastes are listed in the RCRA Generators (RCRA GEN) database. This database includes facilities that generate at least 1,000 kg/month of non-acutely hazardous waste or 1 kg/month of acutely hazardous waste, referred to as large-quantity generators, and those that generate less than 1,000 kg/month of non-acutely hazardous waste, referred to as small-quantity

generators. RCRA facilities which have had a release of hazardous waste or constituents to the environment, for which the government is requiring corrective action, are tracked in the Corrective Action Tracking System (RCRA COR) database, while generators that are known to have violated RCRA regulations are tracked in the RCRA violations and enforcement (RCRA Viol). These violations can be the result of paperwork problems and are not necessarily related to releases of hazardous material.

RCRA NonGen/NLR: RCRAInfo is EPA's comprehensive information system. Providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes sensitive information on sites which generate, transport, store, treat and/or dispose of hazardous waste a defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste. A review of the RCRA NonGEN/NLR list, as provided by EDR, and stated 06/21/2016 has revealed that there are two (2) RCRA NonGen/NLR sites within approximately 0.25 miles of the target property. The RCRA NonGen/NLR sites are summarized below:

Name	Address	Dist. (mi)/ Direction	Relative Elevation
Baileys Service Station, INC.	96 Summer Street	0.115/ESE	Higher
Cricket Press, INC.	50 Summer Street	0.227/SSW	Higher

Hazardous Waste Generator Database and Sites

Permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities. A review of the HW GEN list, as provided by EDR, has revealed that there are two (2) HW GEN site within approximately 0.25 miles of the target property.

Name	Address	EPA ID Number/State Generator Status	Dist. (mi)/ Direction	Relative Elevation
Cricket Press, INC.	50 Summer Street	MAR000007039 SQG-MA	0.227/SSW	Higher
Manchester Essex Regional Schools	36 Lincoln Street	MV9785262055	0.155/NW	Lower

FINDS & TRIS Database Sites

The Facility Index System (FINDS) report is a computerized inventory of all facilities that are regulated or tracked by the USEPA. These facilities are assigned an identification number that serves as a cross-reference for other databases in the USEPA's program system. The Toxic Inventory Information System (TRIS) report contains information concerning the industrial release and/or transfer of toxic chemicals, as reportable under Title III of the Superfund Amendments and Re-authorization Act of 1986 (Sara Title III). Inclusion on this database is required for facilities which release reportable amounts of chemicals into the environment.

No FINDS sites were found within a quarter mile of the target property.

No TRIS sites were found within a quarter mile of the target property.

The Site is not listed on any other databases. Due to the distance and regulatory status of the identified Sites that are not the subject Site, within the search radius, are not considered RECs at the time of this report.

4.8 Additional Environmental Record Sources

CDW contacted the following local agencies for information regarding any hazardous materials response incidents, chemical storage or releases, or notices of environmental violations at the subject property.

4.8.1 Town of Manchester by the Sea Fire Department

Records of two 10,000-gallon #2 fuel oil USTs removed on July 23, 1991 were provided by the fire department. The removal documentation is provided in Appendix B.

4.8.2 Town of Manchester by the Sea Water and Sewer

The Site is serviced by municipal water and sewer. Water service enters the building from Lincoln Street. Water is supplied by Gravelly Pond, a surface water reservoir, which is located off Chebacco Road in Hamilton. The second water source is the Lincoln Street Well, located next to the Manchester/Essex Regional Junior/ Senior High School on Lincoln Street in Manchester.

Sewage from the Site building is discharged through an 8-inch main to a main in Lincoln Street. Sewage enters the headworks building for treatment. Grit is separated from the raw sewage and is dewatered by a grit screw and accumulated for disposal. The raw sewage is pumped from the influent wet well to the aeration tanks where the biological treatment occurs. Sewage exiting the aeration tanks flows to two 48-foot diameter clarifiers where the sludge is settled out. Effluent from the clarifiers is chlorinated and discharged through the outfall pipe into outer Manchester Harbor.

4.8.3 Massachusetts Department of Environmental Protection

The Site is not located in the MassDEP database. The closest MassDEP Site, the Former Texaco Station, located at 76 Summer Street is 0.11 miles upgradient from the Site. The RTN for this property had been closed with a RAO.

4.9 Physical Setting Sources

CDW reviewed several sources of publications including the USGS, the Federal Emergency Management Agency (FEMA) Maps, the United States Department of Agriculture (USDA) Soil Survey, MassGIS and EDR, Inc. to gather information pertaining to the subject property and the physical setting source.

According to the Massachusetts 21E Map, there are zero (0) MassDEP AUL sites within ½-mile. There are also two (2) MassDEP Tier II Classified sites within a ½-mile radius of the study Site. These sites are located to the south and southwest (Figure 2).

According to available information, the site is located within an Interim Wellhead Protection Area (IWPA) and a Zone II of a public water supply well (Figure 3).

According to MassGIS the nearest establish wetland resource areas are located to the south, east, and west of the Site (Figure 4).

The Site is not located within any FEMA Flood Zones (MassGIS) (Figure 5).

The Site is not considered an Open Space area. Open Spaces are located within 0.5-miles of the Site to the north, south, east and west and are defined as municipal parks or private open space (Figure 6).

There are no Natural Heritage mapped areas, Priority or Rare Species Habitats, or Areas of Critical Environmental Concern (ACEC) mapped on the Site. There are no vernal pools within 0.5 miles of the Site (Figure 7).

The Site is located 32 feet above sea level, and the topography is level. The bedrock at the Site consists of Cape Ann Granite (Zen et. al. 1983). There are no bedrock outcrops at the Site.

Surface soils at the Site consist of Udorthents Silty Loam per the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) (USDA 2014).

4.10 Other Historical Use Information

CDW researched sources of historical information to identify the approximate year of development of the subject property and to determine the past use of the subject property since its initial

development. Such sources included, but were not limited to, the research and review of tax assessor records, historical aerial photographs, historical Sanborn Maps, and topographic maps.

Sanborn Maps

Sanborn Fire Insurance Maps were obtained from EDR. Based on a map from 1958, the Site is shown as a school. The 1941 and 1921 map does not show the Site because the property was either undeveloped or not studied at that time. Sanborn maps are provided in Appendix D.

Aerial photographs

Aerial photographs were obtained from EDR. Based on aerial photography from 1952, 1955, 1960, 1969, 1972, 1978, 1986, 1991, 1995, 2008, 2010, and 2012 the Site remains in the same location and the surrounding properties remain consistent. Aerial Photographs are provided in Appendix E.

Based on historical data reviewed, it is CDW's opinion that a full title search would not have provided any significant additional information.

V FINDINGS

CDW has performed this Phase I Environmental Site Assessment of the Subject Property in conformance with the scope and limitations of ASTM Standard E 1527-13 of 43 Lincoln Street in Manchester by the Sea, Massachusetts. This assessment assessed the presence or absence of RECs, HRECs and CRECs in connection with the Site.

No CRECs were identified during the assessment. RECs and HRECs were identified during the assessment. They were:

- Potential contamination from the two 10,000-gallon fuel oil underground storage tanks removed in 1991. This represents a HREC.
- Potential Contamination from the old transformer removed from the electric room in the basement. It is unknown if PCBs were in the transformer fluids. This represents a HREC.
- Potential contamination from the exterior pad mounted transformer. It is unknown if PCBs are in the transformer fluids.
- Potential dumping of ash from incinerator.
- Potential asbestos debris within the dirt floor portion of the crawlspace.

No evidence of inappropriate waste-dumping or suspect waste disposal pits was observed during the Site inspection. No areas of distressed vegetation were observed on the Site. No visible evidence of releases of oil or hazardous materials was observed at the Site.

VI CONCLUSIONS

CDW has completed Phase I Environmental Site Assessment in conformance to the scope and limitations of ASTM Practice E 1527-13 of the Site at 43 Lincoln Street in Manchester by the Sea, Massachusetts. As of the date of this report, there are RECs and HRECs in connection with the Site.

There are no CRECs in connection with the Site. There are no AULs or engineering controls with respect to the historical release(s).

Data Gaps
Based on the information obtained during this ESA, it is the professional opinion of CDW Consultants that historical data failures, as defined in the ASTM guidelines, has occurred as follows:

- Potential contamination from the two 10,000-gallon fuel oil underground storage tanks removed in 1991. This represents a HREC.
- Potential Contamination from the old transformer removed from the electric room in the basement. It is unknown if PCBs were in the transformer fluids. This represents a HREC.
- Potential contamination from the exterior pad mounted transformer. It is unknown if PCBs are in the transformer fluids.
- Potential dumping of ash from incinerator.
- Potential asbestos debris within the dirt floor portion of the crawlspace.

These data gaps cannot be resolved without subsurface exploration and land disturbance. Furthermore, no definitive conclusions can be made regarding any subsurface conditions at the Site without the completion of soil and groundwater sampling and analysis which were outside of the scope of this Phase 1 ESA.

Recommendations

No conclusions or opinions can be made regarding the subsurface conditions at the Site without the completion of soil and groundwater sampling and analysis. CDW recommends the following to further investigate the environmental condition of the Site:

CDW recommends that a Phase II subsurface investigation be conducted including the installation of additional monitoring wells, and comprehensive soil and groundwater analysis. The wells should be installed in areas to investigate the possible on-site presence of contaminants from former USTs, substandard fill, and other historic activities that may have impacted the site.

The results of the soil and groundwater analytical results should be compared with applicable

standards under the Massachusetts Contingency Plan for notification and/or mitigation requirements. The outcome of the initial sampling efforts can be used to determine whether further investigation and/or remediation is warranted to mitigate potential environmental impacts prior to or during construction.

During any future excavation of the subsurface, there is potential for encountering isolated areas of suspect oil or hazardous materials. CDW recommends that a soil management plan be incorporated into future construction documents to provide guidance on the types of conditions requiring special management or mitigating measures.

National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations require sampling potential ACM prior to demolition or extensive renovation, regardless of the date of construction; therefore, if such activities are planned, it may be required to conduct a survey of the entire facility, or that portion slated for renovation or demolition, before initiating such destructive activities. That survey should include an assessment of all subject building materials, including those in areas which are normally inaccessible. Any material found to be ACM should be handled in accordance with applicable regulations.

VII LIMITATIONS

1.1 Purpose

CDW performed a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of the ASTM E1527-13 Standard. The purpose of the assessment was to evaluate the Site history, observable conditions, and current Site use to identify potential presence of RECs at or associated with the Site. RECs are defined by ASTM as:

"The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."

HRECs are defined by ASTM as:

"A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria established by a regulatory authority, without subjecting the property to any required controls (e.g., property use restrictions, AULs, institutional controls, or engineering controls). Before calling the past release an HREC, the EP must determine whether the past release is a REC at the time the Phase I ESA is conducted (e.g., if there has been a change in the regulatory criteria). If the EP considers this past release to be a REC at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a REC."

CRECs are defined by ASTM as:

"A REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (e.g., as evidenced by the issuance of a NFA letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (e.g., property use restrictions, AULs, institutional controls, or engineering controls).

The conclusions are intended to help the user evaluate the "business environmental risk" associated with the Site, defined by ASTM as:

"A risk which can have a material environmental or environmentally-driven financial impact on the business associated with the current or planned use of a parcel of commercial real estate. Consideration of business environmental risk issues may involve addressing one or more non-scope considerations."

1.2 Detailed Scope of Services

The CDW investigation consisted of the following elements: a Site reconnaissance, a review of available historical documents associated with the Site; a review of local, state, and federal environmental databases; and interviews with the Site owner, city officials, and agency employees.

1.3 Significant Assumptions

CDW assumes that all available Site information has been provided by the owner or its representative, that the information reviewed and provided by the owner, the City, and information databases are accurate, current, and complete. Where portions of the Site were inaccessible, CDW assumes that Site conditions in those areas would not contradict any observations made herein.

There is a possibility that even with the proper application of these methodologies that there may be conditions that exist on the subject property that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. CDW believes that the information obtained from the record review and the interviews concerning the subject property is reliable. However, CDW Consultants cannot and does not warrant or guarantee that the information provided by these sources is accurate or complete. The methodologies of this assessment are not intended to produce all-inclusive or comprehensive results, but rather to provide the Client with information relating to the subject property.

1.4 Limitations and Exceptions

The conclusions of this report are limited to the information available at the time of the investigation and the scope of services as defined. No subsurface exploration was performed on this Site; therefore, no conclusions can be made relative to subsurface conditions or the presence or absence of soil or groundwater contamination from either on-Site or off-Site sources.

Where access to portions of the Site was unavailable or limited, CDW renders no opinion as to the presence of oil or hazardous material or the presence of indirect evidence related to oil or hazardous material in that portion of the Site.

No other conclusions, interpretations, or recommendations are contained or implied in this report other than those expressed. CDW makes no warranty, expressed or implied, on the accuracy of the work and information completed by others and upon which CDW has relied to prepare this report. No other use of this report is warranted without the written consent of CDW.

Events occurring on the subject property after August 28, 2017, the date of the inspection, are beyond the scope of this report. CDW makes no expressed or implied representations or warranties regarding any changes in the condition of the premises after this date from on-site or off-site sources.

1.5 Special Terms and Conditions

This Phase I ESA was conducted as part of a feasibility study for future construction. There were no other specific Terms or Conditions.

1.6 User Reliance

This report is intended for the use of the entities listed below, and may be relied upon for up to one year after the date issued. No other individuals or entities may rely upon the report contents, in part or in whole.

Owner: Manchester By the Sea School District

Architect: JCJ Architecture

1.7 Additional Services

No soil, groundwater, surface water or other media testing was conducted as part of this assessment. A wetlands survey was not performed. A comprehensive asbestos and hazardous building material survey was not included. A professional title search was not included.

VIII REFERENCES

Manchester by the Sea Fire Department.

Manchester by the Sea Assessor's Office.

Manchester by the Sea Water and Sewer Department.

Environmental Data Resources, Radius Map Report, September 8, 2017.

Environmental Data Resources, Sanborn Map Report, September 8, 2017.

Environmental Data Resources, Aerial Photo Report, September 8, 2017.

Massachusetts Department of Environmental Protection, Searchable Site List, September 15, 2017.

Massachusetts Department of Environmental Protection, UST Query Tool, September 15, 2017.

Massachusetts GIS Online Data Viewer, September 15, 2017.

United States Department of Agriculture, Web Soil Survey.

United States Geological Survey, Marblehead North Topographic Quadrangle, 2012.

Zen et. al., Bedrock Geologic Map of Massachusetts, 1983.

IX SIGNATURE AND QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

The investigation of the Site described in the report was performed by Ms. Susan Cahalan, Senior Project Manager, who is qualified to make investigations and formulate the opinions herein set forth. Ms. Cahalan has 20 years of experience performing environmental site assessments. She has a Bachelors of Science in Geology from Northeastern University in Boston, Massachusetts and a Masters of Liberal arts in Sustainability and Environmental Management from Harvard University in Cambridge, Massachusetts.

The Site Investigator is knowledgeable regarding the type of industrial, manufacturing, commercial or other processes or operations which might reasonably be expected to generate, use, treat, store or dispose of oil or hazardous material. The Site Investigator has reviewed the recent history of the Site and has considered the potential for the generation, use, treatment, storage or disposal of oil or hazardous material by (a) the uses presently associated with the Site and (b) to the extent ascertainable by inquiry, the uses previously associated with the Site.

This report is dated October 10, 2017, and is signed by individuals who are duly authorized to do so.



Susan Cahalan, PG, ISSP-SA
Senior Environmental Scientist

PHOTOGRAPHS



Exterior Front



Exterior Front Showing Gardens



Exterior Front -View Toward Tennis Courts



Rear Near Kitchen and Chimney



Exterior Pad Mounted Transformer



Exterior Courtyard



Incinerator in Boiler Room



Dirt Floor Portion of Crawlspace



Crawlspace Pipe Runs



Old Electric Room Off Boiler Room



Typical Classroom

FIGURES



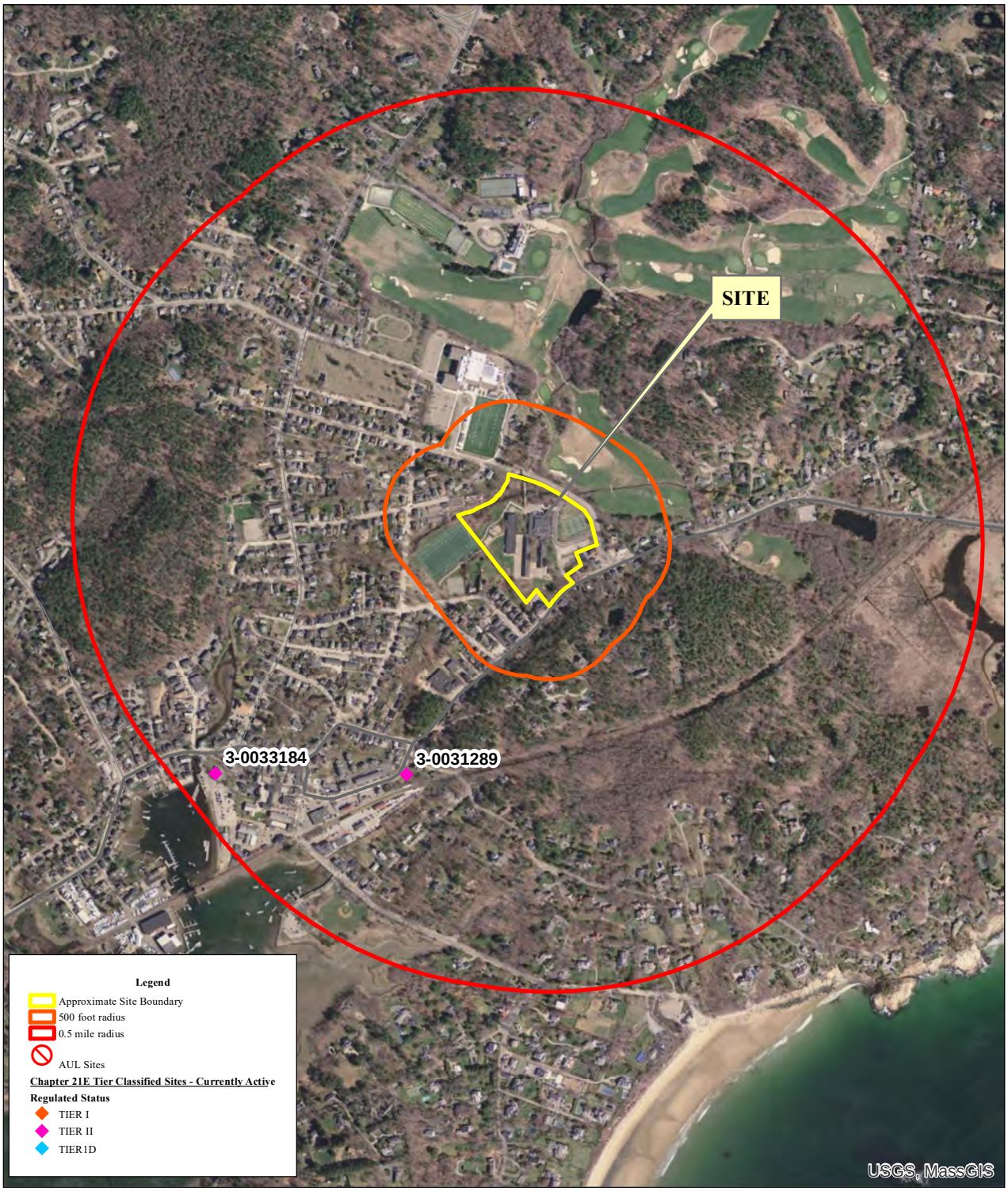
CDW CONSULTANTS, INC.

Manchester Memorial Elementary School
43 Lincoln Street
Manchester-by-the-Sea, MA 01944

Figure 1: Site Location Map

SOURCE: MASSGIS

SCALE: 1 inch = 2,083 feet



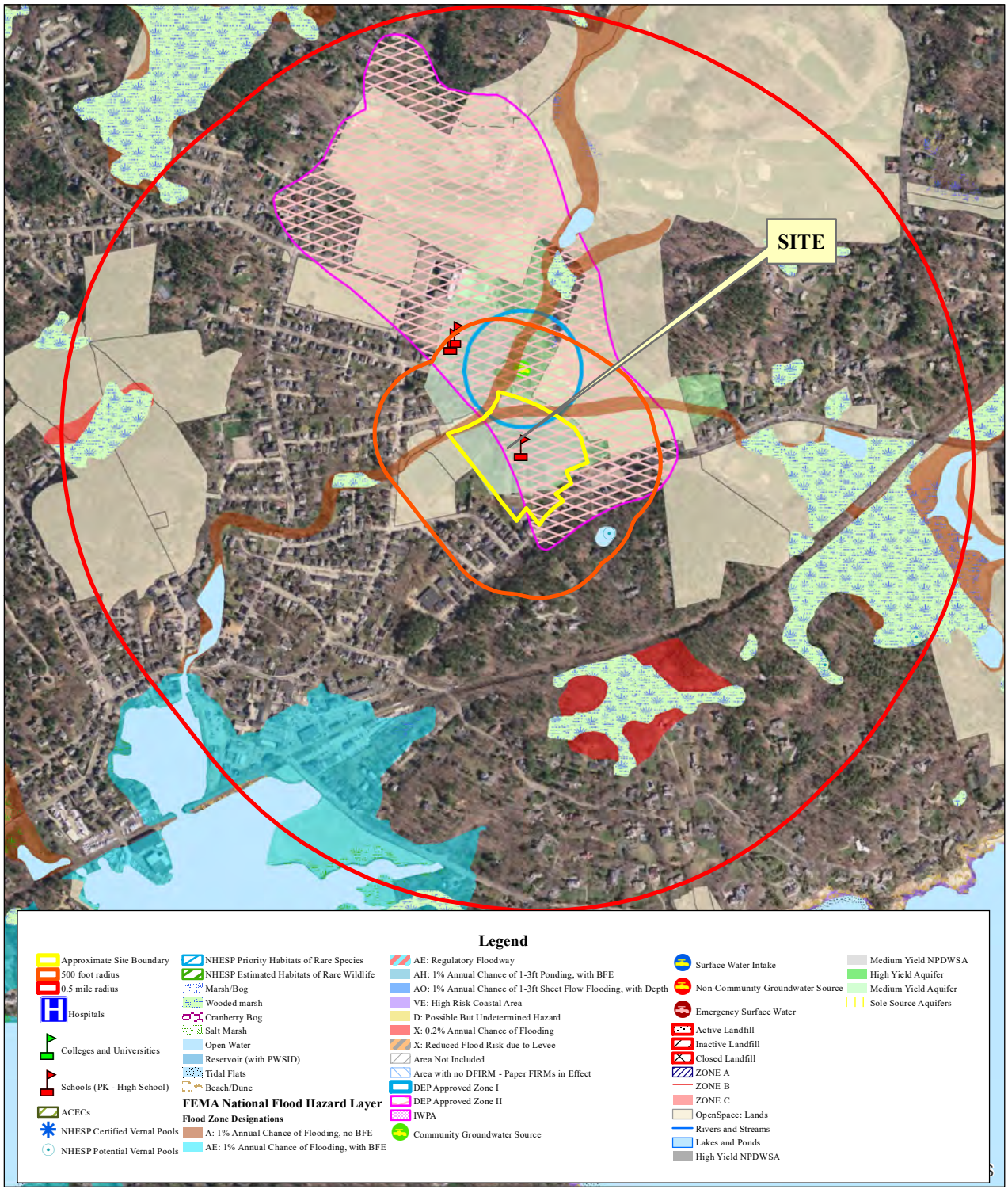
CDW CONSULTANTS, INC.

Manchester Memorial Elementary School
43 Lincoln Street
Manchester-by-the-Sea, MA 01944

Figure 2 - Currently Active Massachusetts 21E and AUL Map

SOURCE: MASSGIS

SCALE: 1 inch = 1,042 feet



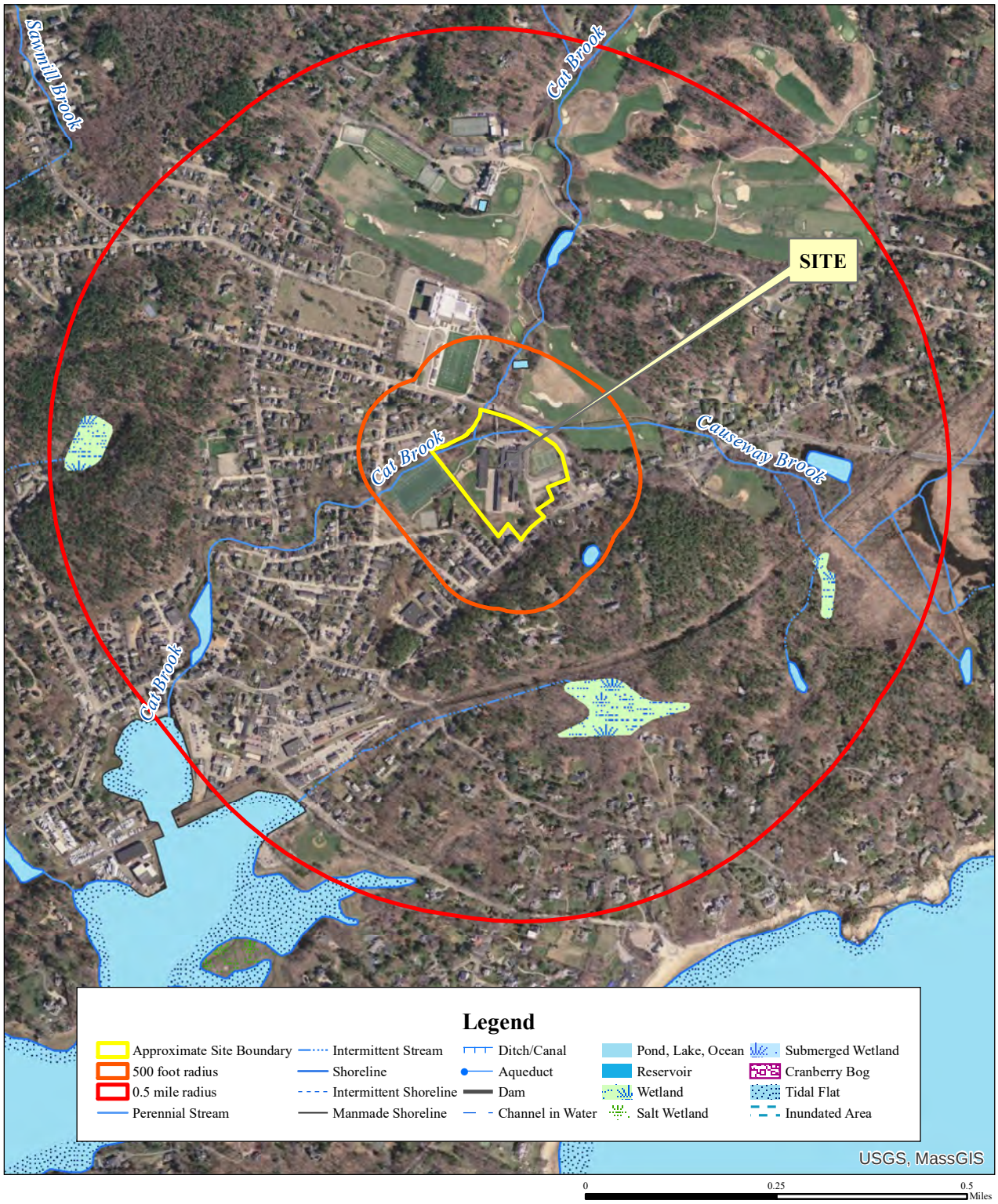
CDW CONSULTANTS, INC.

Manchester Memorial Elementary School
43 Lincoln Street
Manchester-by-the-Sea, MA 01944

Figure 3 - Priority Resource Areas Map

SOURCE: MASSGIS

SCALE: 1 inch = 1,039 feet



CDW CONSULTANTS, INC.

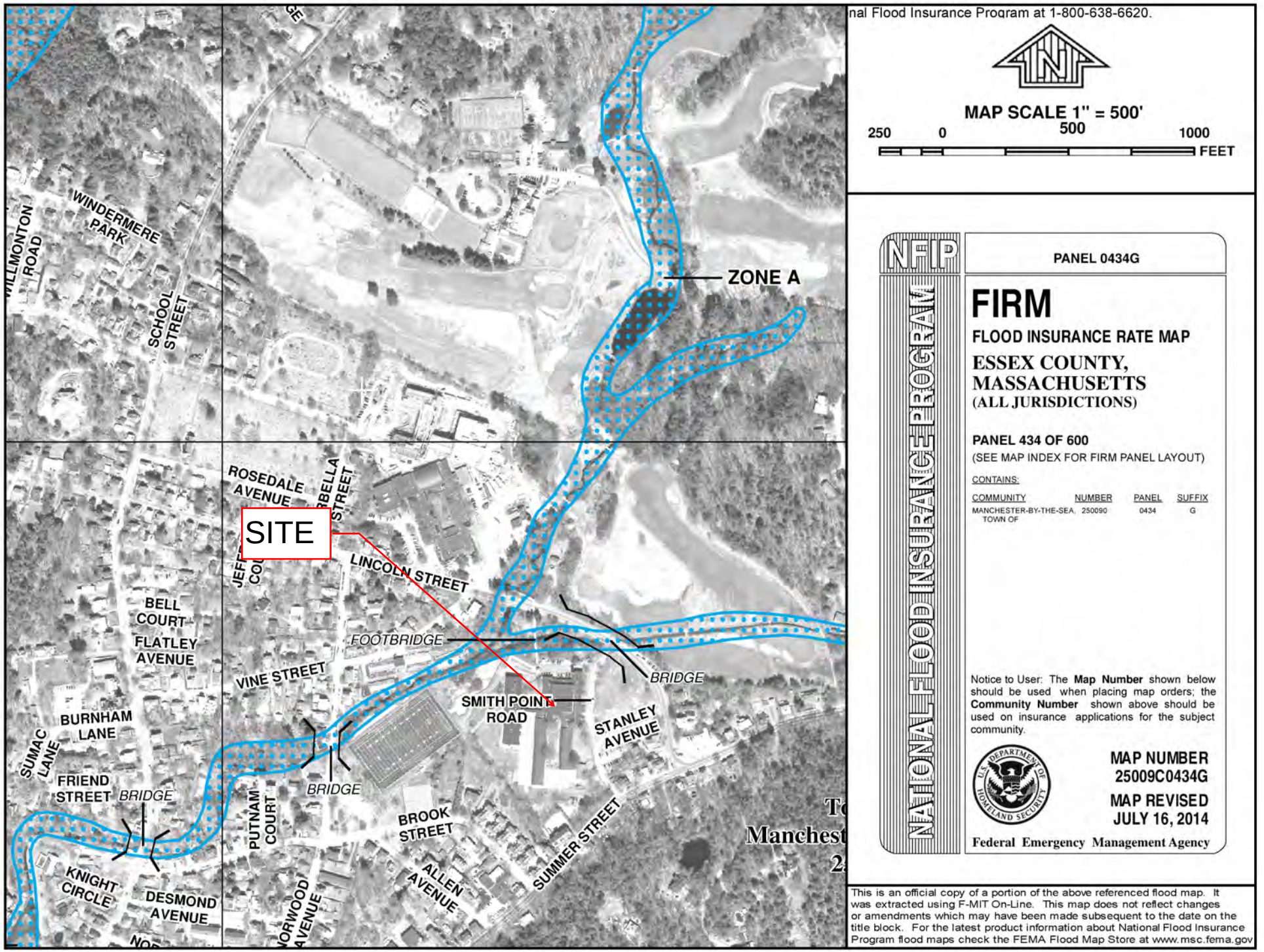
Manchester Memorial Elementary School
43 Lincoln Street
Manchester-by-the-Sea, MA 01944

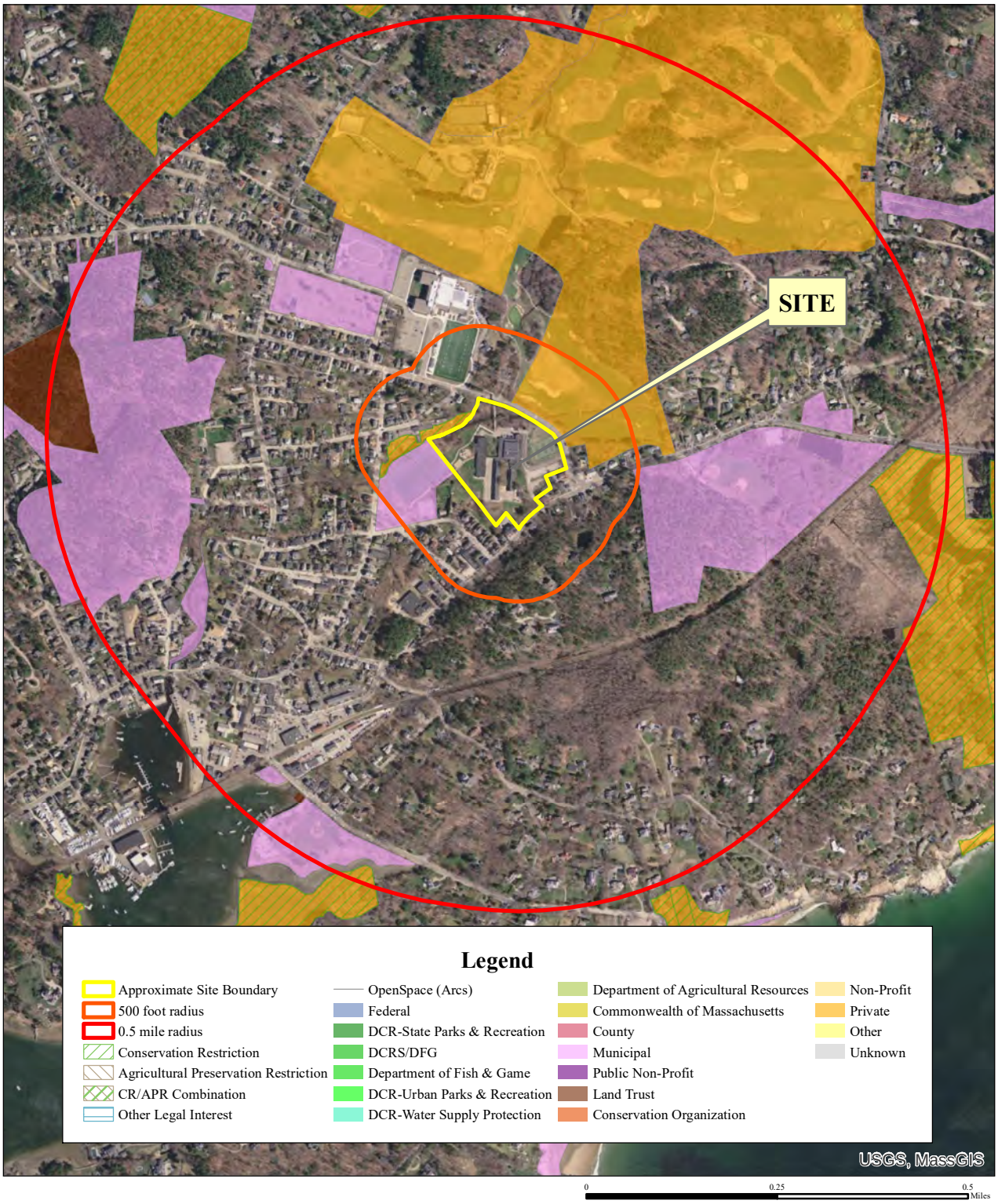
Figure 4 - Hydrography Map

SOURCE: MASSGIS

SCALE: 1 inch = 1,042 feet

FIGURE 5: FEMA MAP





CDW CONSULTANTS, INC.

Manchester Memorial Elementary School
43 Lincoln Street
Manchester-by-the-Sea, MA 01944

Figure 6 - Open Space Map

SOURCE: MASSGIS

SCALE: 1 inch = 1,042 feet



CDW CONSULTANTS, INC.

Manchester Memorial Elementary School
43 Lincoln Street
Manchester-by-the-Sea, MA 01944

Figure 7 - Natural Heritage Atlas and ACEC Map

SOURCE: MASSGIS

SCALE: 1 inch = 1,042 feet

APPENDIX A

User Questionnaire

ENVIRONMENTAL SITE ASSESSMENT QUESTIONNAIRE

INSTRUCTIONS: As soon as possible, please complete to the best of your knowledge and return to (email):

Susan Cahalan
CDW Consultants
6 Huron Drive
Natick, MA
scahalan@cdwconsultants.com

GENERAL INFORMATION

Property Name: Manchester Memorial Elementary School

Address: 43 Lincoln St, Manchester-by-the-Sea, MA 01944

PROPERTY INFORMATION

Property Size (in acres): **11.31 acres**
# of Buildings: 2

Gross Building Square feet: 66, 573

Date of Construction: School Opened 1951; 1954 Addition (8 classrooms, 2 rest rooms); 1965 Addition (13 classrooms, 4 rest rooms).

The questionnaire information was provided by:

Name: Jay Pagliarulo

Title: Facilities Manager

Signature: _____

Date: September 21, 2017

ENVIRONMENTAL INFORMATION

PREVIOUS REPORTS, DOCUMENTS AND OWNERS

1. Are you aware if a previous Environmental Assessment has ever been performed on the subject property?

Yes No (Do not Know)

If yes, are you aware of the recommendations made in the report or please provide a copy of the report?

Still Researching

2. Do you have any other environmentally associated documents, such as compliance audits, environmental permits (such as an NPDES permit, **boiler permit**, wastewater permit), registrations (such as for an underground storage tank)? If yes, please provide a copy of the document(s)

(Yes) No Do not Know

HISTORICAL & PRESENT USAGE/SITE CONDITIONS – SUBJECT AND ADJOINING PROPERTIES

1. Are you aware of the prior use of the subject property, i.e., any previous development, undeveloped? If so, please describe.

Still Researching

2. Has fill dirt ever been brought onto the subject property that originated from a contaminated site or from an unknown source?

Yes (No) Do not Know

3. Are there currently or have there ever been any pits, ponds or lagoons on the subject property utilized in connection with waste treatment or waste disposal?

Yes (No) Do not Know

4. Are you currently aware of or have there ever been any hazardous substances, petroleum products, tires, car or industrial batteries, pesticides or other chemicals or waste materials that have been dumped, buried or burned on the subject property?

Yes (No) Do not Know

5. Have any of the adjoining properties ever been used for industrial purposes? (including but not limited to a gas station, dry cleaner, auto repair facility, landfill, waste treatment, printing facility etc.)? If yes, please describe.

(Yes) No Do not Know

QUESTION 5 NARRATIVE

Manchester Gas and Service Station, 96 Summer St, while not directly adjoining the property is located east of Memorial at the corner of Lincoln and Summer Streets. Additionally, 76 Summer St., located south of, and adjacent to, the Memorial property was formerly a Texaco Station. A search of the Mass DEP indicates a small gasoline spill here on 1/2/1990 with response action and follow up through 3/20/208. Copy of records can be found at http://public.dep.state.ma.us/fileviewer/Scanned.aspx?id=144582

6. If the subject property is served by a private well or non-public water system, is there evidence or do you have prior knowledge that contaminants have been identified in the well or system that exceed guidelines applicable to the water system or that the well has been designated as contaminated by any government environmental/health agency? If an on-site well is present, please attach a copy of the most recent water quality testing report.

Yes (No) Do not Know

AAI and REGULATORY QUESTIONS

1. Are you aware of any past or current existence of hazardous substances, specific chemicals, or petroleum products on the subject property or any facility located on the property?

Yes (No) Do not Know

2. Are you aware of any past or current spills or other chemical releases that have taken place at the property?

Yes (No) Do not Know

3. Do you know of any clean ups (with respect to hazardous substances, specific chemicals, or petroleum products) that have occurred at the property?

Yes (No) Do not Know

4. Are you aware, based on your knowledge of the property, if there are any obvious indicators that point to the presence or likely presence of contamination at the property?

Yes (No) Do not Know

5. Do you have any knowledge of filed or recorded environmental cleanup liens under federals, state or local law or governmental notification relating to past or recurrent violations of environmental laws with respect to the subject property or any facility located on the property?

Yes (No) Do not Know

6. Are there any potential or pending lawsuits or administrative actions concerning a release or threatened release of hazardous substances or petroleum product involving the subject property or any facility located on the property?

Yes (No) Do not Know

7. Are you aware of any areas of activity or use limitations (AULs) such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been recorded or filed in a registry under federal, state or tribal law?

Yes (No) Do not Know

STORAGE TANKS AND DRAINS

1. Are there currently or are you aware if there have ever previously been any registered or unregistered storage tanks, aboveground or underground, located on the subject property? If so, please attach copies of documentation such as tank closure/removal reports, tank tightness tests or registration/regulatory information.

(Yes) No Do not Know

An oil storage tank was removed from Memorial when the school converted from oil fired to natural gas fired boilers. Confirmation of removal date attached. Disposal manifest attached.

2. Are there currently or are you aware if there have ever previously been any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the subject property?

(Yes) No Do not Know

3. Are there currently or are you aware if there has ever previously been any current evidence of leaks, spills, or staining by substances other than water, or foul odors, associated with any flooring, drains, walls, ceilings, or exposed grounds on the subject property?

Yes (No) Do not Know

TRANSFORMERS AND HYDRAULIC EQUIPMENT

1. Are there are any transformers, capacitors, and/or hydraulic equipment on the subject property?

(Yes) No Do not Know

2. If yes, are there any records indicating the presence or absence of PCBs in this equipment. If so, please attach copies of this documentation.

Yes (No) Do not Know

3. Are the transformers owned by the subject property or by the local utility? If owned by the utility, please note the name of the utility. **Owned by National Grid.**

_____

_____

ASBESTOS CONTAINING MATERIALS

1. Has the subject property ever been tested for the presence of asbestos containing materials (ACM)?

(Yes) No Do not Know

2. If yes, are you aware if asbestos containing materials were identified? If so, please note what asbestos containing materials were identified and their locations or please attach a copy of the test results?

(Yes) No Not applicable

A copy of test results will be attached.

3. Is there an Asbestos Operations and Maintenance Program in place at the subject property?

Yes No Do not Know

RADON

1. Has the subject property ever been tested for the presence of radon?

Yes No Do not Know

2. If yes, do you have the results of the testing? Please attach.

Yes No Do not Know

LEAD BASED PAINT

1. Has the subject property ever been tested for the presence of lead based paint (LBP)?

Yes No Do not Know

2. If yes, are you aware if lead based paint was identified? If so, please note where it was identified or please attach a copy of the test results?

Yes No Not applicable

MOLD

1. Is there any evidence of mold and/or mildew on the subject property? If yes, please provide information as to the location, extent and the cause of the mold/mildew. Please note what actions are currently or have formerly been taken to address this concern.

Yes No

There is a minimal amount of mildew on some exterior painted surfaces. This is caused by moisture and minimal exposure to sunlight. Some areas have been washed with a 10% bleach solution, but there are other areas on roof fascia boards that we have not disturbed due to the belief that the fascia contains lead paint.

2. Is there a Mold and Moisture Minimization Program in place at the subject property?

Yes No Do not Know

COMMENTS/ADDITIONAL INFORMATION (If necessary, please provide any additional relevant environmental information that has not been discussed above.)

Currently researching whether formal testing has been done for lead paint. The wood fascias, soffits, and frieze boards are all believed to contain lead paint (visual inspection). Seeking records of a previous Environmental Assessment. Researching prior land use.

APPENDIX B

UST Removal Documentation

OIL Box 27 GAS

LINCOLN ST 9/12/51 4 CYL
BORNER Removed 7-23-91 PROPANE
MAKE - PETRO 94 GALS
OIL #2 - AMT 10,000 UNDERGROUND 11/13/53
INST BY F. H. MAHONEY
87 WHITE ST - HAVERHILL
~~1 - 500 GAL. TANK GASOLINE - UNDERGROUND~~
Manchester Memorial School

RECEIPT OF DISPOSAL OF UNDERGROUND STEEL STORAGE TANK

NAME AND ADDRESS OF APPROVED TANK YARD: JAMES G. GRANT CO., INC. R. 28 WOLCOTT ST. READVILLE, MA 02137

APPROVED TANK YARD NO. 03501

Tank Yard Ledger 502 CMR 3.03(4) Number: 9106826

I certify under penalty of law I have personally examined the underground steel storage tank delivered to this "approved tank yard" by firm, corporation or partnership J. G. Grant and accepted same in conformance with Massachusetts Fire Prevention Regulation 502 CMR 3.00 Provisions for Approving Underground Steel Storage Tank dismantling yards. A valid permit was issued by LOCAL Head of Fire Department FDID# 09165 to transport this tank to this yard.

Name and official title of approved tank yard owner or owners authorized representative:

David Grant (SIGNATURE) Pres. (TITLE) 7-23-91 (DATE SIGNED)

This signed receipt of disposal must be returned to the local head of the fire department FDID# 09165 pursuant to 502 CMR 3:00. (EACH TANK MUST HAVE A RECEIPT OF DISPOSAL)

FORM F.P. 291 (rev. 9/88) (OVER) MASSACHUSETTS STATE FIRE MARSHAL'S OFFICE

DIMENSIONS

	Width (feet)		Length (feet)
Tank 1	-----	X	----- 10000
Tank 2	-----	X	-----
Tank 3	-----	X	-----
Tank 4	-----	X	-----
Tank 5	-----	X	-----

Tank Removed From
Lincoln St.
(no. street)
Manchester
(city or town)

Fire Department Permit # ----------
(if applicable)

RECEIPT OF DISPOSAL OF UNDERGROUND STEEL STORAGE TANK

NAME AND ADDRESS OF APPROVED TANK YARD: JAMES G. GRANT CO., INC. R. 28 WOLCOTT ST. READVILLE, MA 02137

APPROVED TANK YARD NO. 03501

Tank Yard Ledger 502 CMR 3.03(4) Number: 9106827

I certify under penalty of law I have personally examined the underground steel storage tank delivered to this "approved tank yard" by firm, corporation or partnership J. G. Grant and accepted same in conformance with Massachusetts Fire Prevention Regulation 502 CMR 3.00 Provisions for Approving Underground Steel Storage Tank dismantling yards. A valid permit was issued by LOCAL Head of Fire Department FDID# 09166 to transport this tank to this yard.

Name and official title of approved tank yard owner or owners authorized representative:

David Grant (SIGNATURE) — pres (TITLE) — 7-23-91 (DATE SIGNED)

This signed receipt of disposal must be returned to the local head of the fire department FDID# 09166 pursuant to 502 CMR 3:00. (EACH TANK MUST HAVE A RECEIPT OF DISPOSAL)

FORM F.P. 291 (rev. 9/88) (OVER) MASSACHUSETTS STATE FIRE MARSHAL'S OFFICE

DIMENSIONS

	Width (feet)		Length (feet)
Tank 1	-----	X	----- 10000
Tank 2	-----	X	-----
Tank 3	-----	X	-----
Tank 4	-----	X	-----
Tank 5	-----	X	-----

Tank Removed From

Lincoln St.
(no. street)

Manchester
(city or town)

Fire Department Permit # ----------
(if applicable)

The Commonwealth of Massachusetts

Department of Public Safety - Division of Fire Prevention

APPLICATION/PERMIT FOR REMOVAL AND TRANSPORTATION TO APPROVED TANK YARD

FDID# 09166

July 16, 1991
(Date)

C.82 S.40 M.G.L.
DIG SAFE NUMBER
918651136
Start Date

To: HEAD OF FIRE DEPARTMENT

Manchester, Mass.
City or Town

In accordance with the provisions of Chapter 148, G.L. as provided in Section 38A Application is hereby made by

J. Grant Co
(Name of Person, Firm or Corporation removing the tank)

25 Wolcott St. Peabody, Hyde Park, Ma.
Street address & city or town

For permission to remove and transport underground steel storage tank(s) from

Town of Manchester — Lincoln St.
Property owner or tenant — Street address (city or town)

Person, Firm, Corporation transporting waste J. Pierce Oil

Street address & city or town MAD 982754277

Waste transporters State License # ?

Person, Firm, Corporation transporting tank J. Grant Co.

25 Wolcott St. Peabody, Ma.
Street address & city or town

to approved tank yard # 03601
Yard name and #

State clearly type of inert gas used in steel storage tank CO^2
Inert gas to be used

List # of tanks and capacity of each (2) 10,000

Date issued July 16 1991 By: James Carroll
Signature of Applicant

Date of expiration July 26th 1991

PARRELLA, JAMES, J.
Applicant's name printed

Fee paid $ N/A

Joseph P. O'Malley Fire Chief
Signature of official granting permit (Title)

KEEP ORIGINAL AS APPLICATION AND ISSUE COPY AS PERMIT

The Commonwealth of Massachusetts

Department of Public Safety - Division of Fire Prevention

APPLICATION/PERMIT FOR REMOVAL AND TRANSPORTATION TO APPROVED TANK YARD

FDID# 09166

July 16, 1991
(Date)

To: HEAD OF FIRE DEPARTMENT

Manchester, Mass.
City or Town

C.82 S.40 M.G.L.
DIG SAFE NUMBER
912625136
Start Date

In accordance with the provisions of Chapter 148, G.L. as provided in Section 38A Application is hereby made by:

J. Grant Co
(Name of Person, Firm or Corporation removing the tank)

25 Wolcott St. Peabody, Hyde Park, Ma
Street address & city or town

For permission to remove and transport underground steel storage tank(s) from

Town of Manchester — Lincoln St.
Property owner or tenant — Street address (city or town)

Person, Firm, Corporation transporting waste J. Rines Oil

Street address & city or town MAD 982754277

Waste transporters State License # P338

Person, Firm, Corporation transporting tank J. Grant Co.

25 Wolcott St. Peabody, Ma.
Street address & city or town

to approved tank yard # 03601
Yard name and #

State clearly type of inert gas used in steel storage tank CO^2
Inert gas to be used

List # of tanks and capacity of each (2) 10,000

Date issued July 16 1991 By: James Parrell
Signature of Applicant

Date of expiration July 26th 1991

PARRELL JAMES J.
Applicant's name printed

Fee paid $ N/A

Joseph P. O'Malley Fire Chief
Signature of official granting permit (Title)

KEEP ORIGINAL AS APPLICATION AND ISSUE COPY AS PERMIT

APPENDIX C

EDR Executive Summary

Manchester Memorial Elementary School
43 Lincoln Street
MANCHESTER, MA 01944

Inquiry Number: 5045285.2s
September 08, 2017

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	124
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-15
Physical Setting Source Map Findings	A-17
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2017 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

43 LINCOLN STREET
MANCHESTER, MA 01944

COORDINATES

Latitude (North):	42.5792560 - 42° 34' 45.32''
Longitude (West):	70.7642750 - 70° 45' 51.39''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	355213.5
UTM Y (Meters):	4715387.5
Elevation:	32 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5644856 MARBLEHEAD NORTH, MA
Version Date:	2012
East Map:	5642632 GLOUCESTER, MA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140712
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
43 LINCOLN STREET
MANCHESTER, MA 01944

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	MANCHESTER MEMORIAL	43 LINCOLN STREET	FINDS		TP
A2	FMR TEXACO	74 TO 76 SUMMER ST	LUST, RELEASE	Higher	480, 0.091, South
A3	TEXACO STATION FMR	76 SUMMER ST	LUST, RELEASE	Higher	480, 0.091, South
A4	HOTZ MOTOR CO	76 SUMMER ST	EDR Hist Auto	Higher	480, 0.091, South
5	AT SUMMER ST	50 BROOK ST	SHWS, RELEASE	Higher	533, 0.101, SSW
B6	BAILEY GUY	96 SUMMER ST	EDR Hist Auto	Higher	596, 0.113, ESE
B7	BAILEYS SERVICE STA	96 SUMMER ST	RCRA NonGen / NLR	Higher	609, 0.115, ESE
B8	MANCHESTER GAS AND S	96 SUMMER ST	UST, Financial Assurance	Higher	609, 0.115, ESE
9	MANCHESTER ESSEX REG	36 LINCOLN ST	HW GEN	Lower	817, 0.155, NW
10	VERIZON MASSACHUSETT	52 SUMMER ST	LUST, UST, AST, RELEASE, Financial Assurance, TIER...	Higher	1065, 0.202, SSW
C11	CRICKET PRESS INC	50 SUMMER ST	HW GEN	Higher	1200, 0.227, SSW
C12	CRICKET PRESS	50 SUMMER STREET	RCRA NonGen / NLR, US AIRS, FINDS, ECHO	Higher	1200, 0.227, SSW
13	SACRED HEART CHURCH	62 SCHOOL STREET	LUST, SPILLS, RELEASE	Higher	1713, 0.324, West
14	MANCHESTER NUMBER 23	23 SUMMER ST	SHWS, RELEASE	Lower	1886, 0.357, SSW
15	SEABREEZE VARIETY	8 BEACH ST	SHWS, LUST, RELEASE	Lower	2228, 0.422, SW
16	RESIDENCE	24 FOREST ST	LAST, RELEASE	Higher	2440, 0.462, ENE
17	PROPERTY	1-3 POWDER HOUSE LA	LUST, RELEASE	Higher	2526, 0.478, WSW
18	MANCHESTER HARDWARE	35 BEACH STREET	MERCURY	Lower	2604, 0.493, SW
19	TOWN HALL PARKING LO	10 CENTRAL STREET	SHWS, RELEASE	Lower	2638, 0.500, SW
20	MANCHESTER AUTO BODY	6 ELM ST	SHWS, LUST, RELEASE, HW GEN	Lower	2647, 0.501, WSW
21	9 MORSE COURT	9 MORSE COURT	SHWS, LUST, RELEASE	Lower	2788, 0.528, WSW
22	GASOLINE STATION	PINE AT CENTRAL ST	SHWS, RELEASE	Lower	3323, 0.629, WSW
D23	GULF FACILITY	2 PINE ST	SHWS, LUST, RELEASE	Higher	3329, 0.630, WSW
D24	RTE 127 GIBBS GAS ST	PINE ST	SHWS, RELEASE	Higher	3329, 0.630, WSW
25	RESIDENCE	3 CURRIER RD	SHWS, RELEASE	Higher	3617, 0.685, WNW
26	MANCHESTER MARINE	ASHLAND AVE	SHWS, RELEASE	Lower	3730, 0.706, SW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
MANCHESTER MEMORIAL 43 LINCOLN STREET MANCHESTER, MA 01944	FINDS Registry ID:: 110055260952	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators

RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Facility Database/Transfer Stations

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

INST CONTROL ---------- Sites With Activity and Use Limitation

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ---------- Completed Brownfields Covenants Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
ODI ---------- Open Dump Inventory
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register

US CDL ..... National Clandestine Laboratory Register

Local Land Records

LIENS ..... Liens Information Listing
LIENS 2 ..... CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
SPILLS ..... Historical Spill List
RELEASE ..... Reportable Releases Database
SPILLS 90 ..... SPILLS 90 data from FirstSearch
SPILLS 80 ..... SPILLS 80 data from FirstSearch

Other Ascertainable Records

FUDS ..... Formerly Used Defense Sites
DOD ..... Department of Defense Sites
SCRD DRYCLEANERS ..... State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ..... Financial Assurance Information
EPA WATCH LIST ..... EPA WATCH LIST
2020 COR ACTION ..... 2020 Corrective Action Program List
TSCA ..... Toxic Substances Control Act
TRIS ..... Toxic Chemical Release Inventory System
SSTS ..... Section 7 Tracking Systems
ROD ..... Records Of Decision
RMP ..... Risk Management Plans
RAATS ..... RCRA Administrative Action Tracking System
PRP ..... Potentially Responsible Parties
PADS ..... PCB Activity Database System
ICIS ..... Integrated Compliance Information System
FTTS ..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ..... Material Licensing Tracking System
COAL ASH DOE ..... Steam-Electric Plant Operation Data
COAL ASH EPA ..... Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ..... PCB Transformer Registration Database
RADINFO ..... Radiation Information Database
HIST FTTS ..... FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ..... Incident and Accident Data
CONSENT ..... Superfund (CERCLA) Consent Decrees
INDIAN RESERV ..... Indian Reservations
FUSRAP ..... Formerly Utilized Sites Remedial Action Program
UMTRA ..... Uranium Mill Tailings Sites
LEAD SMELTERS ..... Lead Smelter Sites
US AIRS ..... Aerometric Information Retrieval System Facility Subsystem
US MINES ..... Mines Master Index File
ABANDONED MINES ..... Abandoned Mines
DOCKET HWC ..... Hazardous Waste Compliance Docket Listing
UXO ..... Unexploded Ordnance Sites
ECHO ..... Enforcement & Compliance History Information
FUELS PROGRAM ..... EPA Fuels Program Registered Listing
AIRS ..... Permitted Facilities Listing
DRYCLEANERS ..... Regulated Drycleaning Facilities

ENF Enforcement Action Cases
Financial Assurance Financial Assurance Information Listing
GWDP Ground Water Discharge Permits
LEAD Lead Inspection Database
NPDES NPDES Permit Listing
TIER 2 Tier 2 Information Listing
TSD TSD Facility

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Cleaner EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS Recovered Government Archive State Hazardous Waste Facilities List
RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent CERCLIS

SHWS: Contains information on releases of oil and hazardous materials that have been reported to DEP.

A review of the SHWS list, as provided by EDR, and dated 06/06/2017 has revealed that there are 11 SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
AT SUMMER ST	***50 BROOK ST***	***SSW 0 - 1/8 (0.101 mi.)***	***5***	***20***
Release Tracking Number / Current Status: 3-0014131 / DPS				
GULF FACILITY	***2 PINE ST***	***WSW 1/2 - 1 (0.630 mi.)***	***D23***	***96***
Release Tracking Number / Current Status: 3-0022977 / RAO				

Release Tracking Number / Current Status: 3-0026154 / RAONR
Release Tracking Number / Current Status: 3-0028523 / RAO

RTE 127 GIBBS GAS ST	***PINE ST***	***WSW 1/2 - 1 (0.630 mi.)***	***D24***	***117***
Release Tracking Number / Current Status: 3-0027354 / RAO				
RESIDENCE	***3 CURRIER RD***	***WNW 1/2 - 1 (0.685 mi.)***	***25***	***119***
Release Tracking Number / Current Status: 3-0031336 / RAO				

Lower Elevation	Address	Direction / Distance	Map ID	Page
MANCHESTER NUMBER 23	***23 SUMMER ST***	***SSW 1/4 - 1/2 (0.357 mi.)***	***14***	***44***
Release Tracking Number / Current Status: 3-0031289 / TIERII				
SEABREEZE VARIETY	***8 BEACH ST***	***SW 1/4 - 1/2 (0.422 mi.)***	***15***	***48***
Release Tracking Number / Current Status: 3-0028168 / RAO				
TOWN HALL PARKING LO	***10 CENTRAL STREET***	***SW 1/4 - 1/2 (0.500 mi.)***	***19***	***64***
Release Tracking Number / Current Status: 3-0033184 / TIERII				
MANCHESTER AUTO BODY	***6 ELM ST***	***WSW 1/2 - 1 (0.501 mi.)***	***20***	***67***
Release Tracking Number / Current Status: 3-0032090 / PSNC				
Release Tracking Number / Current Status: 3-0032404 / PSNC				
Release Tracking Number / Current Status: 3-0031969 / PSNC				
9 MORSE COURT	***9 MORSE COURT***	***WSW 1/2 - 1 (0.528 mi.)***	***21***	***80***
Release Tracking Number / Current Status: 3-0019810 / RAO				
Release Tracking Number / Current Status: 3-0033011 / PSNC				
GASOLINE STATION	***PINE AT CENTRAL ST***	***WSW 1/2 - 1 (0.629 mi.)***	***22***	***93***
Release Tracking Number / Current Status: 3-0028313 / RAO				
MANCHESTER MARINE	***ASHLAND AVE***	***SW 1/2 - 1 (0.706 mi.)***	***26***	***121***
Release Tracking Number / Current Status: 3-0003657 / WCSPRM				

State and tribal leaking storage tank lists

LAST: The Leaking Aboveground Storage Tanks database

A review of the LAST list, as provided by EDR, and dated 06/06/2017 has revealed that there is 1 LAST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RESIDENCE	***24 FOREST ST***	***ENE 1/4 - 1/2 (0.462 mi.)***	***16***	***56***
Release Tracking Number / Current Status: 3-0029448 / RAO				

LUST: Sites within the Releases Database that have a UST listed as its source.

A review of the LUST list, as provided by EDR, and dated 06/06/2017 has revealed that there are 6 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FMR TEXACO	***74 TO 76 SUMMER ST***	***S 0 - 1/8 (0.091 mi.)***	***A2***	***8***
Release Tracking Number / Current Status: 3-0021362 / RAONR				
TEXACO STATION FMR	***76 SUMMER ST***	***S 0 - 1/8 (0.091 mi.)***	***A3***	***11***

Release Tracking Number / Current Status: 3-0002657 / RAO

VERIZON MASSACHUSETT	***52 SUMMER ST***	***SSW 1/8 - 1/4 (0.202 mi.)***	***10***	***28***

Release Tracking Number / Current Status: 3-0011714 / RAO

SACRED HEART CHURCH	***62 SCHOOL STREET***	***W 1/4 - 1/2 (0.324 mi.)***	***13***	***42***

Release Tracking Number / Current Status: 3-0004415 / RAO

PROPERTY	***1-3 POWDER HOUSE LA***	***WSW 1/4 - 1/2 (0.478 mi.)***	***17***	***62***

Release Tracking Number / Current Status: 3-0004233 / RAO

Lower Elevation	Address	Direction / Distance	Map ID	Page
SEABREEZE VARIETY	***8 BEACH ST***	***SW 1/4 - 1/2 (0.422 mi.)***	***15***	***48***

Release Tracking Number / Current Status: 3-0028168 / RAO

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Protection's Summary Listing of all the Tanks Registered in the State of Massachusetts.

A review of the UST list, as provided by EDR, and dated 06/09/2017 has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MANCHESTER GAS AND S	***96 SUMMER ST***	***ESE 0 - 1/8 (0.115 mi.)***	***B8***	***24***

Tank Status: Tank Removed
Tank Status: In Use
Facility Id: 5491

VERIZON MASSACHUSETT	***52 SUMMER ST***	***SSW 1/8 - 1/4 (0.202 mi.)***	***10***	***28***

Tank Status: Tank Removed
Facility Id: 5487

AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Protection's Summary Listing of all the Tanks Registered in the State of Massachusetts.

A review of the AST list, as provided by EDR, has revealed that there is 1 AST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
VERIZON MASSACHUSETT	***52 SUMMER ST***	***SSW 1/8 - 1/4 (0.202 mi.)***	***10***	***28***

Database: AST, Date of Government Version: 10/22/2009
Release Tracking Number: 5487

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/12/2016 has revealed that there are 2 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BAILEYS SERVICE STA	96 SUMMER ST	ESE 0 - 1/8 (0.115 mi.)	B7	23
CRICKET PRESS	***50 SUMMER STREET***	***SSW 1/8 - 1/4 (0.227 mi.)***	***C12***	***38***

HW GEN: Permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities.

A review of the HW GEN list, as provided by EDR, and dated 06/05/2017 has revealed that there are 2 HW GEN sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CRICKET PRESS INC State Generator Status: SQG-MA EPA Id: MAR000007039	50 SUMMER ST	SSW 1/8 - 1/4 (0.227 mi.)	C11	37

Lower Elevation	Address	Direction / Distance	Map ID	Page
MANCHESTER ESSEX REG EPA Id: MV9785262055	36 LINCOLN ST	NW 1/8 - 1/4 (0.155 mi.)	9	28

MERCURY: A listing of locations, collecting and recycling for mercury-added products. Mercury is toxic to the human nervous system, as well as fish and animals. Mercury can enter the body either through skin absorption or through inhalation of mercury vapors. At room temperature, small beads of mercury will vaporize.

A review of the MERCURY list, as provided by EDR, and dated 01/31/2017 has revealed that there is 1 MERCURY site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
MANCHESTER HARDWARE	35 BEACH STREET	SW 1/4 - 1/2 (0.493 mi.)	18	63

EXECUTIVE SUMMARY

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 2 EDR Hist Auto sites within approximately 0.125 miles of the target property.

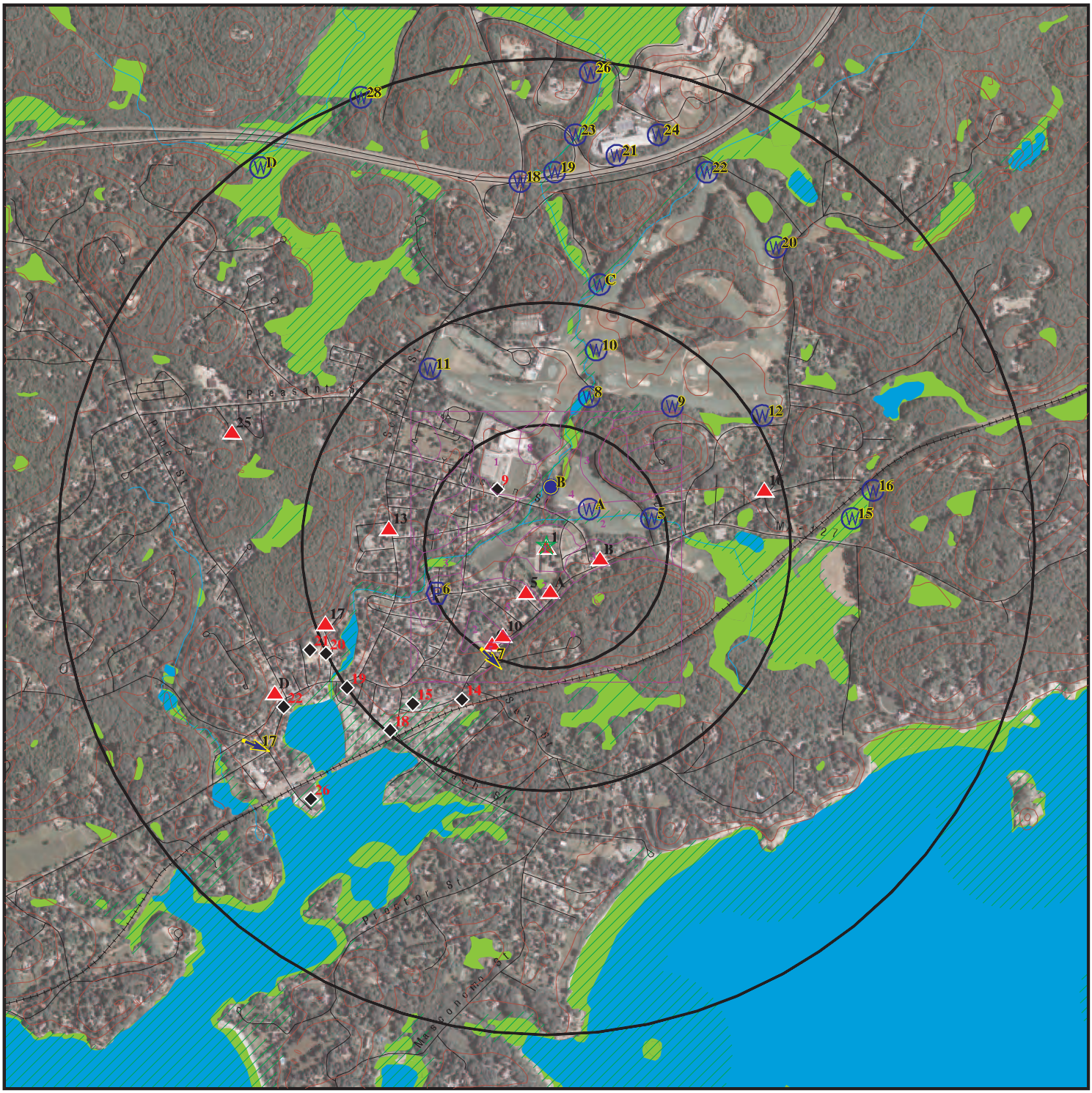
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HOTZ MOTOR CO	76 SUMMER ST	S 0 - 1/8 (0.091 mi.)	A4	20
BAILEY GUY	96 SUMMER ST	ESE 0 - 1/8 (0.113 mi.)	B6	22

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 5 records.

Site Name	Database(s)
NO LOCATION AID	SHWS, RELEASE
NO LOCATION AID	SHWS, RELEASE
RAILROAD TRACKS	SHWS, RELEASE
NO LOCATION AID	SHWS, RELEASE
UTILITY POLE NO 1	SHWS, RELEASE

OVERVIEW MAP - 5045285.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites

0 1/4 1/2 1 Miles

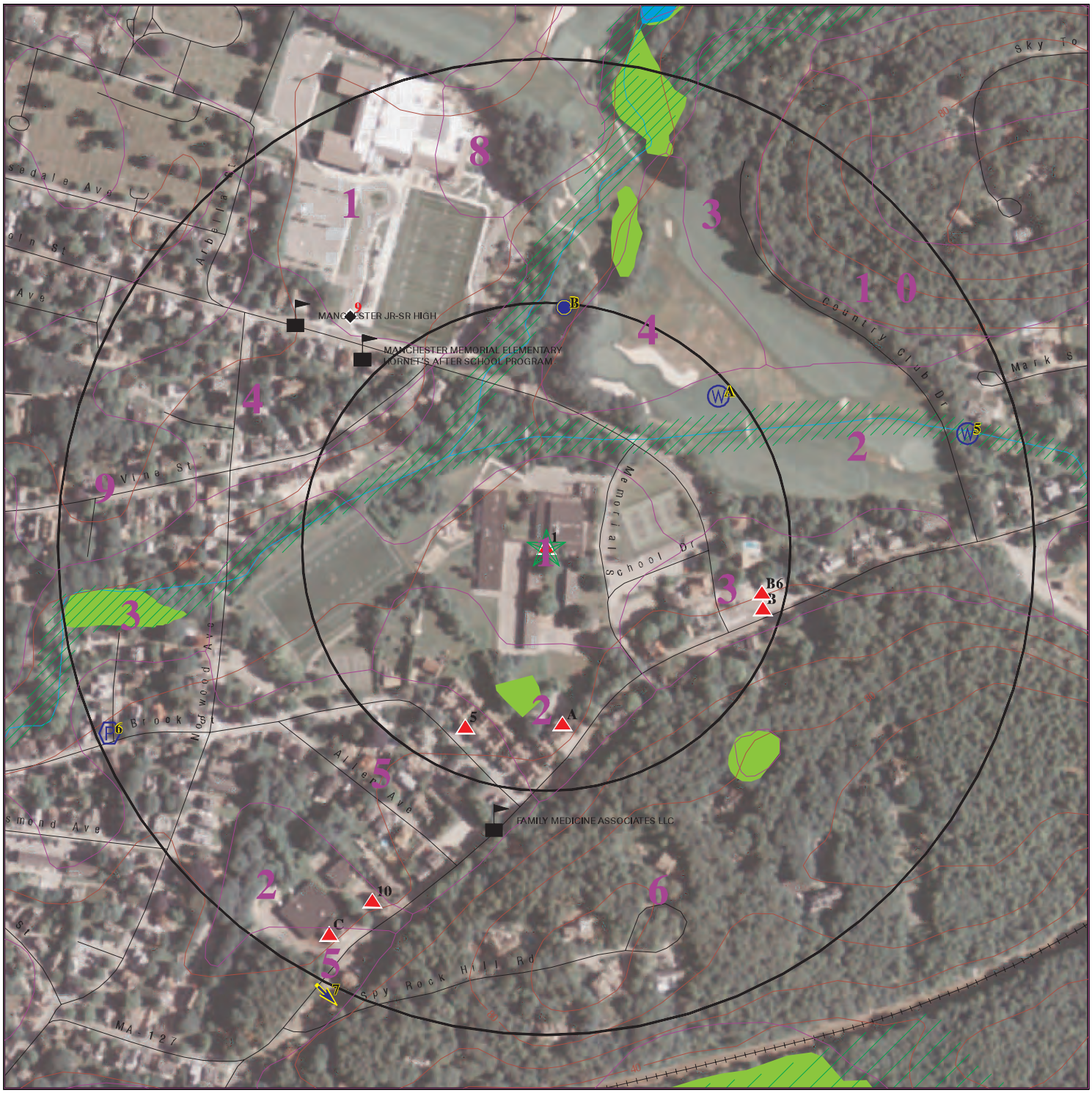
- Indian Reservations BIA
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Upgradient Area
- Areas of Critical Environmental Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Manchester Memorial Elementary School	CLIENT:	CDW Consultants Inc.
ADDRESS:	43 Lincoln Street MANCHESTER MA 01944	CONTACT:	Susan Cahalan
LAT/LONG:	42.579256 / 70.764275	INQUIRY #:	5045285.2s
		DATE:	September 08, 2017 6:53 pm

Copyright © 2017 EDR, Inc. © 2015 TomTom Rel. 2015.

DETAIL MAP - 5045285.2S



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Manchester Memorial Elementary School	CLIENT:	CDW Consultants Inc.
ADDRESS:	43 Lincoln Street MANCHESTER MA 01944	CONTACT:	Susan Cahalan
LAT/LONG:	42.579256 / 70.764275	INQUIRY #:	5045285.2s
		DATE:	September 08, 2017 6:57 pm

Copyright © 2017 EDR, Inc. © 2015 TomTom Rel. 2015.

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS	1.000		1	0	3	7	NR	11
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LAST	0.500		0	0	1	NR	NR	1
LUST	0.500		2	1	3	NR	NR	6
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST	0.250		1	1	NR	NR	NR	2
AST	0.250		0	1	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
RELEASE	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
SPILLS 80	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	1	NR	NR	NR	2
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP	1	NR	NR	NR	NR	NR	1
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
GWDP	TP		NR	NR	NR	NR	NR	0
HW GEN	0.250		0	2	NR	NR	NR	2
LEAD	TP		NR	NR	NR	NR	NR	0
MERCURY	0.500		0	0	1	NR	NR	1
NPDES	TP		NR	NR	NR	NR	NR	0
TIER 2	TP		NR	NR	NR	NR	NR	0
TSD	0.500		0	0	0	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		2	NR	NR	NR	NR	2
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	TP		NR	NR	NR	NR	NR	0

APPENDIX D

Sanborn Maps

Manchester Memorial Elementary School
43 Lincoln Street
MANCHESTER, MA 01944

Inquiry Number: 5045285.3
September 11, 2017

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

09/11/17

Site Name:

Manchester Memorial Elementa
43 Lincoln Street
MANCHESTER, MA 01944
EDR Inquiry # 5045285.3

Client Name:

CDW Consultants Inc.
40 Speen Street
Framingham, MA 01701
Contact: Susan Cahalan

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by CDW Consultants Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 2CF8-42D2-A42F

PO # NA

Project 1587.0

Maps Provided:

1958
1941
1921

Sanborn® Library search results

Certification #: 2CF8-42D2-A42F

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

CDW Consultants Inc. (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2017 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1958 Source Sheets



Volume 1, Sheet 2
1958



Volume 1, Sheet 7
1958

1941 Source Sheets



Volume 1, Sheet 7
1941

1921 Source Sheets

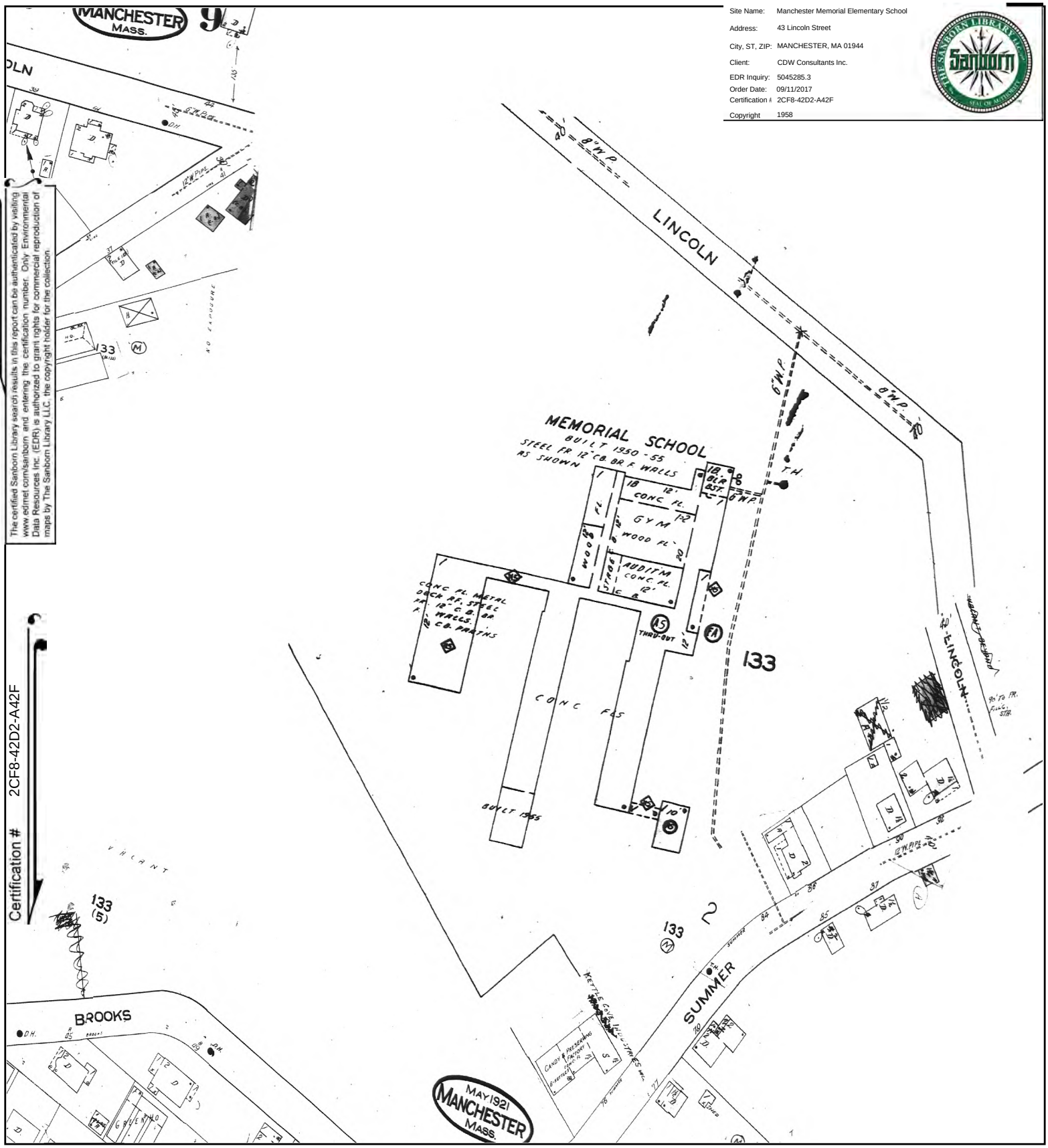


Volume 1, Sheet 7
1921

Site Name: Manchester Memorial Elementary School
Address: 43 Lincoln Street
City, ST, ZIP: MANCHESTER, MA 01944
Client: CDW Consultants Inc.
EDR Inquiry: 5045285.3
Order Date: 09/11/2017
Certification #: 2CF8-42D2-A42F
Copyright 1958

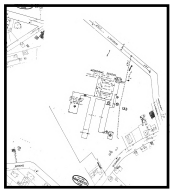
The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

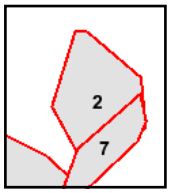
Certification # 2CF8-42D2-A42F



This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600





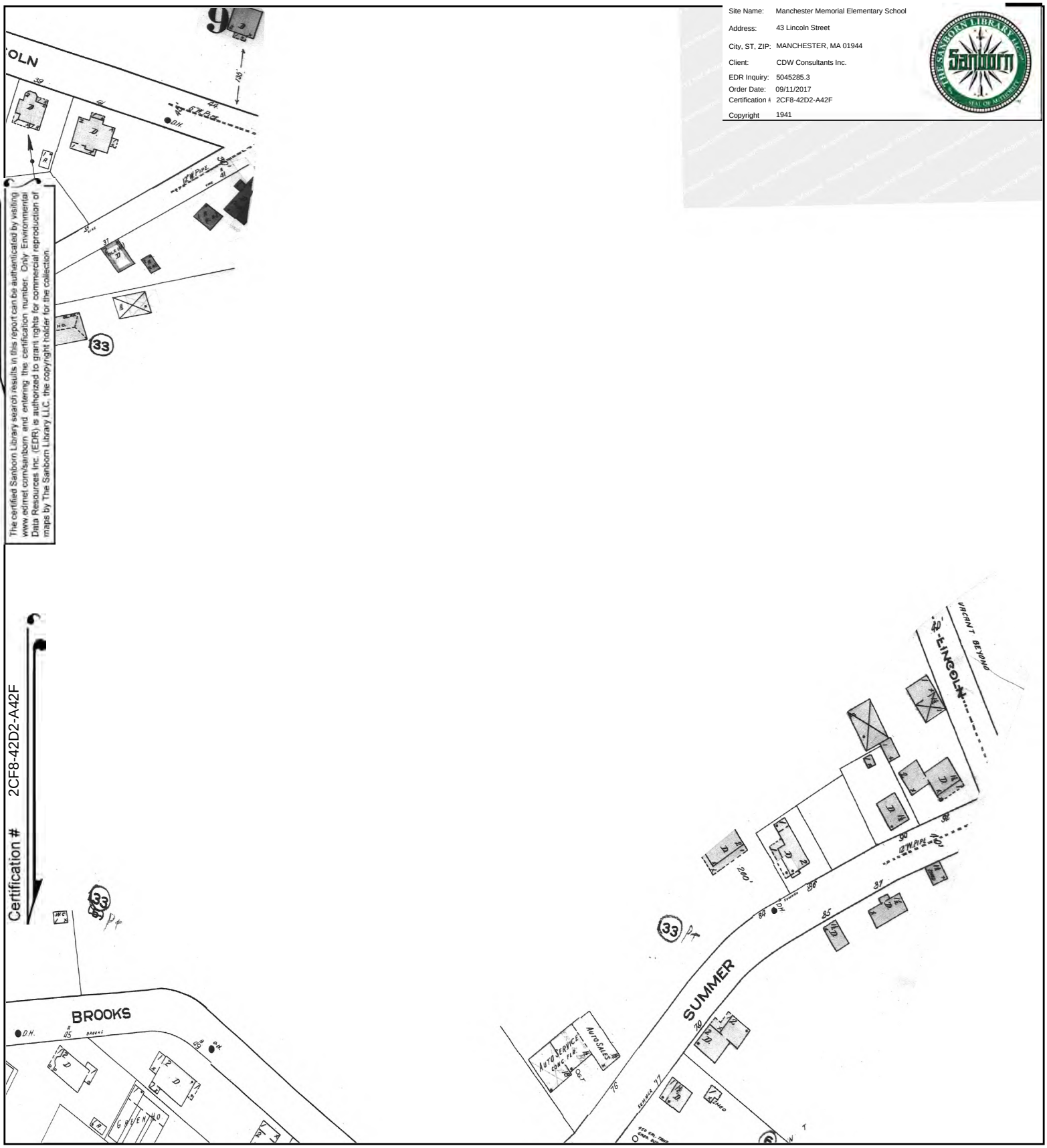
Volume 1, Sheet 7
Volume 1, Sheet 2

N

Site Name: Manchester Memorial Elementary School
Address: 43 Lincoln Street
City, ST, ZIP: MANCHESTER, MA 01944
Client: CDW Consultants Inc.
EDR Inquiry: 5045285.3
Order Date: 09/11/2017
Certification #: 2CF8-42D2-A42F
Copyright 1941

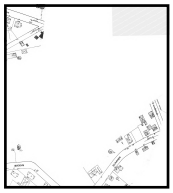
The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

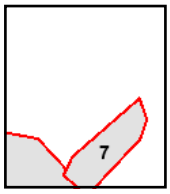
Certification # 2CF8-42D2-A42F



This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600





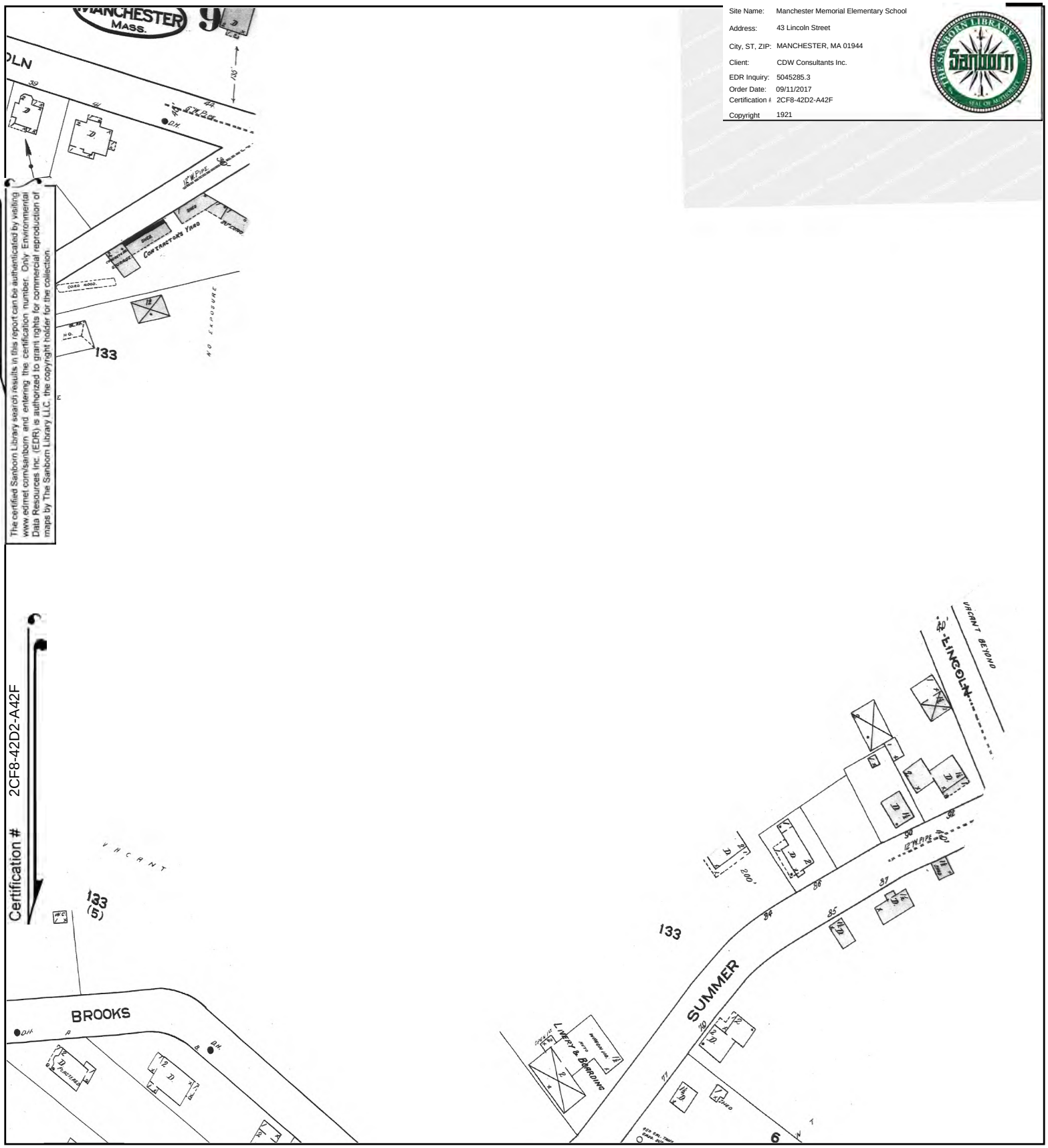
Volume 1, Sheet 7

N

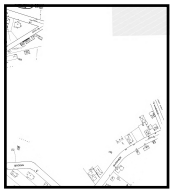
Site Name: Manchester Memorial Elementary School
Address: 43 Lincoln Street
City, ST, ZIP: MANCHESTER, MA 01944
Client: CDW Consultants Inc.
EDR Inquiry: 5045285.3
Order Date: 09/11/2017
Certification #: 2CF8-42D2-A42F
Copyright 1921

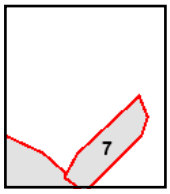
The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

Certification # 2CF8-42D2-A42F



This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.





Volume 1, Sheet 7

0 Feet 150 300 600

N

APPENDIX E

Aerial Photographs

Manchester Memorial Elementary School
43 Lincoln Street
MANCHESTER, MA 01944

Inquiry Number: 5045285.5
September 11, 2017

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

09/11/17

Site Name:

Manchester Memorial Element
43 Lincoln Street
MANCHESTER, MA 01944
EDR Inquiry # 5045285.5

Client Name:

CDW Consultants Inc.
40 Speen Street
Framingham, MA 01701
Contact: Susan Cahalan

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2008	1"=500'	Flight Year: 2008	USDA/NAIP
1995	1"=500'	Acquisition Date: March 29, 1995	USGS/DOQQ
1991	1"=750'	Flight Date: April 04, 1991	USGS
1986	1"=500'	Flight Date: April 01, 1986	USDA
1978	1"=500'	Flight Date: May 11, 1978	USGS
1972	1"=500'	Flight Date: May 22, 1972	USGS
1969	1"=500'	Flight Date: April 13, 1969	USGS
1960	1"=500'	Flight Date: May 19, 1960	USGS
1955	1"=500'	Flight Date: December 05, 1955	USGS
1952	1"=500'	Flight Date: August 26, 1952	USDA
1938	1"=500'	Flight Date: November 10, 1938	USGS

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2017 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

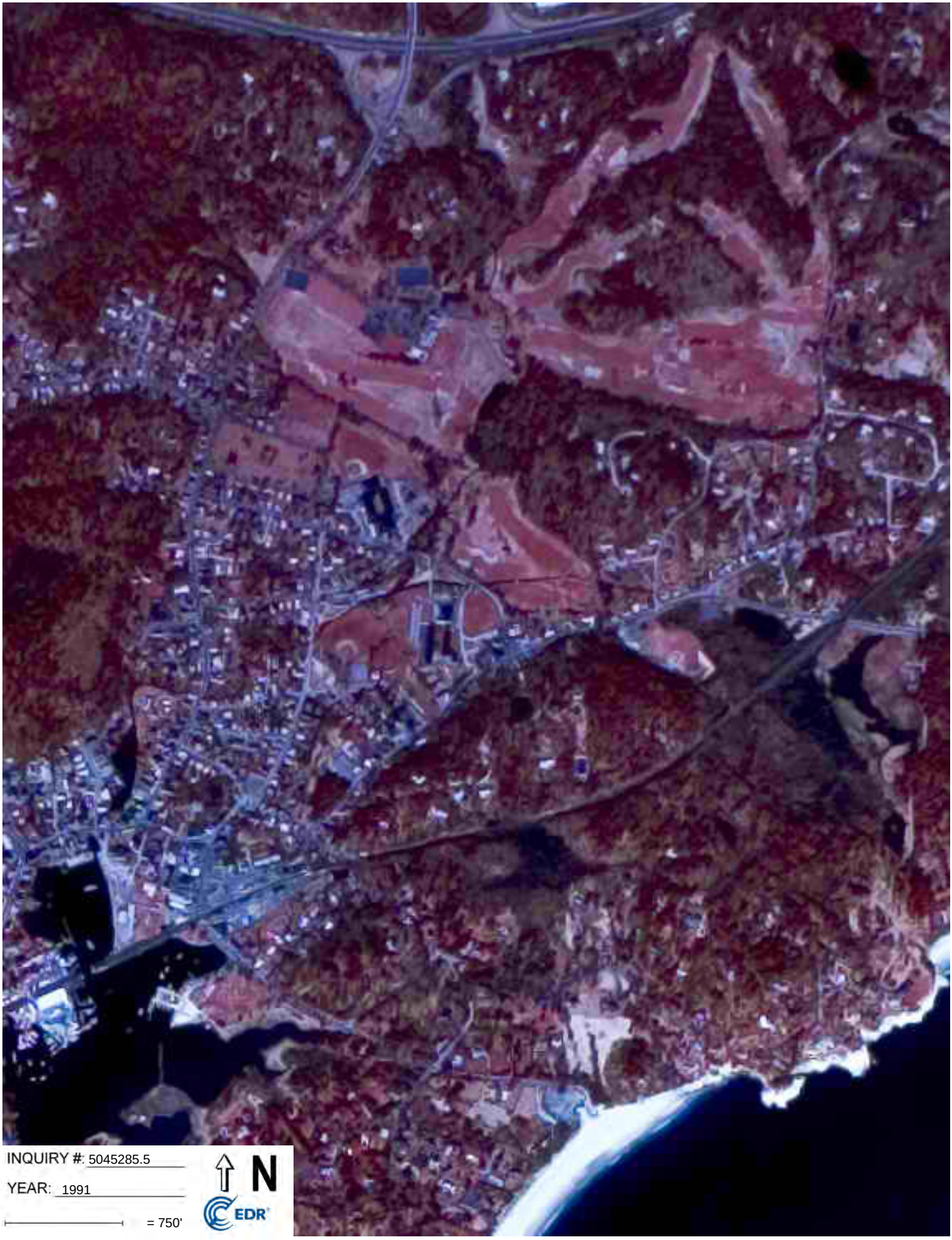
EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.


INQUIRY #: 5045285.5
YEAR: 2012
= 500'
N
EDR


INQUIRY #: 5045285.5
YEAR: 2010
= 500'
N
EDR


INQUIRY #: 5045285.5
YEAR: 2008
= 500'
N
EDR


INQUIRY #: 5045285.5
YEAR: 1995
= 500'
N
EDR


INQUIRY #: 5045285.5
YEAR: 1991
= 750'
N
EDR


INQUIRY #: 5045285.5
YEAR: 1986
= 500'
N
EDR


INQUIRY #: 5045285.5
YEAR: 1978
= 500'
N
EDR


INQUIRY #: 5045285.5
YEAR: 1978
= 500'
N
EDR


INQUIRY #: 5045285.5
YEAR: 1972
= 500'
N
EDR


INQUIRY #: 5045285.5
YEAR: 1969
= 500'
N
EDR


INQUIRY #: 5045285.5
YEAR: 1960
= 500'
N
EDR


INQUIRY #: 5045285.5
YEAR: 1955
= 500'
N
EDR



INQUIRY #: 5045285.5

YEAR: 1952

= 500'

N

EDR


INQUIRY #: 5045285.5
YEAR: 1938
= 500'
N
EDR

CDW CONSULTANTS, INC.
CIVIL & ENVIRONMENTAL ENGINEERS

PHASE II
LIMITED SUBSURFACE INVESTIGATION

Memorial Elementary School
49 Lincoln Street
Manchester-by-the-Sea, MA

Prepared for

JCJ Architects
One State Street, Suite 900
Boston, MA 02109

March 2019

CDW Project # 1838.0

6 Huron Drive, Natick, MA 01760 508-875-2657 FAX 508-875-6617
www.cdwconsultants.com

TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1
1.1 Purpose 1
1.2 Site & Surrounding Area Description 1
2.0 SUMMARY OF PHASE I SITE ASSESSMENT 2
3.0 LIMITED SUBSURFACE INVESTIGATION 2
3.1 Topography and Hydrogeologic Features 2
3.1 Soil Borings and Monitoring Wells 2
3.2 Soil Screening and Laboratory Samples 3
3.3 Groundwater Sampling 4
3.4 Groundwater Gauging 4
4.0 NATURE AND EXTENT OF CONTAMINATION 4
4.1 Soil and Groundwater Classifications 4
4.2 Soil Sample Analysis Results 5
4.3 Groundwater Sample Analysis Results 5
5.0 CONSLUSIONS AND RECOMMENDATIONS 5
6.0 LIMITATIONS 7

FIGURES

Figure 1: Site Location Map
Figure 2: Site Plan with Sampling Locations

TABLES

Table 1: Soil Data Table
Table 2: Groundwater Data Table

APPENDICES

Appendix A: Soil Boring Logs
Appendix B: Soil Laboratory Analytical Report
Appendix C: Groundwater Laboratory Analytical Report

1.0 INTRODUCTION

CDW Consultants, Inc. (CDW), on behalf of our client, JCJ Architects, has conducted a limited subsurface investigation on the Site which is located at 43 Lincoln Street, Manchester-by-the-Sea Massachusetts (Figure 1). The investigation included the advancement of soil borings, soil sampling and analysis, installation of four monitoring wells and groundwater sampling and analysis. This investigation was conducted in February-March 2019. The investigation was conducted in order to determine the presence or likely presence of hazardous substances or petroleum products on the property in areas of concern identified in CDW's Phase I Environmental Site Assessment report from November 2017.

1.1 Purpose

The purpose of the investigation was to evaluate subsurface conditions at the Site in specific areas that will be undergoing Site and/or building demolition and new construction that may have been impacted by identified potential sources of contamination at the Site. This investigation was performed in accordance with Massachusetts General Law (MGL) Chapter 21E.

1.2 Site & Surrounding Area Description

The Site includes 11.31 acres of land. The Site contains one main 66,573 square foot school building constructed in the 1951 with two additions, one in 1954 and 1965. The site is owned by the Town of Manchester by the Sea, and is listed as Book 3507-137, Page 138.

The Site building is connected to municipal water and sewer. The Site building is heated with natural gas. The Site is bound by athletic fields and causeway brook aqueduct to the north, Summer Street to the south with residential properties beyond, Lincoln Street to the east, and north and to the west by residential properties. The Site is located on the United States Geological Survey (USGS) Marblehead North 2012 Quadrangle Map at the following approximate location and elevation:

Universal Transverse Mercator (UTM) Zone 19 Coordinates	
4715387.5	UTM Y (Meters)
4715387.5	UTM X (Meters)
Latitude/Longitude	
42.5792560 - 42° 34' 45.32''	Latitude (North)
70.7642750 - 70° 55' 51.39''	Longitude (West)
Elevation	
32	Feet above sea level

2.0 SUMMARY OF PHASE I SITE ASSESSMENT

CDW completed a Phase I Environmental Site Assessment in October 2017. The investigation conducted by CDW personnel included a review of available federal, state, and local environmental agency records to identify the presence or likely presence of Recognized Environmental Conditions (RECs), Historical Recognized Environmental Condition (HRECs) and Controlled Recognized Environmental Condition (CRECs). No CRECs were identified during the assessment. RECs and HRECs were identified during the assessment. They were:

- Potential contamination from the two 10,000-gallon fuel oil underground storage tanks removed in 1991. This represents a HREC.
- Potential Contamination from the old transformer removed from the electric room in the basement. It is unknown if what chemicals were in the transformer fluids. This represents a HREC.
- Potential contamination from the exterior pad mounted transformer. It is unknown what chemicals were in the transformer fluids.
- Potential dumping of ash from incinerator.

3.0 LIMITED SUBSURFACE INVESTIGATION

3.1 Topography and Hydrogeologic Features

The Site is located 32 feet above sea level, and the topography is level. The bedrock at the Site consists of Cape Ann Granite (Zen et. al. 1983). There are no bedrock outcrops at the Site. According to available information, the site is located within an Interim Wellhead Protection Area (IWPA) and a Zone II of a public water supply well. According to MassGIS the nearest establish wetland resource areas are located to the south, east, and west of the Site. The Site is not located within any FEMA Flood Zones (MassGIS). Surface soils at the Site consist of Udorthents Silty Loam per the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). Groundwater is located approximately 13-21 feet below ground surface. A groundwater elevation survey was performed. Groundwater gauging data points to flow in a northern direction.

3.1 Soil Borings and Monitoring Wells

On February 22, 2019, CDW advanced four (4) soil borings (MW-1, MW2, MW-3, MW-4) at the Site. The soil borings were advanced using a hollow stem auger drill rig. Soil samples were collected continuously in split spoon samples to a depth of 20 feet and classified on-site. CDW's subcontractor, Technical Drilling Services, Inc, of Sterling, MA completed the advancement of the

soil borings. CDW's subcontractor, Eurofins Spectrum Analytical, Inc. of Agawam, Massachusetts, completed the laboratory sample analyses.

The selection of the locations of the borings was based upon the potential source of contamination due to possible onsite presence of contaminants RECs and HRECs at the Site, which may be encountered during construction. The boring locations were chosen to provide coverage surrounding the most probable location of contamination on the Site. This was determined to be the basement boiler room below the kitchen where two 10,000-gallon fuel oil underground storage tanks were removed in 1991 and the old transformer. Soil boring MW-1 was drilled on the eastern part of the building, boring MW-2 on the norther part, near the transformer, MW-3 on the western part of the alcove, and MW-4 on the northern part between 1 and 2.

A two-inch diameter monitoring well was installed to a depth of 20 feet in all four borings. The wells were constructed of a 10-foot length of two-inch diameter slotted polyvinyl chloride (PVC) well screen and a solid PVC riser. Uniformly graded sand was placed around the well screen up to one foot above the screen. One foot of bentonite grout was placed above the sand, followed by native fill to grade. A protective roadway box was installed at grade. The boring/groundwater monitoring well locations are depicted on Figure 2. The soil boring logs are depicted in Appendix A.

3.2 Soil Screening and Laboratory Samples

Soil samples were collected continuously from samples from each boring and field-screened with a photoionization detector (PID) using the headspace method. The soil headspace screening results are provided on the boring logs in Appendix A. The PID is an instrument used to quantify total organic volatiles (TOVs) that ionized at or below 10.6 electron volts (a range which includes gasoline and some fuel oil organics). The detection limit for the instrument is 1 parts per million (ppm). One soil sample from each of four (4) borings was selected and submitted for laboratory analysis for extractable petroleum hydrocarbons (EPH), volatile organic compounds (VOCs), volatile petroleum hydrocarbons (VPH), semi volatile organic compounds (SVOCs) and priority pollutant 13 (PP13) metals. One soil sample from each boring at the depth that exhibited the highest field screening reading or field evidence of contamination was collected. If no field instrumentation readings were registered during drilling, the soil sample was collected from the vadose zone. The samples were preserved by ice, refrigeration and methanol, as appropriate, prior to laboratory analysis, and delivered to the laboratory accompanied by an appropriate chain of custody record.

The field-screening results indicated detectable levels of TOVs in both borings ranging from non-detect to 0.2 ppmv. These detections are very low and were not consistently detected in any area of the borings. The PID headspace analysis results are summarized in the boring logs in Appendix A.

3.3 Groundwater Sampling

On March 1, 2019, CDW collected groundwater samples from the newly installed monitoring wells (MW-1, MW2, MW-3, MW-4). All wells were allowed to equilibrate for at least one week prior to sampling. The wells were purged and sampled using a disposable polyethylene bailers. At least three well volumes were purged from the well prior to collecting the samples. The groundwater collected was turbid with an abundance of silt. The samples were submitted to CDW's subcontractor, Spectrum Analytical, for analysis for EPH, VOCs, VPH, SVOCs and dissolved PP13. The samples for metals analyses were filtered in the field prior to preservation.

3.4 Groundwater Gauging

On March 1, 2019, newly installed monitoring wells were gauged for depth to groundwater and the presence of non-aqueous phase liquid (NAPL) using an oil/water interface probe. Measurements were made to the top of the PVC riser. No NAPL was observed in the well. Depth to groundwater was measured at approximately 14 feet below the ground surface. Groundwater from all four monitoring wells was observed to flow directly downgradient to the Causeway Brook which flows through the north edge of the Site. Depth to groundwater measurements are provided in Table 2.

4.0 NATURE AND EXTENT OF CONTAMINATION

4.1 Soil and Groundwater Classifications

The selection of a soil classification of RCS-1, as defined in the Massachusetts Contingency Plan (MCP), 310 CMR 40.0361(1)(a), for the comparison of Reportable Concentrations, is applicable to the Site because:

- All the soil sample locations are on an elementary school property.

The selection of a groundwater classification of RCGW-1, as defined in the MCP, 310 CMR 40.0362, for the purpose of identifying Reportable Concentrations, was based upon the following criterion:

- Groundwater at the northern part of the Site where all four wells are located, is in a MassDEP Wellhead protection area (Zone I) because of its proximity to a public water supply and recharge area.

4.2 Soil Sample Analysis Results

Laboratory analysis of soil samples revealed detectable concentrations of EPH compounds, SVOCs, VOCs and metals. All compounds detected are reported below MCP RCS-1 Reportable Concentrations. It is important to note that the laboratory detection limits for VOC analytes and one metal were above the MCP RCS-1 standard. The following analytes were affected: bromodichloromethane, bromoform, bromomethane, chloroform, chloromethane, cis-1,2-dichloroethene, cis-1,3-dichloropropene, dibromochloromethane, 1,4-dioxane, 1,2-dichloroethane, 1,2-dichloropropane, 4-methyl-2-pentanone, 1,1,1,2-tetrachloroethane, 1,1,1-trichloroethane, 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane and thallium. The reporting limit (RL) for an individual compound using WSC-CAM-II A is dependent on the concentration of the lowest non-zero standard in the initial calibration, analyzed under identical conditions as the sample, with adjustments made for the sample size, extraction concentration factor, percent solids, dilution factors, etc., as required. The CAM RLs for WSC-CAM-II target analytes are 100-200 µg/kg (wet weight) for high-level soil/sediment samples. Therefore, the above listed compounds RLs are below the target RL. Since no other VOCs were detected in soil and there is no source on property, it is reasonable to assume that these compounds are not likely to be present. Furthermore, there were no PID readings, or olfactory-visual indication of contamination. Analytical test results from all other compounds were below their respective laboratory detection limits. None of these results exceeded the applicable MCP Reportable Concentrations. The results of all soil analyses are summarized in Table 1. A copy of the laboratory analytical report are included in Appendix B.

4.3 Groundwater Sample Analysis Results

Groundwater samples were analyzed for EPH, VPH, VOCs, SVOCs and PP13 metals. No VPH, EPH or VOCs were detected in groundwater above laboratory detection limits. SVOC compounds benzo (b) fluoranthene, chrysene, floranthene, phenanthrene and pyrene were detected above laboratory detection limits, but below MCP GW-1 Reportable Concentrations. The dissolved metals arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, thallium and zinc were detected in all four groundwater samples. The detected concentrations of metals are above the applicable Reportable Concentration for GW-1 classified groundwater. The results of groundwater analyses are included in Table 2. The laboratory analytical report is included in Appendix C.

5.0 CONSLUSIONS AND RECOMMENDATIONS

The Site study area for this Phase II Investigation consists of a portion of the Manchester Memorial Elementary School in Manchester by the Sea, Massachusetts. This investigation focused on subsurface testing in areas of the school property that are proposed for new construction. Based upon the results of subsurface soil and groundwater testing and site observations, CDW is presenting our

conclusions and a summary of the key observations upon which these conclusions are based. Based upon our research, subsurface testing, and site observations, CDW is presenting our conclusions and a summary of the key observations upon which these conclusions are based. From this study, CDW has made the following observations:

On February 22, 2019, CDW advanced four (4) soil borings (MW-1, MW2, MW-3, MW-4) at the Site. A two-inch diameter monitoring well was installed to a depth of 20 feet in all four borings. Soil samples were collected continuously from samples from each boring and field-screened with a PID for TOVs. One soil sample from each of four (4) borings was selected and submitted for laboratory analysis for EPH, VOCs, VPH, SVOCs and PP13. Laboratory analysis of soil samples revealed detectable concentrations of EPH compounds, SVOCs, VOCs and metals. All compounds detected are reported below MCP RCS-1 Reportable Concentrations.

On March 1, 2019, CDW collected groundwater samples from the newly installed monitoring wells (MW-1, MW2, MW-3, MW-4). The samples were submitted for laboratory analysis of EPH, VOCs, VPH, SVOCs and dissolved PP13. No VPH, EPH, VOCs or SVOCs were detected in groundwater above MCP GW-1 Reportable Concentrations. The detected concentrations of metals in all four wells are above the applicable Reportable Concentration for GW-1 classified groundwater.

Based upon the Phase II Investigation, CDW has the following recommendations:

Soil

The soils on the site contain low levels of EPH compounds, SVOCs, VOCs and metals. All compounds detected are reported below MCP RCS-1 Reportable Concentrations. These soils are therefore not regulated by the MCP, and are not considered a remediation waste once excavated. The soils may be re-used on-site without restriction. However, reuse of these soils off-site needs to be evaluated such that the quality of the exported Site soils is acceptable to the destination site pursuant to MassDEP regulations and policies.

The sampling and analytical program was specific to one or more areas of the Site where potential contamination could or occur. As such, contingency plans should be in place to manage any potentially contaminated soil that may be encountered during building demolition or new construction. CDW recommends that a contingency be factored into soil excavation planning to allow for evaluation, testing and disposal of any impacted soils discovered during construction that were not discovered during these limited investigation activities. Historical research does not guarantee that all former Site use, storage and disposal practices have been properly recorded and/or are presently known. If evidence of a release to soil and/or groundwater is encountered, measures must be conducted to properly manage those conditions.

Groundwater

The detected concentrations of metals in all four wells are above the applicable Reportable Concentration for GW-1 classified groundwater, and represent a 120-day reporting condition to the Massachusetts Department of Environmental Protection (MassDEP). However, due to the high levels of turbidity encountered in the groundwater, CDW recommends resampling the four monitoring wells within the 120 day reporting window, to determine if the metals concentrations are an anomaly due to turbidity.

6.0 LIMITATIONS

This investigation was intended to provide a general assessment of current subsurface conditions and was limited in nature and scope. The findings are limited to the information available at the time of the investigation and the scope of services as defined. The results of the limited subsurface exploration performed on this Site provide the basis for the findings and are representative of conditions at the time of the investigation. No other conclusions, interpretations, or recommendations are contained or implied in this report other than those expressed. Also, CDW makes no warranty, expressed or implied, on the accuracy of the work and information completed by others and upon which CDW has relied to prepare this report. No other use of this report is warranted without the written consent of CDW Consultants, Inc.

FIGURES



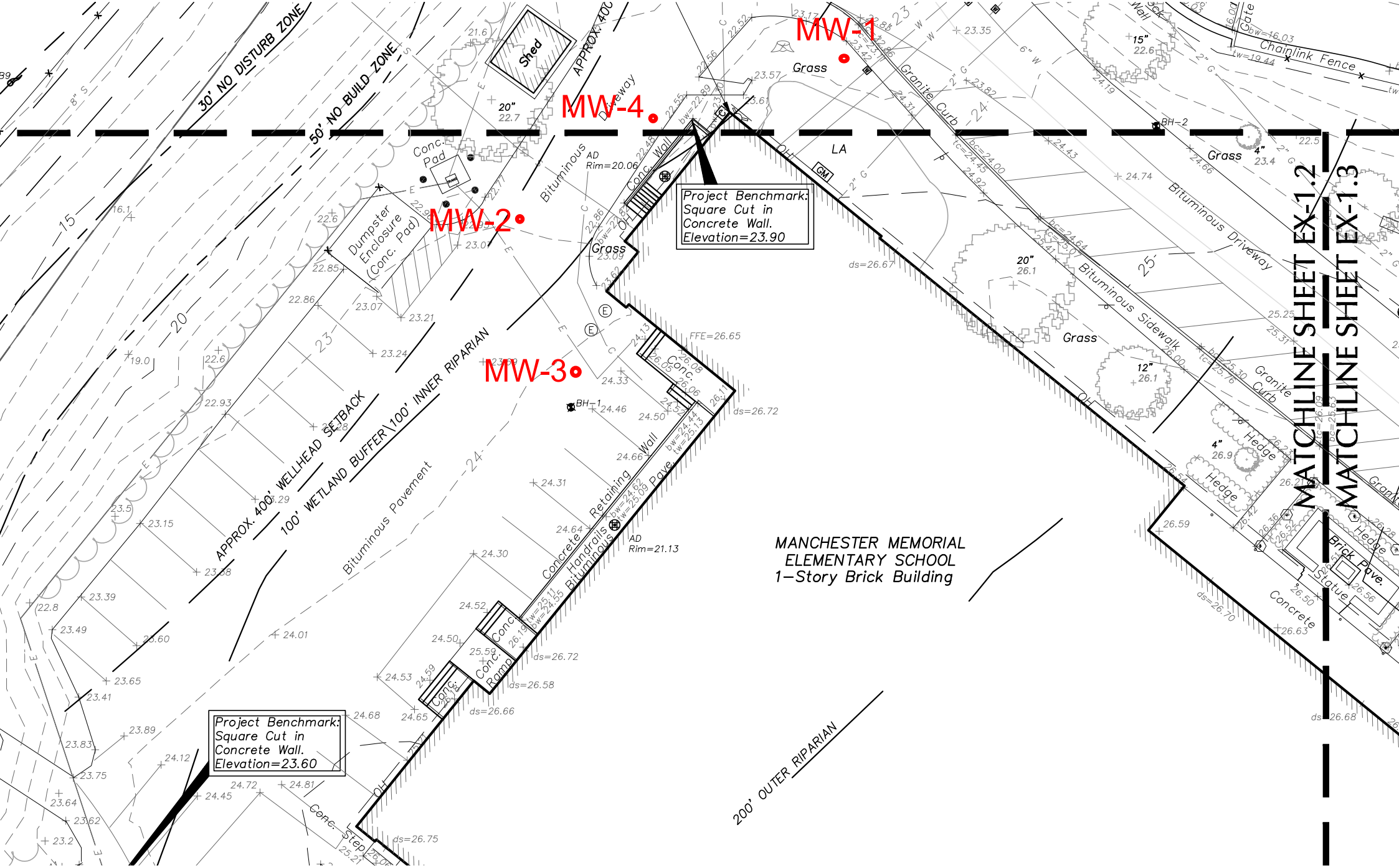
CDW CONSULTANTS, INC.

Manchester Memorial Elementary School
43 Lincoln Street
Manchester-by-the-Sea, MA 01944

Figure 1: Site Location Map

SOURCE: MASSGIS

SCALE: 1 inch = 2,083 feet


MW-1
MW-2
MW-3
MW-4
30' NO DISTURB ZONE
50' NO BUILD ZONE
APPROX. 400' WELLHEAD SETBACK
100' WETLAND BUFFER\100' INNER RIPARIAN
200' OUTER RIPARIAN
Project Benchmark: Square Cut in Concrete Wall. Elevation=23.90
Project Benchmark: Square Cut in Concrete Wall. Elevation=23.60
MANCHESTER MEMORIAL ELEMENTARY SCHOOL
1-Story Brick Building
MATCHLINE SHEET EX-1.2
MATCHLINE SHEET EX-1.3
Shed
Dumpster Enclosure (Conc. Pad)
Conc. Pad
Bituminous Driveway
Bituminous Pavement
Bituminous Sidewalk
Granite Curb
Chainlink Fence
Gate
Concrete Retaining Wall
Concrete Handrails
Conc. Ramp
Conc. Steps
Brick Pave.
Statue
Hedge
Grass
LA
GM
OH
BH-1
BH-2
AD Rim=20.06
AD Rim=21.13
FFE=26.65

TABLES

Table 1
Soil Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCS1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53666-01**	**SC53666-02**	**SC53666-03**	**SC53666-04**
Matrix:		**Soil**	**Soil**	**Soil**	**Soil**
Sampled:		**22-Feb-19**	**22-Feb-19**	**22-Feb-19**	**22-Feb-19**
MADEP EPH (mg/kg)					
2-Methylnaphthalene	0.7	< 0.63	< 0.55	< 0.54	< 0.55
Acenaphthene	4	< 0.63	< 0.55	< 0.54	< 0.55
Acenaphthylene	1	< 0.63	< 0.55	< 0.54	< 0.55
Anthracene	1000	< 0.63	< 0.55	< 0.54	< 0.55
Benzo(a)anthracene	7	< 0.63	< 0.55	< 0.54	< 0.55
Benzo(a)pyrene	2	< 0.63	< 0.55	< 0.54	< 0.55
Benzo(b)fluoranthene	7	< 0.63	< 0.55	< 0.54	< 0.55
Benzo(g,h,i)perylene	1000	< 0.63	< 0.55	< 0.54	< 0.55
Benzo(k)fluoranthene	70	< 0.63	< 0.55	< 0.54	< 0.55
C11 to C22 Aromatics	1000	< 15	< 13	< 13	< 13
C19 to C36 Aliphatics	3000	< 15	< 13	< 13	22
C9 to C18 Aliphatics	1000	< 7.6	< 6.7	< 6.5	< 6.6
Chrysene	70	< 0.63	< 0.55	< 0.54	< 0.55
Dibenzo(a,h)anthracene	0.7	< 0.63	< 0.55	< 0.54	< 0.55
Fluoranthene	1000	< 0.63	< 0.55	< 0.54	< 0.55
Fluorene	1000	< 0.63	< 0.55	< 0.54	< 0.55
Indeno(1,2,3-cd)pyrene	7	< 0.63	< 0.55	< 0.54	< 0.55
Naphthalene	4	< 0.63	< 0.55	< 0.54	< 0.55
Phenanthrene	10	< 0.63	< 0.55	< 0.54	< 0.55
Pyrene	1000	< 2.5	< 2.2	< 2.2	< 2.2
Unadjusted C11 - C22 Aromatics	NA	< 15	< 13	< 13	< 13
MADEP VPH (mg/kg)					
Benzene	2	< 0.3	< 0.1	< 0.1	< 0.09
C5-C8 Aliphatic Hydrocarbons	100	< 13.0	< 7.29	< 6.20	< 4.30
C9-C10 Aromatic Hydrocarbons	100	< 13.0	< 7.29	< 6.20	< 4.30
C9-C12 Aliphatic Hydrocarbons	1000	< 13.0	< 7.29	< 6.20	< 4.30
Ethylbenzene	40	< 0.3	< 0.1	< 0.1	< 0.09
m,p-Xylenes	300	< 0.3	< 0.1	< 0.1	< 0.09
Methyl t-butyl ether	0.1	< 0.3	< 0.1	< 0.1	< 0.09
Naphthalene	4	< 0.8	< 0.4	< 0.4	< 0.3
o-Xylene	500	< 0.3	< 0.1	< 0.1	< 0.09
Toluene	30	< 0.3	< 0.1	< 0.1	< 0.09
Unadjusted C5-C8 Aliphatics	NA	< 13.0	< 7.29	< 6.20	< 4.30
Unadjusted C9-C12 Aliphatics	NA	< 13.0	< 7.29	< 6.20	< 4.30
SM 2540 G %Moisture Calc (%)					
Moisture	NA	24.1	12.7	10.4	10.3

Table 1
Soil Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCS1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53666-01**	**SC53666-02**	**SC53666-03**	**SC53666-04**
Matrix:		**Soil**	**Soil**	**Soil**	**Soil**
Sampled:		**22-Feb-19**	**22-Feb-19**	**22-Feb-19**	**22-Feb-19**
SW-846 6010C (mg/kg)					
Antimony	20	< 5.19	4.11	< 4.69	< 3.90
Arsenic	20	9.96	9.56	9.99	8.65
Beryllium	90	1.38	0.811	0.594	1.05
Cadmium	70	< 0.519	< 0.390	< 0.469	< 0.390
Chromium	100	33.9	17	19.9	21.6
Copper	1000	20.9	< 1.56	< 1.88	15.2
Lead	200	12.5	7.74	7.46	12.8
Nickel	600	21	16.1	14.7	15.2
Selenium	400	< 5.19	< 3.90	< 4.69	< 3.90
Silver	100	< 1.04	< 0.779	< 0.938	< 0.780
Thallium	8	< 15.6	< 11.7	< 14.1	< 11.7
Zinc	1000	110	80.6	64	78.3
SW-846 7471B (mg/kg)					
Mercury	20	< 0.167	< 0.153	< 0.137	< 0.139
SW-846 8260C (ug/kg)					
1,1,1,2-Tetrachloroethane	100	< 660	< 570	< 370	< 170
1,1,1-Trichloroethane	30000	< 660	< 570	< 370	< 170
1,1,2,2-Tetrachloroethane	5	< 660	< 570	< 370	< 170
1,1,2-Trichloroethane	100	< 660	< 570	< 370	< 170
1,1-Dichloroethane	400	< 660	< 570	< 370	< 170
1,1-Dichloroethene	3000	< 660	< 570	< 370	< 170
1,1-Dichloropropene	NA	< 660	< 570	< 370	< 170
1,2,3-Trichlorobenzene	NA	< 1300	< 1100	< 730	< 330
1,2,3-Trichloropropane	100000	< 660	< 570	< 370	< 170
1,2,4-Trichlorobenzene	2000	< 1300	< 1100	< 730	< 330
1,2,4-Trimethylbenzene	1000000	< 660	< 570	< 370	< 170
1,2-Dibromo-3-chloropropane	10000	< 660	< 570	< 370	< 170
1,2-Dibromoethane	100	< 660	< 570	< 370	< 170
1,2-Dichlorobenzene	9000	< 660	< 570	< 370	< 170
1,2-Dichloroethane	100	< 660	< 570	< 370	< 170
1,2-Dichloropropane	100	< 660	< 570	< 370	< 170
1,3,5-Trichlorobenzene	NA	< 1100	< 910	< 590	< 270
1,3,5-Trimethylbenzene	10000	< 660	< 570	< 370	< 170
1,3-Dichlorobenzene	3000	< 660	< 570	< 370	< 170
1,3-Dichloropropane	500000	< 660	< 570	< 370	< 170
1,4-Dichlorobenzene	700	< 660	< 570	< 370	< 170

Table 1
Soil Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCS1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53666-01**	**SC53666-02**	**SC53666-03**	**SC53666-04**
Matrix:		**Soil**	**Soil**	**Soil**	**Soil**
Sampled:		**22-Feb-19**	**22-Feb-19**	**22-Feb-19**	**22-Feb-19**
1,4-Dioxane	200	< 33000	< 28000	< 18000	< 8300
2,2-Dichloropropane	NA	< 660	< 570	< 370	< 170
2-Butanone	4000	< 1300	< 1100	< 730	< 330
2-Chlorotoluene	100000	< 660	< 570	< 370	< 170
2-Hexanone	100000	< 1300	< 1100	< 730	< 330
4-Chlorotoluene	NA	< 660	< 570	< 370	< 170
4-Methyl-2-pentanone	400	< 1300	< 1100	< 730	< 330
Acetone	6000	< 2600	< 2300	< 1500	< 670
Acrylonitrile	100000	< 2600	< 2300	< 1500	< 670
Benzene	2000	< 660	< 570	< 370	< 170
Bromobenzene	100000	< 660	< 570	< 370	< 170
Bromochloromethane	NA	< 660	< 570	< 370	< 170
Bromodichloromethane	100	< 660	< 570	< 370	< 170
Bromoform	100	< 1300	< 1100	< 730	< 330
Bromomethane	500	< 660	< 570	< 370	< 170
Carbon Disulfide	100000	< 660	< 570	< 370	< 170
Carbon Tetrachloride	5000	< 660	< 570	< 370	< 170
Chlorobenzene	1000	< 660	< 570	< 370	< 170
Chloroethane	100000	< 660	< 570	< 370	< 170
Chloroform	200	< 660	< 570	< 370	< 170
Chloromethane	100000	< 660	< 570	< 370	< 170
cis-1,2-Dichloroethene	300	< 660	< 570	< 370	< 170
cis-1,3-Dichloropropene	10	< 660	< 570	< 370	< 170
Dibromochloromethane	5	< 660	< 570	< 370	< 170
Dibromomethane	500000	< 660	< 570	< 370	< 170
Dichlorodifluoromethane	1000000	< 660	< 570	< 370	< 170
di-Isopropyl ether	100000	< 660	< 570	< 370	< 170
Ethanol	100000	< 99000	< 85000	< 55000	< 25000
Ethyl Ether	100000	< 660	< 570	< 370	< 170
Ethyl t-butyl ether	NA	< 660	< 570	< 370	< 170
Ethylbenzene	40000	< 660	< 570	< 370	< 170
Freon 113	NA	< 1300	< 1100	< 730	< 330
Hexachlorobutadiene	30000	< 1300	< 1100	< 730	< 330
Isopropylbenzene	1000000	< 660	< 570	< 370	< 170
m+p-Xylene	300000	< 660	< 570	< 370	< 170
Methyl Tertiary Butyl Ether	100	< 660	< 570	< 370	< 170
Methylene Chloride	100	< 660	< 570	< 370	< 170
Naphthalene	4000	< 660	< 570	< 370	< 170
n-Butylbenzene	NA	< 1100	< 910	< 590	< 270
n-Propylbenzene	100000	< 660	< 570	< 370	< 170

Table 1
Soil Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCS1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53666-01**	**SC53666-02**	**SC53666-03**	**SC53666-04**
Matrix:		**Soil**	**Soil**	**Soil**	**Soil**
Sampled:		**22-Feb-19**	**22-Feb-19**	**22-Feb-19**	**22-Feb-19**
o-Xylene	500000	< 660	< 570	< 370	< 170
p-Isopropyltoluene	100000	< 660	< 570	< 370	< 170
sec-Butylbenzene	NA	< 660	< 570	< 370	< 170
Styrene	3000	< 660	< 570	< 370	< 170
t-Amyl methyl ether	NA	< 660	< 570	< 370	< 170
t-Butyl alcohol	100000	< 13000	< 11000	< 7300	< 3300
tert-Butylbenzene	100000	< 660	< 570	< 370	< 170
Tetrachloroethene	1000	< 660	< 570	< 370	< 170
Tetrahydrofuran	500000	< 1100	< 910	< 590	< 270
Toluene	30000	< 660	< 570	< 370	< 170
trans-1,2-Dichloroethene	1000	< 660	< 570	< 370	< 170
trans-1,3-Dichloropropene	10	< 660	< 570	< 370	< 170
trans-1,4-Dichloro-2-butene	10000	< 6600	< 5700	< 3700	< 1700
Trichloroethene	300	< 660	< 570	< 370	< 170
Trichlorofluoromethane	1000000	< 660	< 570	< 370	< 170
Vinyl Chloride	700	< 660	< 570	< 370	< 170
SW-846 8270D (ug/kg)					
1,1'-Biphenyl	50	< 48	< 42	< 40	< 41
1,2,4,5-Tetrachlorobenzene	1000000	< 48	< 42	< 40	< 41
1,2,4-Trichlorobenzene	2000	< 66	< 57	< 55	< 56
1,2-Dichlorobenzene	9000	< 66	< 57	< 55	< 56
1,2-Diphenylhydrazine	50000	< 57	< 49	< 48	< 48
1,3-Dichlorobenzene	3000	< 48	< 42	< 40	< 41
1,4-Dichlorobenzene	700	< 48	< 42	< 40	< 41
1-Methylnaphthalene	NA	< 22	< 19	< 18	< 19
2,3,4,6-Tetrachlorophenol	50000	< 220	< 190	< 180	< 190
2,4,5-Trichlorophenol	4000	< 88	< 76	< 73	< 74
2,4,6-Trichlorophenol	700	< 75	< 65	< 62	< 63
2,4-Dichlorophenol	700	< 57	< 49	< 48	< 48
2,4-Dimethylphenol	700	< 88	< 76	< 73	< 74
2,4-Dinitrophenol	3000	< 1300	< 1100	< 1100	< 1100
2,4-Dinitrotoluene	700	< 220	< 190	< 180	< 190
2,6-Dinitrotoluene	100000	< 66	< 57	< 55	< 56
2-Chloronaphthalene	1000000	< 44	< 38	< 37	< 37
2-Chlorophenol	700	< 48	< 42	< 40	< 41
2-Methylnaphthalene	700	< 44	< 38	< 37	< 37
2-Methylphenol	500000	< 88	< 76	< 73	< 74
2-Nitroaniline	NA	< 66	< 57	< 55	< 56
2-Nitrophenol	100000	< 75	< 65	< 62	< 63

Table 1
Soil Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCS1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		SC53666-01	SC53666-02	SC53666-03	SC53666-04
Matrix:		Soil	Soil	Soil	Soil
Sampled:		22-Feb-19	22-Feb-19	22-Feb-19	22-Feb-19
3,3'-Dichlorobenzidine	3000	< 440	< 380	< 370	< 370
3-Nitroaniline	NA	< 220	< 190	< 180	< 190
4,6-Dinitro-2-methylphenol	50000	< 660	< 570	< 550	< 560
4-Bromophenyl-phenylether	100000	< 66	< 57	< 55	< 56
4-Chloro-3-methylphenol	1000000	< 66	< 57	< 55	< 56
4-Chloroaniline	1000	< 220	< 190	< 180	< 190
4-Chlorophenyl-phenylether	1000000	< 57	< 49	< 48	< 48
4-Methylphenol	500000	< 44	< 38	< 37	< 37
4-Nitroaniline	1000000	< 220	< 190	< 180	< 190
4-Nitrophenol	100000	< 660	< 570	< 550	< 560
Acenaphthene	4000	< 22	< 19	< 18	< 19
Acenaphthylene	1000	< 22	< 19	< 18	< 19
Acetophenone	1000000	< 66	< 57	< 55	< 56
Aniline	1000000	< 660	< 570	< 550	< 560
Anthracene	1000000	< 22	< 19	< 18	< 19
Atrazine	100000	< 570	< 490	< 480	< 480
Benzaldehyde	100000	< 220	< 190	< 180	< 190
Benzidine	10000	< 1300	< 1100	< 1100	< 1100
Benzo(a)anthracene	7000	< 22	< 19	< 18	< 19
Benzo(a)pyrene	2000	< 22	< 19	< 18	< 19
Benzo(b)fluoranthene	7000	27.3	< 19	< 18	< 19
Benzo(g,h,i)perylene	1000000	< 22	< 19	< 18	< 19
Benzo(k)fluoranthene	70000	< 22	< 19	< 18	< 19
Benzoic acid	1000000	< 660	< 570	< 550	< 560
Benzyl alcohol	NA	< 660	< 570	< 550	< 560
bis(2-Chloroethoxy)methane	500000	< 48	< 42	< 40	< 41
bis(2-Chloroethyl)ether	700	< 66	< 57	< 55	< 56
bis(2-Chloroisopropyl)ether	700	< 57	< 49	< 48	< 48
bis(2-Ethylhexyl)phthalate	90000	< 220	1130	260	< 190
Butylbenzylphthalate	100000	< 220	< 190	< 180	< 190
Caprolactam	NA	< 220	< 190	< 180	< 190
Carbazole	NA	< 48	< 42	< 40	< 41
Chrysene	70000	< 22	< 19	< 18	< 19
Dibenz(a,h)anthracene	700	< 22	< 19	< 18	< 19
Dibenzofuran	100000	< 48	< 42	< 40	< 41
Diethylphthalate	10000	< 220	< 190	< 180	< 190
Dimethylphthalate	700	< 220	< 190	< 180	< 190
Di-n-butylphthalate	50000	< 220	< 190	< 180	< 190
Di-n-octylphthalate	1000000	< 220	< 190	< 180	< 190
Fluoranthene	1000000	36.2	< 19	< 18	< 19

Table 1
Soil Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCS1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53666-01**	**SC53666-02**	**SC53666-03**	**SC53666-04**
Matrix:		**Soil**	**Soil**	**Soil**	**Soil**
Sampled:		**22-Feb-19**	**22-Feb-19**	**22-Feb-19**	**22-Feb-19**
Fluorene	1000000	< 22	< 19	< 18	< 19
Hexachlorobenzene	700	< 22	< 19	< 18	< 19
Hexachlorobutadiene	30000	< 100	< 88	< 84	< 85
Hexachlorocyclopentadiene	50000	< 660	< 570	< 550	< 560
Hexachloroethane	700	< 220	< 190	< 180	< 190
Indeno(1,2,3-cd)pyrene	7000	< 22	< 19	< 18	< 19
Isophorone	100000	< 48	< 42	< 40	< 41
Naphthalene	4000	< 22	< 19	< 18	< 19
Nitrobenzene	500000	< 88	< 76	< 73	< 74
N-Nitrosodimethylamine	50000	< 220	< 190	< 180	< 190
N-Nitroso-di-n-propylamine	50000	< 66	< 57	< 55	< 56
N-Nitrosodiphenylamine	100000	< 48	< 42	< 40	< 41
Pentachloronitrobenzene	100000	< 220	< 190	< 180	< 190
Pentachlorophenol	3000	< 220	< 190	< 180	< 190
Phenanthrene	10000	25.4	< 19	< 18	< 19
Phenol	1000	< 48	< 42	< 40	< 41
Pyrene	1000000	31.8	< 19	< 18	< 19
Pyridine	500000	< 220	< 190	< 180	< 190

A Value with a < in front of = Not Detected above detection limit of value listed.
RCS-1 = Massachusetts Contingency Plan RCS-1 Reportable Concentrations

Table 2
Groundwater Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCGW-1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53767-01**	**SC53767-02**	**SC53767-03**	**SC53767-04**
Matrix:		**Ground Water**	**Ground Water**	**Ground Water**	**Ground Water**
Sampled:		**1-Mar-19**	**1-Mar-19**	**1-Mar-19**	**1-Mar-19**
Depth to Groundwater (feet):		15.9	14.4	16.2	16.41
MADEP EPH (ug/l)					
C11 to C22 Aromatics	200	< 400	< 400	< 400	< 400
C19 to C36 Aliphatics	14000	< 500	< 500	< 500	< 500
C9 to C18 Aliphatics	700	< 300	< 300	< 300	< 300
Unadjusted C11 - C22 Aromatics	NA	< 400	< 400	< 400	< 400
MADEP VPH (ug/l)					
Benzene	5	< 5.00	< 5.00	< 5.00	< 5.00
C5-C8 Aliphatic Hydrocarbons	300	< 100	< 100	< 100	< 100
C9-C10 Aromatic Hydrocarbons	200	< 100	< 100	< 100	< 100
C9-C12 Aliphatic Hydrocarbons	700	< 100	< 100	< 100	< 100
Ethylbenzene	700	< 5.00	< 5.00	< 5.00	< 5.00
m,p-Xylenes	5000	< 10.0	< 10.0	< 10.0	< 10.0
Methyl t-butyl ether	70	< 5.00	< 5.00	< 5.00	< 5.00
Naphthalene	140	< 5.00	< 5.00	< 5.00	< 5.00
o-Xylene	6000	< 5.00	< 5.00	< 5.00	< 5.00
Toluene	1000	< 5.00	< 5.00	< 5.00	< 5.00
Unadjusted C5-C8 Aliphatics	NA	< 100	< 100	< 100	< 100
Unadjusted C9-C12 Aliphatics	NA	< 100	< 100	< 100	< 100
SW-846 6020A (mg/l)					
Antimony	0.006	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Arsenic	0.01	**0.323**	**0.402**	**0.398**	**0.562**
Beryllium	0.004	**0.0796**	**0.0239**	**0.0288**	**0.0797**
Cadmium	0.004	**0.0129**	<0.0100	**0.0102**	**0.009**
Chromium	0.1	**0.273**	**0.359**	**0.278**	**1.07**
Copper	10	**0.559**	0.844	**0.659**	**1.01**
Lead	0.01	**0.335**	**0.498**	**0.363**	**0.898**
Nickel	0.1	**0.389**	**0.539**	**0.506**	**0.847**
Selenium	0.05	**0.0055**	**0.003**	**0.0053**	**0.0101**
Silver	0.007	< 0.00050	<0.0050	< 0.00050	**0.00085**
Thallium	0.002	**0.002**	**0.0016**	**0.0013**	**0.0048**
Zinc	0.9	**4.13**	**2.78**	**2.94**	**6.67**
SW-846 7470A (mg/l)					
Mercury	0.002	< 0.00020	< 0.00020	< 0.00020	0.0014
SW-846 8260C (ug/l)					
1,1,1,2-Tetrachloroethane	5	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	200	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	2	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	5	< 1	< 1	< 1	< 1
1,1-Dichloroethane	70	< 1	< 1	< 1	< 1
1,1-Dichloroethene	7	< 1	< 1	< 1	< 1
1,1-Dichloropropene	NA	< 5	< 5	< 5	< 5
1,2,3-Trichlorobenzene	NA	< 5	< 5	< 5	< 5
1,2,3-Trichloropropane	1000	< 5	< 5	< 5	< 5
1,2,4-Trichlorobenzene	70	< 5	< 5	< 5	< 5
1,2,4-Trimethylbenzene	10000	< 5	< 5	< 5	< 5
1,2-Dibromo-3-chloropropane	100	< 5	< 5	< 5	< 5
1,2-Dibromoethane	0.02	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	600	< 5	< 5	< 5	< 5
1,2-Dichloroethane	5	< 1	< 1	< 1	< 1
1,2-Dichloropropane	3	< 1	< 1	< 1	< 1
1,3,5-Trichlorobenzene	NA	< 5	< 5	< 5	< 5
1,3,5-Trimethylbenzene	100	< 5	< 5	< 5	< 5
1,3-Dichlorobenzene	100	< 5	< 5	< 5	< 5

Table 2
Groundwater Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCGW-1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53767-01**	**SC53767-02**	**SC53767-03**	**SC53767-04**
Matrix:		**Ground Water**	**Ground Water**	**Ground Water**	**Ground Water**
Sampled:		**1-Mar-19**	**1-Mar-19**	**1-Mar-19**	**1-Mar-19**
1,3-Dichloropropane	5000	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	5	< 5	< 5	< 5	< 5
1,4-Dioxane	0.3	< 250	< 250	< 250	< 250
2,2-Dichloropropane	NA	< 1	< 1	< 1	< 1
2-Butanone	4000	< 10	< 10	< 10	< 10
2-Chlorotoluene	1000	< 5	< 5	< 5	< 5
2-Hexanone	1000	< 10	< 10	< 10	< 10
4-Chlorotoluene	NA	< 5	< 5	< 5	< 5
4-Methyl-2-pentanone	350	< 10	< 10	< 10	< 10
Acetone	6300	< 20	< 20	< 20	< 20
Acrylonitrile	1000	< 20	< 20	< 20	< 20
Benzene	5	< 1	< 1	< 1	< 1
Bromobenzene	1000	< 5	< 5	< 5	< 5
Bromochloromethane	NA	< 5	< 5	< 5	< 5
Bromodichloromethane	3	< 1	< 1	< 1	< 1
Bromoform	4	< 4	< 4	< 4	< 4
Bromomethane	7	< 1	< 1	< 1	< 1
Carbon Disulfide	1000	< 5	< 5	< 5	< 5
Carbon Tetrachloride	2	< 1	< 1	< 1	< 1
Chlorobenzene	100	< 1	< 1	< 1	< 1
Chloroethane	1000	< 1	< 1	< 1	< 1
Chloroform	50	< 1	< 1	< 1	< 1
Chloromethane	1000	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	70	< 1	< 1	< 1	< 1
cis-1,3-Dichloropropene	0.5	< 1	< 1	< 1	< 1
Dibromochloromethane	2	< 1	< 1	< 1	< 1
Dibromomethane	5000	< 1	< 1	< 1	< 1
Dichlorodifluoromethane	10000	< 1	< 1	< 1	< 1
di-Isopropyl ether	1000	< 1	< 1	< 1	< 1
Ethanol	1000	< 750	< 750	< 750	< 750
Ethyl ether	1000	< 5	< 5	< 5	< 5
Ethyl t-butyl ether	NA	< 1	< 1	< 1	< 1
Ethylbenzene	700	< 1	< 1	< 1	< 1
Freon 113	NA	< 10	< 10	< 10	< 10
Hexachlorobutadiene	0.6	< 5	< 5	< 5	< 5
Isopropylbenzene	10000	< 5	< 5	< 5	< 5
m+p-Xylene	5000	< 5	< 5	< 5	< 5
Methyl Tertiary Butyl Ether	70	< 1	< 1	< 1	< 1
Methylene Chloride	5	< 1	< 1	< 1	< 1
Naphthalene	140	< 5	< 5	< 5	< 5
n-Butylbenzene	NA	< 5	< 5	< 5	< 5
n-Propylbenzene	1000	< 5	< 5	< 5	< 5
o-Xylene	6000	< 1	< 1	< 1	< 1
p-Isopropyltoluene	1000	< 5	< 5	< 5	< 5
sec-Butylbenzene	NA	< 5	< 5	< 5	< 5
Styrene	100	< 5	< 5	< 5	< 5
t-Amyl methyl ether	NA	< 5	< 5	< 5	< 5
t-Butyl alcohol	1000	< 30	< 30	< 30	< 30
tert-Butylbenzene	1000	< 5	< 5	< 5	< 5
Tetrachloroethene	5	< 1	< 1	< 1	< 1
Tetrahydrofuran	5000	< 10	< 10	< 10	< 10
Toluene	1000	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	80	< 1	< 1	< 1	< 1
trans-1,3-Dichloropropene	0.5	< 1	< 1	< 1	< 1
trans-1,4-Dichloro-2-butene	100	< 50	< 50	< 50	< 50
Trichloroethene	5	< 1	< 1	< 1	< 1
Trichlorofluoromethane	10000	< 1	< 1	< 1	< 1
Vinyl Chloride	2	< 1	< 1	< 1	< 1

Table 2
Groundwater Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCGW-1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53767-01**	**SC53767-02**	**SC53767-03**	**SC53767-04**
Matrix:		**Ground Water**	**Ground Water**	**Ground Water**	**Ground Water**
Sampled:		**1-Mar-19**	**1-Mar-19**	**1-Mar-19**	**1-Mar-19**
SW-846 8270D SIM (ug/l)					
2-Methylnaphthalene	10	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthene	20	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	30	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	30	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	1	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.2	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b)fluoranthene	1	< 0.5	< 0.5	< 0.5	0.7
Benzo(g,h,i)perylene	20	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	1	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	2	< 0.5	< 0.5	< 0.5	0.5
Dibenz(a,h)anthracene	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	90	< 0.5	< 0.5	< 0.5	0.8
Fluorene	30	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	140	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	40	< 0.5	< 0.5	< 0.5	0.6
Pyrene	20	< 0.5	< 0.5	< 0.5	0.8

A Value with a < in front of = Not Detected above detection limit of value listed.
GW-1 = Massachusetts Contingency Plan GW-1 Reportable Concentrations
Bold = Analyte exceeds GW-1 Reportable Concentrations

APPENDIX A

TEST BORING LOG

CDW Consultants, Inc.

Project No.:	1838.0	Client:	JCJ Architects	BORING ID:	**MW-1**
Total Depth:	20	Location:	Manchester Memorial	Logged By:	SA
Date Started:	2/22/2019	Completed:	2/22/2019	Contractor:	
Casing ID:		Ground El.		Sheet #:	
Remarks:					

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0							
-1		9/5/19/16	0-2'	18''	0.0	Medium dense dark brown fine SAND to lose pink and light grey GRAVEL and fine sand	
-2							
-3							
-4							
-5							
-6		5/4/6/8	5-7'	18''	0.2	Medium brown sandy SILT. Wet (perched aquifer)	
-7							
-8							
-9							
-10		5/15/20/16	10-12'	12''	0.1	Dense brown silty coarse SAND and coarse white/grey/pink GRAVEL	
-11							
-12							
-13							
-14							
-15							
-16		9/9/13/12	15-17'	4''	0.1	Little recovery, loose tan silty SAND and course gravel. Water table at 14 feet.	
-17							
-18							
-19							
-20							

Groundwater Measurements

Date	Time	Depth to Groundwater	Measuring Point
2/22/2019	900	14ft	

Summary

Overburden:

Rock:

Well Depth: 20'

Boring:

TEST BORING LOG

CDW Consultants, Inc.

Project No.:	1838.0	Client:	JCJ Architects	BORING ID:	**MW-2**
Total Depth:	20	Location:	Manchester Memorial	Logged By:	SA
Date Started:	2/22/2019	Completed:	2/22/2019	Contractor:	
Casing ID:		Ground El.		Sheet #:	
Remarks:					

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0							
-1		10/4/5/6	0-2'	9"	0.0	Asphalt, brown/red loose SAND and fine GRAVEL	
-2							
-3							
-4							
-5							
-6		3/3/3/16	5-7'	12"	0.0	Soft brown coarse SAND and fine gravel to stiff grey/brown SILT and coarse gravel	
-7							
-8							
-9							
-10		10/12/15/29	10-12'	1"	0	Almost no recovered soil, rock stuck in spoon. Dense dark brown medium SAND and fine gravel	
-11							
-12							
-13							
-14							
-15							
-16			15-17'	12''	0.10	Loose red and brown course silty SAND with some fine gravel Water Table at 14ft	
-17							
-18							
-19							
-20							

Groundwater Measurements				Summary
Date	Time	Depth to Groundwater	Measuring Point	Overburden:
2/22/2019	1000	14ft		Rock:
				Well Depth: 20'
				Boring:

TEST BORING LOG

CDW Consultants, Inc.

Project No.:	1838.0	Client:	JCJ Architects	BORING ID:	**MW-3**
Total Depth:	20	Location:	Manchester Memorial	Logged By:	SA
Date Started:	2/22/2019	Completed:	2/22/2019	Contractor:	
Casing ID:		Ground El.		Sheet #:	
Remarks:					

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0							
-1		11/10/8/5	0-2'	6"	0.1	Asphalt, loose dark brown/red silty SAND and coarse pink/grey/white GRAVEL	
-2							
-3							
-4							
-5							
-6		3/5/5/7	5-7'	24"	0.0	Medium grey/brown SILT and medium GRAVEL with some coarse sand and red mud	
-7							
-8							
-9							
-10		13/15/13	10-12'	22"	0		
						Medium dense, red, yellow, white and brown coarse to medium grained dry SAND with some coarse gravel	
-11							
-12							
-13							
-14							
-15							
-16		5/6/17/17	15-17'	12''	0.10	Medium dense, very coarse SAND and small to large gravel, all covered in red/brown SILT. Water table at 14 feet	
-17							
-18							
-19							
-20							

Groundwater Measurements				Summary
Date	Time	Depth to Groundwater	Measuring Point	Overburden:
2/22/2019	1130	14ft		Rock:
				Well Depth: 20'
				Boring:

TEST BORING LOG

CDW Consultants, Inc.

Project No.:	1838.0	Client:	JCJ Architects	BORING ID:	**MW-4**
Total Depth:	20	Location:	Manchester Memorial	Logged By:	SA
Date Started:	2/22/2019	Completed:	2/22/2019	Contractor:	
Casing ID:		Ground El.		Sheet #:	
Remarks:					

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0							
-1		6/9/16/24	0-2'	5"	0.1	Medium dense, white fine SAND to brown silty sand	
-2							
-3							
-4							
-5							
-6		5/7/12/15	5-7'	13"	0.0	Loose dark brown medium SAND, to red-brown silty sand with medium to coarse gravel	
-7							
-8							
-9							
-10		3/3/3/3	10-12'	20"	0.1	Loose, coarse and medium brown SAND to soft brown and gray sandy SILT	
-11							
-12							
-13							
-14							
-15							
-16		5/6/6/6	15-17'	1"	0.00	No recovery, groundwater at 14ft	
-17							
-18							
-19							
-20							

Groundwater Measurements				Summary
Date	Time	Depth to Groundwater	Measuring Point	Overburden:
2/22/2019	1330	14ft		Rock:
				Well Depth: 20'
				Boring:

APPENDIX B

☑ Final Report
☐ Revised Report

Report Date:
13-Mar-19 11:54

Laboratory Report
SC53666

CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760
Attn: Susan Cahalan-Roach

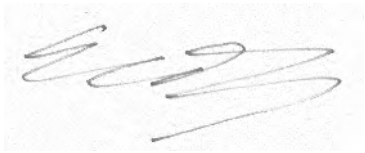
Project: Manchester Memorial School - MA
Project #: [none]

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393

Authorized by:

Erica Troy
Quality Services Manager



Eurofins Spectrum Analytical holds primary certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 56 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. is currently accredited for the specific method or analyte indicated. Please refer to our 'Quality' web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Eurofins Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC53666

Project: Manchester Memorial School - MA

Project Number: [none]

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC53666-01	CDW-MW-1	Soil	22-Feb-19 09:00	26-Feb-19 15:59
SC53666-02	CDW-MW-2	Soil	22-Feb-19 10:00	26-Feb-19 15:59
SC53666-03	CDW-MW-3	Soil	22-Feb-19 11:30	26-Feb-19 15:59
SC53666-04	CDW-MW-4	Soil	22-Feb-19 13:30	26-Feb-19 15:59
SC53666-05	Trip Blank	Trip Blank	25-Feb-19 00:00	26-Feb-19 15:59

The following outlines the condition of all VPH samples contained within this report upon laboratory receipt.

Matrices	Soil		
Containers	✓ Satisfactory		
Sample Preservative	**Aqueous** (acid preserved)	✓ N/A pH≤2 pH>2	
	Soil or Sediment	N/A Samples not received in Methanol	ml Methanol/g soil 1:1 +/-25% Other
		Samples received in Methanol: covering soil/sediment not covering soil/sediment	
		Samples received in air-tight container	
Temperature	Received on ice ✓ Received at 4 ± 2 ºC		

Were all QA/QC procedures followed as required by the VPH method? *Yes*
Were any significant modifications made to the VPH method as specified in section 11.3? *No*
Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

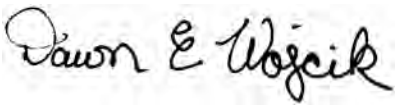
The following outlines the condition of all EPH samples contained within this report upon laboratory receipt.

Matrices	Soil
Containers	✓ Satisfactory
Aqueous Preservative	✓ N/A pH≤2 pH>2 pH adjusted to <2 in lab
Temperature	Received on ice ✓ Received at 4 ± 2 ºC

Were all QA/QC procedures followed as required by the EPH method? *Yes*
Were any significant modifications made to the EPH method as specified in Section 11.3? *No*
Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Authorized by:



Dawn E. Wojcik
Laboratory Director

MassDEP Analytical Protocol Certification Form

Laboratory Name: Eurofins Spectrum Analytical, Inc.	**Project #:** [none]
Project Location: Manchester Memorial School - MA	**RTN:**
This form provides certifications for the following data set:	SC53666-01 through SC53666-05
Matrices: Soil Trip Blank	

CAM Protocol

✓ 8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	✓ MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	✓ MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9012 Total Cyanide/PAC CAM VI A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	✓ Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes ✓ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	✓ Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	✓ Yes No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	✓ Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?	✓ Yes No

Responses to questions G, H and I below are required for "Presumptive Certainty" status

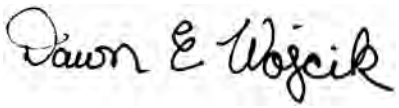
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	Yes ✓ No

***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes ✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes ✓ No

All negative responses are addressed in a case narrative on the cover page of this report.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.



Dawn E. Wojcik
Laboratory Director
Date: 3/13/2019

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 2.6 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

All VOC soils samples submitted and analyzed in methanol will have a minimum dilution factor of 50. This is the minimum amount of solvent allowed on the instrumentation without causing interference. Soils are run on a manual load instrument. 100ug of sample (MEOH) is spiked into 5ml DI water along with the surrogate and added directly onto the instrument. Additional dilution factors may be required to keep analyte concentration within instrument calibration range.

General Comments:
See the Laboratory Sample Analysis Record section of the Analysis Report for the method references .
All QC met criteria unless otherwise noted in an Analysis Specific Comment below .
Refer to the QC Summary for specific values and acceptance criteria.
Project specific QC samples are not included in this data set.
Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.
Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below .
The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.
Analysis Specific Comments:
SW-846 8260C, GC/MS Volatiles
Sample #s: 9993886, 9993887, 9993888, 9993889
The MA MCP required reporting limit could not be
attained using the laboratory LOQ.
Batch #: Q190641AA (Sample number(s): 9993886-9993889)
The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Acetone
SW-846 8270D, GC/MS Semivolatiles
Sample #s: 9993886, 9993887, 9993888, 9993889
The project QA/QC requirements were not met. The percent recovery
for 4-Chloroaniline was outside of the acceptance limits in the
LCS/LCSD associated with this sample as noted on the QC summary.
The failure is within the 20% failure rate allowed by CT RCP,
therefore the data is reported.
Batch #: 19063SLC026 (Sample number(s): 9993886-9993889)
The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window:
4-Chloroaniline
MA EPH 5/04, GC Petroleum Hydrocarbons
Sample #s: 9993886, 9993887, 9993888, 9993889
Target analytes were detected in the method blank associated with the
samples as noted on the QC Summary.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is
outside the QC acceptance limits as noted on the QC Summary. The following
action was taken:
The sample was re-extracted and the LCSD is again outside of the
acceptance limits. The data is reported from both trials.
Batch #: 190590017A (Sample number(s): 9993886-9993889)
The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: C19 to C36 Aliphatics
The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window:
Naphthalene
Batch #: 190640020A (Sample number(s): 9993886-9993889 UNSPK: 9993887)
The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window:
Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene,
Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene,
Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, 2-Methylnaphthalene, C9 to C18
Aliphatics, C19 to C36 Aliphatics, Unadjusted C11 - C22 Aromatics
The relative percent difference(s) for the following analyte(s) in the LCS/LCSD were outside acceptance windows: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene,
Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene,
Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene,
2-Methylnaphthalene, C9 to C18 Aliphatics, C19 to C36 Aliphatics, Unadjusted C11 - C22 Aromatics
The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window:
Naphthalene
The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) LCSD
SW-846 6010C, Metals
Sample #s: 9993886, 9993887, 9993888, 9993889
The MA MCP analyte list requirement was not met for metals .

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

MADEP EPH

Laboratory Control Samples:

190590017A BS

MADEP EPH

Laboratory Control Samples:

190590017A BS

C19 to C36 Aliphatics percent recovery 277 (40-140) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

CDW-MW-1
CDW-MW-2
CDW-MW-3
CDW-MW-4

LCS17059Q

Outside of specification

C19 to C36 Aliphatics

Spikes:

P993887M321822A *Source: SC53666-02*

Outside of specification

Naphthalene

P90597AY

Outside of specification

C19 to C36 Aliphatics
Naphthalene

P90640AY

Outside of specification

1-Chloro-octadecane
2-Methylnaphthalene
Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
C19 to C36 Aliphatics
C9 to C18 Aliphatics
Chrysene
Dibenzo(a,h)anthracene
Fluoranthene
Fluorene
Indeno(1,2,3-cd)pyrene
Naphthalene
Orthoterphenyl
Phenanthrene
Pyrene
Unadjusted C11 - C22 Aromatics

SW-846 8260C

Laboratory Control Samples:

LCSQ25Q

SW-846 8260C

Laboratory Control Samples:

LCSQ25Q

Outside of specification

Acetone

Q190641AA BS

Acetone percent recovery 136 (70-130) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

CDW-MW-1
CDW-MW-2
CDW-MW-3
CDW-MW-4

SW-846 8270D

Laboratory Control Samples:

063LCLCSQ

Outside of specification

4-Chloroaniline

19063SLC026 BS

4-Chloroaniline percent recovery 32 (40-140) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

CDW-MW-1
CDW-MW-2
CDW-MW-3
CDW-MW-4

Sample Acceptance Check Form

Client:	CDW Consultants, Inc.
Project:	Manchester Memorial School - MA / [none]
Work Order:	SC53666
Sample(s) received on:	2/26/2019

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Summary of Hits

Lab ID: SC53666-01 **Client ID:** CDW-MW-1

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Moisture	24.1		0.50	%	SM 2540 G %Moisture Calc
Arsenic	9.96		5.19	mg/kg	SW-846 6010C
Beryllium	1.38		0.519	mg/kg	SW-846 6010C
Chromium	33.9		1.56	mg/kg	SW-846 6010C
Copper	20.9		2.07	mg/kg	SW-846 6010C
Lead	12.5		1.56	mg/kg	SW-846 6010C
Nickel	21.0		1.04	mg/kg	SW-846 6010C
Zinc	110		2.07	mg/kg	SW-846 6010C
Benzo(b)fluoranthene	27.3		22	ug/kg	SW-846 8270D
Fluoranthene	36.2		22	ug/kg	SW-846 8270D
Phenanthrene	25.4		22	ug/kg	SW-846 8270D
Pyrene	31.8		22	ug/kg	SW-846 8270D

Lab ID: SC53666-02 **Client ID:** CDW-MW-2

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Moisture	12.7		0.50	%	SM 2540 G %Moisture Calc
Antimony	4.11		3.90	mg/kg	SW-846 6010C
Arsenic	9.56		3.90	mg/kg	SW-846 6010C
Beryllium	0.811		0.390	mg/kg	SW-846 6010C
Chromium	17.0		1.17	mg/kg	SW-846 6010C
Lead	7.74		1.17	mg/kg	SW-846 6010C
Nickel	16.1		0.779	mg/kg	SW-846 6010C
Zinc	80.6		1.56	mg/kg	SW-846 6010C
bis(2-Ethylhexyl)phthalate	1130		190	ug/kg	SW-846 8270D

Lab ID: SC53666-03 **Client ID:** CDW-MW-3

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Moisture	10.4		0.50	%	SM 2540 G %Moisture Calc
Arsenic	9.99		4.69	mg/kg	SW-846 6010C
Beryllium	0.594		0.469	mg/kg	SW-846 6010C
Chromium	19.9		1.41	mg/kg	SW-846 6010C
Lead	7.46		1.41	mg/kg	SW-846 6010C
Nickel	14.7		0.938	mg/kg	SW-846 6010C
Zinc	64.0		1.88	mg/kg	SW-846 6010C
bis(2-Ethylhexyl)phthalate	260		180	ug/kg	SW-846 8270D

Lab ID: SC53666-04 **Client ID:** CDW-MW-4

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
C19 to C36 Aliphatics	22		13	mg/kg	MADEP EPH
Moisture	10.3		0.50	%	SM 2540 G %Moisture Calc
Arsenic	8.65		3.90	mg/kg	SW-846 6010C
Beryllium	1.05		0.390	mg/kg	SW-846 6010C
Chromium	21.6		1.17	mg/kg	SW-846 6010C
Copper	15.2		1.56	mg/kg	SW-846 6010C
Lead	12.8		1.17	mg/kg	SW-846 6010C
Nickel	15.2		0.780	mg/kg	SW-846 6010C
Zinc	78.3		1.56	mg/kg	SW-846 6010C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.63		mg/kg	0.63	0.13	1	MADEP EPH	28-Feb-19 20:25	02-Mar-19 06:34	M-PA009	0590017	
83-32-9	Acenaphthene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 15		mg/kg	15	15	1	"	"	"	"	"	
	C19 to C36 Aliphatics	< 15		mg/kg	15	15	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 7.6		mg/kg	7.6	7.6	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.5		mg/kg	2.5	0.76	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 15		mg/kg	15	15	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*55*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*84*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*70*			*40-140 %*			"	"	"	"	"	
Re-analysis of Subcontracted Analyses Prepared by method SW-846 3546													
91-57-6	2-Methylnaphthalene	< 0.64		mg/kg	0.64	0.13	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 13:02	M-PA009	0640020	
83-32-9	Acenaphthene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 15		mg/kg	15	15	1	"	"	"	"	"	
	C19 to C36 Aliphatics	< 15		mg/kg	15	15	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 7.7		mg/kg	7.7	7.7	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1	[none]	Soil	22-Feb-19 09:00	26-Feb-19
SC53666-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
Re-analysis of Subcontracted Analyses													
86-73-7	Fluorene	< 0.64		mg/kg	0.64	0.13	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 13:02	M-PA009	0640020	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.6		mg/kg	2.6	0.77	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 15		mg/kg	15	15	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*62*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*84*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*64*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 0.3		mg/kg	0.3	0.1	98.36	MADEP VPH	22-Feb-19 09:00	06-Mar-19 19:31	M-PA009	9065A54/	
	C5-C8 Aliphatic Hydrocarbons	< 13.0		mg/kg	13.0	6.48	98.36	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 13.0		mg/kg	13.0	6.48	98.36	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 13.0		mg/kg	13.0	6.48	98.36	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.3		mg/kg	0.3	0.1	98.36	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 0.3		mg/kg	0.3	0.1	98.36	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 0.3		mg/kg	0.3	0.1	98.36	"	"	"	"	"	
91-20-3	Naphthalene	< 0.8		mg/kg	0.8	0.4	98.36	"	"	"	"	"	
95-47-6	o-Xylene	< 0.3		mg/kg	0.3	0.1	98.36	"	"	"	"	"	
108-88-3	Toluene	< 0.3		mg/kg	0.3	0.1	98.36	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 13.0		mg/kg	13.0	6.48	98.36	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 13.0		mg/kg	13.0	6.48	98.36	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*97*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*98*			*70-130 %*			"	"	"	"	"	
Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
	Moisture	**24.1**		%	0.50	0.50	1	SM 2540 G %Moisture Calc	01-Mar-19 09:39	01-Mar-19 09:39	M-PA009	6082000	
Subcontracted Analyses Prepared by method SW-846 3050B													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-36-0	Antimony	< 5.19		mg/kg	5.19	1.76	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:23	M-PA009	5814049	
7440-38-2	Arsenic	**9.96**		mg/kg	5.19	1.24	1	"	"	"	"	"	
7440-41-7	Beryllium	**1.38**		mg/kg	0.519	0.104	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.519		mg/kg	0.519	0.104	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1 SC53666-01	[none]	Soil	22-Feb-19 09:00	26-Feb-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-47-3	Chromium	**33.9**		mg/kg	1.56	0.218	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:23	M-PA009	05814049	
7440-50-8	Copper	**20.9**		mg/kg	2.07	0.519	1	"	"	"	"	"	
7439-92-1	Lead	**12.5**		mg/kg	1.56	0.622	1	"	"	"	"	"	
7440-02-0	Nickel	**21.0**		mg/kg	1.04	0.218	1	"	"	"	"	"	
7782-49-2	Selenium	< 5.19		mg/kg	5.19	1.56	1	"	"	"	"	"	
7440-22-4	Silver	< 1.04		mg/kg	1.04	0.415	1	"	"	"	"	"	
7440-28-0	Thallium	< 15.6		mg/kg	15.6	4.67	5	"	"	"	"	"	
7440-66-6	Zinc	**110**		mg/kg	2.07	0.415	1	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	< 0.167		mg/kg	0.167	0.0391	1	SW-846 7471B	28-Feb-19 09:10	01-Mar-19 06:39	M-PA009	05910638	
Subcontracted Analyses													
Prepared by method SW-846 5035A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 660		ug/kg	660	66	100	SW-846 8260C	22-Feb-19 09:00	05-Mar-19 12:56	M-PA009	190641A	
71-55-6	1,1,1-Trichloroethane	< 660		ug/kg	660	79	100	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 660		ug/kg	660	53	100	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 660		ug/kg	660	66	100	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 660		ug/kg	660	66	100	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 660		ug/kg	660	66	100	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 660		ug/kg	660	66	100	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 1300		ug/kg	1300	660	100	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 660		ug/kg	660	79	100	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 1300		ug/kg	1300	660	100	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 660		ug/kg	660	66	100	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 660		ug/kg	660	53	100	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 660		ug/kg	660	53	100	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 660		ug/kg	660	66	100	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 660		ug/kg	660	79	100	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 660		ug/kg	660	66	100	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 1100		ug/kg	1100	530	100	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 660		ug/kg	660	66	100	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 660		ug/kg	660	66	100	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 660		ug/kg	660	53	100	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 660		ug/kg	660	53	100	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 33000		ug/kg	33000	4900	100	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 660		ug/kg	660	66	100	"	"	"	"	"	
78-93-3	2-Butanone	< 1300		ug/kg	1300	130	100	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 660		ug/kg	660	53	100	"	"	"	"	"	
591-78-6	2-Hexanone	< 1300		ug/kg	1300	130	100	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 660		ug/kg	660	53	100	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 1300		ug/kg	1300	130	100	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1	[none]	Soil	22-Feb-19 09:00	26-Feb-19
SC53666-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
67-64-1	Acetone	< 2600		ug/kg	2600	790	100	SW-846 8260C	22-Feb-19 09:00	05-Mar-19 12:56	M-PA009	190641A	
107-13-1	Acrylonitrile	< 2600		ug/kg	2600	110	100	"	"	"	"	"	
71-43-2	Benzene	< 660		ug/kg	660	66	100	"	"	"	"	"	
108-86-1	Bromobenzene	< 660		ug/kg	660	53	100	"	"	"	"	"	
74-97-5	Bromochloromethane	< 660		ug/kg	660	79	100	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 660		ug/kg	660	53	100	"	"	"	"	"	
75-25-2	Bromoform	< 1300		ug/kg	1300	660	100	"	"	"	"	"	
74-83-9	Bromomethane	< 660		ug/kg	660	92	100	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 660		ug/kg	660	79	100	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 660		ug/kg	660	66	100	"	"	"	"	"	
108-90-7	Chlorobenzene	< 660		ug/kg	660	66	100	"	"	"	"	"	
75-00-3	Chloroethane	< 660		ug/kg	660	130	100	"	"	"	"	"	
67-66-3	Chloroform	< 660		ug/kg	660	79	100	"	"	"	"	"	
74-87-3	Chloromethane	< 660		ug/kg	660	79	100	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 660		ug/kg	660	66	100	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 660		ug/kg	660	53	100	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 660		ug/kg	660	53	100	"	"	"	"	"	
74-95-3	Dibromomethane	< 660		ug/kg	660	66	100	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 660		ug/kg	660	79	100	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 660		ug/kg	660	66	100	"	"	"	"	"	
64-17-5	Ethanol	< 99000		ug/kg	99000	37000	100	"	"	"	"	"	
60-29-7	Ethyl Ether	< 660		ug/kg	660	130	100	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 660		ug/kg	660	66	100	"	"	"	"	"	
100-41-4	Ethylbenzene	< 660		ug/kg	660	53	100	"	"	"	"	"	
76-13-1	Freon 113	< 1300		ug/kg	1300	79	100	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 1300		ug/kg	1300	660	100	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 660		ug/kg	660	53	100	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 660		ug/kg	660	130	100	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 660		ug/kg	660	66	100	"	"	"	"	"	
75-09-2	Methylene Chloride	< 660		ug/kg	660	260	100	"	"	"	"	"	
91-20-3	Naphthalene	< 660		ug/kg	660	260	100	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 1100		ug/kg	1100	400	100	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 660		ug/kg	660	53	100	"	"	"	"	"	
95-47-6	o-Xylene	< 660		ug/kg	660	53	100	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 660		ug/kg	660	260	100	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 660		ug/kg	660	260	100	"	"	"	"	"	
100-42-5	Styrene	< 660		ug/kg	660	40	100	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 660		ug/kg	660	110	100	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 13000		ug/kg	13000	2000	100	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 660		ug/kg	660	110	100	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 660		ug/kg	660	66	100	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 1100		ug/kg	1100	130	100	"	"	"	"	"	
108-88-3	Toluene	< 660		ug/kg	660	79	100	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 660		ug/kg	660	66	100	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1	[none]	Soil	22-Feb-19 09:00	26-Feb-19
SC53666-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
10061-02-6	trans-1,3-Dichloropropene	< 660		ug/kg	660	40	100	SW-846 8260C	22-Feb-19 09:00	05-Mar-19 12:56	M-PA009	190641A	
110-57-6	trans-1,4-Dichloro-2-butene	< 6600		ug/kg	6600	920	100	"	"	"	"	"	
79-01-6	Trichloroethene	< 660		ug/kg	660	66	100	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 660		ug/kg	660	92	100	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 660		ug/kg	660	79	100	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*97*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*89*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*91*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*90*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
92-52-4	1,1'-Biphenyl	< 48		ug/kg	48	22	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:10	M-PA009	063SLC0	
95-94-3	1,2,4,5-Tetrachlorobenzene	< 48		ug/kg	48	22	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 66		ug/kg	66	31	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 66		ug/kg	66	22	1	"	"	"	"	"	
122-66-7	1,2-Diphenylhydrazine	< 57		ug/kg	57	26	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 48		ug/kg	48	22	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 48		ug/kg	48	22	1	"	"	"	"	"	
90-12-0	1-Methylnaphthalene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
58-90-2	2,3,4,6-Tetrachlorophenol	< 220		ug/kg	220	88	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 88		ug/kg	88	40	1	"	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	< 75		ug/kg	75	35	1	"	"	"	"	"	
120-83-2	2,4-Dichlorophenol	< 57		ug/kg	57	26	1	"	"	"	"	"	
105-67-9	2,4-Dimethylphenol	< 88		ug/kg	88	40	1	"	"	"	"	"	
51-28-5	2,4-Dinitrophenol	< 1300		ug/kg	1300	440	1	"	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	< 220		ug/kg	220	88	1	"	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	< 66		ug/kg	66	31	1	"	"	"	"	"	
91-58-7	2-Chloronaphthalene	< 44		ug/kg	44	8.8	1	"	"	"	"	"	
95-57-8	2-Chlorophenol	< 48		ug/kg	48	22	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 44		ug/kg	44	4.4	1	"	"	"	"	"	
95-48-7	2-Methylphenol	< 88		ug/kg	88	22	1	"	"	"	"	"	
88-74-4	2-Nitroaniline	< 66		ug/kg	66	22	1	"	"	"	"	"	
88-75-5	2-Nitrophenol	< 75		ug/kg	75	35	1	"	"	"	"	"	
91-94-1	3,3'-Dichlorobenzidine	< 440		ug/kg	440	130	1	"	"	"	"	"	
99-09-2	3-Nitroaniline	< 220		ug/kg	220	88	1	"	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	< 660		ug/kg	660	310	1	"	"	"	"	"	
101-55-3	4-Bromophenyl-phenylether	< 66		ug/kg	66	31	1	"	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	< 66		ug/kg	66	31	1	"	"	"	"	"	
106-47-8	4-Chloroaniline	< 220		ug/kg	220	44	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1	[none]	Soil	22-Feb-19 09:00	26-Feb-19
SC53666-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7005-72-3	4-Chlorophenyl-phenylether	< 57		ug/kg	57	26	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:10	M-PA009	063SLC0	
106-44-5	4-Methylphenol	< 44		ug/kg	44	22	1	"	"	"	"	"	
100-01-6	4-Nitroaniline	< 220		ug/kg	220	88	1	"	"	"	"	"	
100-02-7	4-Nitrophenol	< 660		ug/kg	660	220	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
98-86-2	Acetophenone	< 66		ug/kg	66	22	1	"	"	"	"	"	
62-53-3	Aniline	< 660		ug/kg	660	220	1	"	"	"	"	"	
120-12-7	Anthracene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
1912-24-9	Atrazine	< 570		ug/kg	570	260	1	"	"	"	"	"	
100-52-7	Benzaldehyde	< 220		ug/kg	220	88	1	"	"	"	"	"	
92-87-5	Benzidine	< 1300		ug/kg	1300	440	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 22		ug/kg	22	8.8	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	**27.3**		ug/kg	22	4.4	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
65-85-0	Benzoic acid	< 660		ug/kg	660	220	1	"	"	"	"	"	
100-51-6	Benzyl alcohol	< 660		ug/kg	660	220	1	"	"	"	"	"	
111-91-1	bis(2-Chloroethoxy)methane	< 48		ug/kg	48	22	1	"	"	"	"	"	
111-44-4	bis(2-Chloroethyl)ether	< 66		ug/kg	66	31	1	"	"	"	"	"	
39638-32-9	bis(2-Chloroisopropyl)ether	< 57		ug/kg	57	26	1	"	"	"	"	"	
117-81-7	bis(2-Ethylhexyl)phthalate	< 220		ug/kg	220	88	1	"	"	"	"	"	
85-68-7	Butylbenzylphthalate	< 220		ug/kg	220	88	1	"	"	"	"	"	
105-60-2	Caprolactam	< 220		ug/kg	220	44	1	"	"	"	"	"	
86-74-8	Carbazole	< 48		ug/kg	48	22	1	"	"	"	"	"	
218-01-9	Chrysene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 22		ug/kg	22	8.8	1	"	"	"	"	"	
132-64-9	Dibenzofuran	< 48		ug/kg	48	22	1	"	"	"	"	"	
84-66-2	Diethylphthalate	< 220		ug/kg	220	88	1	"	"	"	"	"	
131-11-3	Dimethylphthalate	< 220		ug/kg	220	88	1	"	"	"	"	"	
84-74-2	Di-n-butylphthalate	< 220		ug/kg	220	88	1	"	"	"	"	"	
117-84-0	Di-n-octylphthalate	< 220		ug/kg	220	88	1	"	"	"	"	"	
206-44-0	Fluoranthene	**36.2**		ug/kg	22	4.4	1	"	"	"	"	"	
86-73-7	Fluorene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
118-74-1	Hexachlorobenzene	< 22		ug/kg	22	8.8	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 100		ug/kg	100	48	1	"	"	"	"	"	
77-47-4	Hexachlorocyclopentadiene	< 660		ug/kg	660	260	1	"	"	"	"	"	
67-72-1	Hexachloroethane	< 220		ug/kg	220	44	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
78-59-1	Isophorone	< 48		ug/kg	48	22	1	"	"	"	"	"	
91-20-3	Naphthalene	< 22		ug/kg	22	8.8	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1 SC53666-01	[none]	Soil	22-Feb-19 09:00	26-Feb-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
98-95-3	Nitrobenzene	< 88		ug/kg	88	35	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:10	M-PA009	063SLC0	
62-75-9	N-Nitrosodimethylamine	< 220		ug/kg	220	88	1	"	"	"	"	"	
621-64-7	N-Nitroso-di-n-propylamine	< 66		ug/kg	66	31	1	"	"	"	"	"	
86-30-6	N-Nitrosodiphenylamine	< 48		ug/kg	48	22	1	"	"	"	"	"	
82-68-8	Pentachloronitrobenzene	< 220		ug/kg	220	88	1	"	"	"	"	"	
87-86-5	Pentachlorophenol	< 220		ug/kg	220	88	1	"	"	"	"	"	
85-01-8	Phenanthrene	**25.4**		ug/kg	22	4.4	1	"	"	"	"	"	
108-95-2	Phenol	< 48		ug/kg	48	22	1	"	"	"	"	"	
129-00-0	Pyrene	**31.8**		ug/kg	22	4.4	1	"	"	"	"	"	
110-86-1	Pyridine	< 220		ug/kg	220	88	1	"	"	"	"	"	
Surrogate recoveries:													
118-79-6	*2,4,6-Tribromophenol*	*71*			*30-130 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*81*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*82*			*30-130 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*80*			*30-130 %*			"	"	"	"	"	
13127-88-3	*Phenol-d6*	*83*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-d14*	*93*			*30-130 %*			"	"	"	"	"	

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.55		mg/kg	0.55	0.11	1	MADEP EPH	28-Feb-19 20:25	02-Mar-19 07:55	M-PA009	90590017	
83-32-9	Acenaphthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C19 to C36 Aliphatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 6.7		mg/kg	6.7	6.7	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.2		mg/kg	2.2	0.67	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*54*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*89*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*73*			*40-140 %*			"	"	"	"	"	
Re-analysis of Subcontracted Analyses Prepared by method SW-846 3546													
91-57-6	2-Methylnaphthalene	< 0.56		mg/kg	0.56	0.11	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 15:42	M-PA009	90640020	
83-32-9	Acenaphthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C19 to C36 Aliphatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 6.7		mg/kg	6.7	6.7	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2	[none]	Soil	22-Feb-19 10:00	26-Feb-19
SC53666-02				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
Re-analysis of Subcontracted Analyses													
86-73-7	Fluorene	< 0.56		mg/kg	0.56	0.11	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 15:42	M-PA009	0640020	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.2		mg/kg	2.2	0.67	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*53*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*85*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*63*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 0.1		mg/kg	0.1	0.06	63.68	MADEP VPH	22-Feb-19 10:00	06-Mar-19 20:11	M-PA009	9065A54/	
	C5-C8 Aliphatic Hydrocarbons	< 7.29		mg/kg	7.29	3.65	63.68	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 7.29		mg/kg	7.29	3.65	63.68	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 7.29		mg/kg	7.29	3.65	63.68	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.1		mg/kg	0.1	0.07	63.68	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 0.1		mg/kg	0.1	0.07	63.68	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 0.1		mg/kg	0.1	0.07	63.68	"	"	"	"	"	
91-20-3	Naphthalene	< 0.4		mg/kg	0.4	0.2	63.68	"	"	"	"	"	
95-47-6	o-Xylene	< 0.1		mg/kg	0.1	0.07	63.68	"	"	"	"	"	
108-88-3	Toluene	< 0.1		mg/kg	0.1	0.07	63.68	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 7.29		mg/kg	7.29	3.65	63.68	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 7.29		mg/kg	7.29	3.65	63.68	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*99*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*100*			*70-130 %*			"	"	"	"	"	
Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
	Moisture	**12.7**		%	0.50	0.50	1	SM 2540 G %Moisture Calc	01-Mar-19 09:39	01-Mar-19 09:39	M-PA009	6082000	
Subcontracted Analyses Prepared by method SW-846 3050B													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-36-0	Antimony	**4.11**		mg/kg	3.90	1.32	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:26	M-PA009	5814049	
7440-38-2	Arsenic	**9.56**		mg/kg	3.90	0.935	1	"	"	"	"	"	
7440-41-7	Beryllium	**0.811**		mg/kg	0.390	0.0779	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.390		mg/kg	0.390	0.0779	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2 SC53666-02	[none]	Soil	22-Feb-19 10:00	26-Feb-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-47-3	Chromium	**17.0**		mg/kg	1.17	0.164	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:26	M-PA009	05814049	
7440-50-8	Copper	< 1.56		mg/kg	1.56	0.390	1	"	"	"	"	"	
7439-92-1	Lead	**7.74**		mg/kg	1.17	0.468	1	"	"	"	"	"	
7440-02-0	Nickel	**16.1**		mg/kg	0.779	0.164	1	"	"	"	"	"	
7782-49-2	Selenium	< 3.90		mg/kg	3.90	1.17	1	"	"	"	"	"	
7440-22-4	Silver	< 0.779		mg/kg	0.779	0.312	1	"	"	"	"	"	
7440-28-0	Thallium	< 11.7		mg/kg	11.7	3.51	5	"	"	"	"	"	
7440-66-6	Zinc	**80.6**		mg/kg	1.56	0.312	1	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	< 0.153		mg/kg	0.153	0.0357	1	SW-846 7471B	28-Feb-19 09:10	01-Mar-19 06:41	M-PA009	05910638	
Subcontracted Analyses													
Prepared by method SW-846 5035A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 570		ug/kg	570	57	98.94	SW-846 8260C	22-Feb-19 10:00	05-Mar-19 11:47	M-PA009	190641A	
71-55-6	1,1,1-Trichloroethane	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 1100		ug/kg	1100	570	98.94	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 1100		ug/kg	1100	570	98.94	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 910		ug/kg	910	450	98.94	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 28000		ug/kg	28000	4200	98.94	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
78-93-3	2-Butanone	< 1100		ug/kg	1100	110	98.94	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
591-78-6	2-Hexanone	< 1100		ug/kg	1100	110	98.94	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 1100		ug/kg	1100	110	98.94	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2	[none]	Soil	22-Feb-19 10:00	26-Feb-19
SC53666-02				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
67-64-1	Acetone	< 2300		ug/kg	2300	680	98.94	SW-846 8260C	22-Feb-19 10:00	05-Mar-19 11:47	M-PA009	190641A	
107-13-1	Acrylonitrile	< 2300		ug/kg	2300	91	98.94	"	"	"	"	"	
71-43-2	Benzene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
108-86-1	Bromobenzene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
74-97-5	Bromochloromethane	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
75-25-2	Bromoform	< 1100		ug/kg	1100	570	98.94	"	"	"	"	"	
74-83-9	Bromomethane	< 570		ug/kg	570	79	98.94	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
108-90-7	Chlorobenzene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
75-00-3	Chloroethane	< 570		ug/kg	570	110	98.94	"	"	"	"	"	
67-66-3	Chloroform	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
74-87-3	Chloromethane	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
74-95-3	Dibromomethane	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
64-17-5	Ethanol	< 85000		ug/kg	85000	32000	98.94	"	"	"	"	"	
60-29-7	Ethyl Ether	< 570		ug/kg	570	110	98.94	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
100-41-4	Ethylbenzene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
76-13-1	Freon 113	< 1100		ug/kg	1100	68	98.94	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 1100		ug/kg	1100	570	98.94	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 570		ug/kg	570	110	98.94	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
75-09-2	Methylene Chloride	< 570		ug/kg	570	230	98.94	"	"	"	"	"	
91-20-3	Naphthalene	< 570		ug/kg	570	230	98.94	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 910		ug/kg	910	340	98.94	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
95-47-6	o-Xylene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 570		ug/kg	570	230	98.94	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 570		ug/kg	570	230	98.94	"	"	"	"	"	
100-42-5	Styrene	< 570		ug/kg	570	34	98.94	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 570		ug/kg	570	91	98.94	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 11000		ug/kg	11000	1700	98.94	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 570		ug/kg	570	91	98.94	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 910		ug/kg	910	110	98.94	"	"	"	"	"	
108-88-3	Toluene	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
10061-02-6	trans-1,3-Dichloropropene	< 570		ug/kg	570	34	98.94	SW-846 8260C	22-Feb-19 10:00	05-Mar-19 11:47	M-PA009	190641A	
110-57-6	trans-1,4-Dichloro-2-butene	< 5700		ug/kg	5700	790	98.94	"	"	"	"	"	
79-01-6	Trichloroethene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 570		ug/kg	570	79	98.94	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*95*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*86*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*91*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*86*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
92-52-4	1,1'-Biphenyl	< 42		ug/kg	42	19	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:34	M-PA009	063SLC0	
95-94-3	1,2,4,5-Tetrachlorobenzene	< 42		ug/kg	42	19	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 57		ug/kg	57	27	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 57		ug/kg	57	19	1	"	"	"	"	"	
122-66-7	1,2-Diphenylhydrazine	< 49		ug/kg	49	23	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 42		ug/kg	42	19	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 42		ug/kg	42	19	1	"	"	"	"	"	
90-12-0	1-Methylnaphthalene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
58-90-2	2,3,4,6-Tetrachlorophenol	< 190		ug/kg	190	76	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 76		ug/kg	76	34	1	"	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	< 65		ug/kg	65	30	1	"	"	"	"	"	
120-83-2	2,4-Dichlorophenol	< 49		ug/kg	49	23	1	"	"	"	"	"	
105-67-9	2,4-Dimethylphenol	< 76		ug/kg	76	34	1	"	"	"	"	"	
51-28-5	2,4-Dinitrophenol	< 1100		ug/kg	1100	380	1	"	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	< 190		ug/kg	190	76	1	"	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	< 57		ug/kg	57	27	1	"	"	"	"	"	
91-58-7	2-Chloronaphthalene	< 38		ug/kg	38	7.6	1	"	"	"	"	"	
95-57-8	2-Chlorophenol	< 42		ug/kg	42	19	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 38		ug/kg	38	3.8	1	"	"	"	"	"	
95-48-7	2-Methylphenol	< 76		ug/kg	76	19	1	"	"	"	"	"	
88-74-4	2-Nitroaniline	< 57		ug/kg	57	19	1	"	"	"	"	"	
88-75-5	2-Nitrophenol	< 65		ug/kg	65	30	1	"	"	"	"	"	
91-94-1	3,3'-Dichlorobenzidine	< 380		ug/kg	380	110	1	"	"	"	"	"	
99-09-2	3-Nitroaniline	< 190		ug/kg	190	76	1	"	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	< 570		ug/kg	570	270	1	"	"	"	"	"	
101-55-3	4-Bromophenyl-phenylether	< 57		ug/kg	57	27	1	"	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	< 57		ug/kg	57	27	1	"	"	"	"	"	
106-47-8	4-Chloroaniline	< 190		ug/kg	190	38	1	"	"	"	"	"	

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7005-72-3	4-Chlorophenyl-phenyleth er	< 49		ug/kg	49	23	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:34	M-PA009	063SLC0	
106-44-5	4-Methylphenol	< 38		ug/kg	38	19	1	"	"	"	"	"	
100-01-6	4-Nitroaniline	< 190		ug/kg	190	76	1	"	"	"	"	"	
100-02-7	4-Nitrophenol	< 570		ug/kg	570	190	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
98-86-2	Acetophenone	< 57		ug/kg	57	19	1	"	"	"	"	"	
62-53-3	Aniline	< 570		ug/kg	570	190	1	"	"	"	"	"	
120-12-7	Anthracene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
1912-24-9	Atrazine	< 490		ug/kg	490	230	1	"	"	"	"	"	
100-52-7	Benzaldehyde	< 190		ug/kg	190	76	1	"	"	"	"	"	
92-87-5	Benzidine	< 1100		ug/kg	1100	380	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 19		ug/kg	19	7.6	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
65-85-0	Benzoic acid	< 570		ug/kg	570	190	1	"	"	"	"	"	
100-51-6	Benzyl alcohol	< 570		ug/kg	570	190	1	"	"	"	"	"	
111-91-1	bis(2-Chloroethoxy)metha ne	< 42		ug/kg	42	19	1	"	"	"	"	"	
111-44-4	bis(2-Chloroethyl)ether	< 57		ug/kg	57	27	1	"	"	"	"	"	
39638-32-9	bis(2-Chloroisopropyl)ethe r	< 49		ug/kg	49	23	1	"	"	"	"	"	
117-81-7	bis(2-Ethylhexyl)phthalate	**1,130**		ug/kg	190	76	1	"	"	"	"	"	
85-68-7	Butylbenzylphthalate	< 190		ug/kg	190	76	1	"	"	"	"	"	
105-60-2	Caprolactam	< 190		ug/kg	190	38	1	"	"	"	"	"	
86-74-8	Carbazole	< 42		ug/kg	42	19	1	"	"	"	"	"	
218-01-9	Chrysene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 19		ug/kg	19	7.6	1	"	"	"	"	"	
132-64-9	Dibenzofuran	< 42		ug/kg	42	19	1	"	"	"	"	"	
84-66-2	Diethylphthalate	< 190		ug/kg	190	76	1	"	"	"	"	"	
131-11-3	Dimethylphthalate	< 190		ug/kg	190	76	1	"	"	"	"	"	
84-74-2	Di-n-butylphthalate	< 190		ug/kg	190	76	1	"	"	"	"	"	
117-84-0	Di-n-octylphthalate	< 190		ug/kg	190	76	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
86-73-7	Fluorene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
118-74-1	Hexachlorobenzene	< 19		ug/kg	19	7.6	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 88		ug/kg	88	42	1	"	"	"	"	"	
77-47-4	Hexachlorocyclopentadien e	< 570		ug/kg	570	230	1	"	"	"	"	"	
67-72-1	Hexachloroethane	< 190		ug/kg	190	38	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
78-59-1	Isophorone	< 42		ug/kg	42	19	1	"	"	"	"	"	
91-20-3	Naphthalene	< 19		ug/kg	19	7.6	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2	[none]	Soil	22-Feb-19 10:00	26-Feb-19
SC53666-02				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
98-95-3	Nitrobenzene	< 76		ug/kg	76	30	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:34	M-PA009	063SLC0	
62-75-9	N-Nitrosodimethylamine	< 190		ug/kg	190	76	1	"	"	"	"	"	
621-64-7	N-Nitroso-di-n-propylamine	< 57		ug/kg	57	27	1	"	"	"	"	"	
86-30-6	N-Nitrosodiphenylamine	< 42		ug/kg	42	19	1	"	"	"	"	"	
82-68-8	Pentachloronitrobenzene	< 190		ug/kg	190	76	1	"	"	"	"	"	
87-86-5	Pentachlorophenol	< 190		ug/kg	190	76	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
108-95-2	Phenol	< 42		ug/kg	42	19	1	"	"	"	"	"	
129-00-0	Pyrene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
110-86-1	Pyridine	< 190		ug/kg	190	76	1	"	"	"	"	"	
Surrogate recoveries:													
118-79-6	*2,4,6-Tribromophenol*	*71*			*30-130 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*79*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*77*			*30-130 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*77*			*30-130 %*			"	"	"	"	"	
13127-88-3	*Phenol-d6*	*78*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-d14*	*92*			*30-130 %*			"	"	"	"	"	

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.54		mg/kg	0.54	0.11	1	MADEP EPH	28-Feb-19 20:25	02-Mar-19 10:37	M-PA009	0590017	
83-32-9	Acenaphthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C19 to C36 Aliphatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 6.5		mg/kg	6.5	6.5	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.2		mg/kg	2.2	0.65	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*57*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*90*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*78*			*40-140 %*			"	"	"	"	"	
Re-analysis of Subcontracted Analyses Prepared by method SW-846 3546													
91-57-6	2-Methylnaphthalene	< 0.54		mg/kg	0.54	0.11	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 19:43	M-PA009	0640020	
83-32-9	Acenaphthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C19 to C36 Aliphatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 6.5		mg/kg	6.5	6.5	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3	[none]	Soil	22-Feb-19 11:30	26-Feb-19
SC53666-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
Re-analysis of Subcontracted Analyses													
86-73-7	Fluorene	< 0.54		mg/kg	0.54	0.11	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 19:43	M-PA009	0640020	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.2		mg/kg	2.2	0.65	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*56*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*90*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*72*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 0.1		mg/kg	0.1	0.05	55.58	MADEP VPH	22-Feb-19 11:30	06-Mar-19 20:52	M-PA009	9065A54/	
	C5-C8 Aliphatic Hydrocarbons	< 6.20		mg/kg	6.20	3.10	55.58	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 6.20		mg/kg	6.20	3.10	55.58	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 6.20		mg/kg	6.20	3.10	55.58	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.1		mg/kg	0.1	0.06	55.58	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 0.1		mg/kg	0.1	0.06	55.58	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 0.1		mg/kg	0.1	0.06	55.58	"	"	"	"	"	
91-20-3	Naphthalene	< 0.4		mg/kg	0.4	0.2	55.58	"	"	"	"	"	
95-47-6	o-Xylene	< 0.1		mg/kg	0.1	0.06	55.58	"	"	"	"	"	
108-88-3	Toluene	< 0.1		mg/kg	0.1	0.06	55.58	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 6.20		mg/kg	6.20	3.10	55.58	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 6.20		mg/kg	6.20	3.10	55.58	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*97*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*98*			*70-130 %*			"	"	"	"	"	
Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
	Moisture	**10.4**		%	0.50	0.50	1	SM 2540 G %Moisture Calc	01-Mar-19 09:39	01-Mar-19 09:39	M-PA009	6082000	
Subcontracted Analyses Prepared by method SW-846 3050B													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-36-0	Antimony	< 4.69		mg/kg	4.69	1.59	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:36	M-PA009	5814049	
7440-38-2	Arsenic	**9.99**		mg/kg	4.69	1.13	1	"	"	"	"	"	
7440-41-7	Beryllium	**0.594**		mg/kg	0.469	0.0938	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.469		mg/kg	0.469	0.0938	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3 SC53666-03	[none]	Soil	22-Feb-19 11:30	26-Feb-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-47-3	Chromium	**19.9**		mg/kg	1.41	0.197	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:36	M-PA009	05814049	
7440-50-8	Copper	< 1.88		mg/kg	1.88	0.469	1	"	"	"	"	"	
7439-92-1	Lead	**7.46**		mg/kg	1.41	0.563	1	"	"	"	"	"	
7440-02-0	Nickel	**14.7**		mg/kg	0.938	0.197	1	"	"	"	"	"	
7782-49-2	Selenium	< 4.69		mg/kg	4.69	1.41	1	"	"	"	"	"	
7440-22-4	Silver	< 0.938		mg/kg	0.938	0.375	1	"	"	"	"	"	
7440-28-0	Thallium	< 14.1		mg/kg	14.1	4.22	5	"	"	"	"	"	
7440-66-6	Zinc	**64.0**		mg/kg	1.88	0.375	1	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	< 0.137		mg/kg	0.137	0.0321	1	SW-846 7471B	28-Feb-19 09:10	01-Mar-19 06:43	M-PA009	05910638	
Subcontracted Analyses													
Prepared by method SW-846 5035A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 370		ug/kg	370	37	65.67	SW-846 8260C	22-Feb-19 11:30	05-Mar-19 12:10	M-PA009	190641A	
71-55-6	1,1,1-Trichloroethane	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 730		ug/kg	730	370	65.67	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 730		ug/kg	730	370	65.67	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 590		ug/kg	590	290	65.67	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 18000		ug/kg	18000	2700	65.67	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
78-93-3	2-Butanone	< 730		ug/kg	730	73	65.67	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
591-78-6	2-Hexanone	< 730		ug/kg	730	73	65.67	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 730		ug/kg	730	73	65.67	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3	[none]	Soil	22-Feb-19 11:30	26-Feb-19
SC53666-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
67-64-1	Acetone	< 1500		ug/kg	1500	440	65.67	SW-846 8260C	22-Feb-19 11:30	05-Mar-19 12:10	M-PA009	190641A	
107-13-1	Acrylonitrile	< 1500		ug/kg	1500	59	65.67	"	"	"	"	"	
71-43-2	Benzene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
108-86-1	Bromobenzene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
74-97-5	Bromochloromethane	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
75-25-2	Bromoform	< 730		ug/kg	730	370	65.67	"	"	"	"	"	
74-83-9	Bromomethane	< 370		ug/kg	370	51	65.67	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
108-90-7	Chlorobenzene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
75-00-3	Chloroethane	< 370		ug/kg	370	73	65.67	"	"	"	"	"	
67-66-3	Chloroform	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
74-87-3	Chloromethane	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
74-95-3	Dibromomethane	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
64-17-5	Ethanol	< 55000		ug/kg	55000	21000	65.67	"	"	"	"	"	
60-29-7	Ethyl Ether	< 370		ug/kg	370	73	65.67	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
100-41-4	Ethylbenzene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
76-13-1	Freon 113	< 730		ug/kg	730	44	65.67	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 730		ug/kg	730	370	65.67	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 370		ug/kg	370	73	65.67	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
75-09-2	Methylene Chloride	< 370		ug/kg	370	150	65.67	"	"	"	"	"	
91-20-3	Naphthalene	< 370		ug/kg	370	150	65.67	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 590		ug/kg	590	220	65.67	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
95-47-6	o-Xylene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 370		ug/kg	370	150	65.67	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 370		ug/kg	370	150	65.67	"	"	"	"	"	
100-42-5	Styrene	< 370		ug/kg	370	22	65.67	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 370		ug/kg	370	59	65.67	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 7300		ug/kg	7300	1100	65.67	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 370		ug/kg	370	59	65.67	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 590		ug/kg	590	73	65.67	"	"	"	"	"	
108-88-3	Toluene	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
10061-02-6	trans-1,3-Dichloropropene	< 370		ug/kg	370	22	65.67	SW-846 8260C	22-Feb-19 11:30	05-Mar-19 12:10	M-PA009	190641A	
110-57-6	trans-1,4-Dichloro-2-butene	< 3700		ug/kg	3700	510	65.67	"	"	"	"	"	
79-01-6	Trichloroethene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 370		ug/kg	370	51	65.67	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*113*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*103*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*106*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*104*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
92-52-4	1,1'-Biphenyl	< 40		ug/kg	40	18	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:58	M-PA009	063SLC0	
95-94-3	1,2,4,5-Tetrachlorobenzene	< 40		ug/kg	40	18	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 55		ug/kg	55	26	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 55		ug/kg	55	18	1	"	"	"	"	"	
122-66-7	1,2-Diphenylhydrazine	< 48		ug/kg	48	22	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 40		ug/kg	40	18	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 40		ug/kg	40	18	1	"	"	"	"	"	
90-12-0	1-Methylnaphthalene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
58-90-2	2,3,4,6-Tetrachlorophenol	< 180		ug/kg	180	73	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 73		ug/kg	73	33	1	"	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	< 62		ug/kg	62	29	1	"	"	"	"	"	
120-83-2	2,4-Dichlorophenol	< 48		ug/kg	48	22	1	"	"	"	"	"	
105-67-9	2,4-Dimethylphenol	< 73		ug/kg	73	33	1	"	"	"	"	"	
51-28-5	2,4-Dinitrophenol	< 1100		ug/kg	1100	370	1	"	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	< 180		ug/kg	180	73	1	"	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	< 55		ug/kg	55	26	1	"	"	"	"	"	
91-58-7	2-Chloronaphthalene	< 37		ug/kg	37	7.3	1	"	"	"	"	"	
95-57-8	2-Chlorophenol	< 40		ug/kg	40	18	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 37		ug/kg	37	3.7	1	"	"	"	"	"	
95-48-7	2-Methylphenol	< 73		ug/kg	73	18	1	"	"	"	"	"	
88-74-4	2-Nitroaniline	< 55		ug/kg	55	18	1	"	"	"	"	"	
88-75-5	2-Nitrophenol	< 62		ug/kg	62	29	1	"	"	"	"	"	
91-94-1	3,3'-Dichlorobenzidine	< 370		ug/kg	370	110	1	"	"	"	"	"	
99-09-2	3-Nitroaniline	< 180		ug/kg	180	73	1	"	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	< 550		ug/kg	550	260	1	"	"	"	"	"	
101-55-3	4-Bromophenyl-phenylether	< 55		ug/kg	55	26	1	"	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	< 55		ug/kg	55	26	1	"	"	"	"	"	
106-47-8	4-Chloroaniline	< 180		ug/kg	180	37	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3	[none]	Soil	22-Feb-19 11:30	26-Feb-19
SC53666-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7005-72-3	4-Chlorophenyl-phenylether	< 48		ug/kg	48	22	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:58	M-PA009	063SLC0	
106-44-5	4-Methylphenol	< 37		ug/kg	37	18	1	"	"	"	"	"	
100-01-6	4-Nitroaniline	< 180		ug/kg	180	73	1	"	"	"	"	"	
100-02-7	4-Nitrophenol	< 550		ug/kg	550	180	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
98-86-2	Acetophenone	< 55		ug/kg	55	18	1	"	"	"	"	"	
62-53-3	Aniline	< 550		ug/kg	550	180	1	"	"	"	"	"	
120-12-7	Anthracene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
1912-24-9	Atrazine	< 480		ug/kg	480	220	1	"	"	"	"	"	
100-52-7	Benzaldehyde	< 180		ug/kg	180	73	1	"	"	"	"	"	
92-87-5	Benzidine	< 1100		ug/kg	1100	370	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 18		ug/kg	18	7.3	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
65-85-0	Benzoic acid	< 550		ug/kg	550	180	1	"	"	"	"	"	
100-51-6	Benzyl alcohol	< 550		ug/kg	550	180	1	"	"	"	"	"	
111-91-1	bis(2-Chloroethoxy)methane	< 40		ug/kg	40	18	1	"	"	"	"	"	
111-44-4	bis(2-Chloroethyl)ether	< 55		ug/kg	55	26	1	"	"	"	"	"	
39638-32-9	bis(2-Chloroisopropyl)ether	< 48		ug/kg	48	22	1	"	"	"	"	"	
117-81-7	bis(2-Ethylhexyl)phthalate	**260**		ug/kg	180	73	1	"	"	"	"	"	
85-68-7	Butylbenzylphthalate	< 180		ug/kg	180	73	1	"	"	"	"	"	
105-60-2	Caprolactam	< 180		ug/kg	180	37	1	"	"	"	"	"	
86-74-8	Carbazole	< 40		ug/kg	40	18	1	"	"	"	"	"	
218-01-9	Chrysene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 18		ug/kg	18	7.3	1	"	"	"	"	"	
132-64-9	Dibenzofuran	< 40		ug/kg	40	18	1	"	"	"	"	"	
84-66-2	Diethylphthalate	< 180		ug/kg	180	73	1	"	"	"	"	"	
131-11-3	Dimethylphthalate	< 180		ug/kg	180	73	1	"	"	"	"	"	
84-74-2	Di-n-butylphthalate	< 180		ug/kg	180	73	1	"	"	"	"	"	
117-84-0	Di-n-octylphthalate	< 180		ug/kg	180	73	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
86-73-7	Fluorene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
118-74-1	Hexachlorobenzene	< 18		ug/kg	18	7.3	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 84		ug/kg	84	40	1	"	"	"	"	"	
77-47-4	Hexachlorocyclopentadiene	< 550		ug/kg	550	220	1	"	"	"	"	"	
67-72-1	Hexachloroethane	< 180		ug/kg	180	37	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
78-59-1	Isophorone	< 40		ug/kg	40	18	1	"	"	"	"	"	
91-20-3	Naphthalene	< 18		ug/kg	18	7.3	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3	[none]	Soil	22-Feb-19 11:30	26-Feb-19
SC53666-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
98-95-3	Nitrobenzene	< 73		ug/kg	73	29	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:58	M-PA009	063SLC0	
62-75-9	N-Nitrosodimethylamine	< 180		ug/kg	180	73	1	"	"	"	"	"	
621-64-7	N-Nitroso-di-n-propylamine	< 55		ug/kg	55	26	1	"	"	"	"	"	
86-30-6	N-Nitrosodiphenylamine	< 40		ug/kg	40	18	1	"	"	"	"	"	
82-68-8	Pentachloronitrobenzene	< 180		ug/kg	180	73	1	"	"	"	"	"	
87-86-5	Pentachlorophenol	< 180		ug/kg	180	73	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
108-95-2	Phenol	< 40		ug/kg	40	18	1	"	"	"	"	"	
129-00-0	Pyrene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
110-86-1	Pyridine	< 180		ug/kg	180	73	1	"	"	"	"	"	
Surrogate recoveries:													
118-79-6	*2,4,6-Tribromophenol*	*73*			*30-130 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*82*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*77*			*30-130 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*78*			*30-130 %*			"	"	"	"	"	
13127-88-3	*Phenol-d6*	*80*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-d14*	*95*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Soil	22-Feb-19 13:30	26-Feb-19
SC53666-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.55		mg/kg	0.55	0.11	1	MADEP EPH	28-Feb-19 20:25	02-Mar-19 11:58	M-PA009	90590017	
83-32-9	Acenaphthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C19 to C36 Aliphatics	22		mg/kg	13	13	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 6.6		mg/kg	6.6	6.6	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.2		mg/kg	2.2	0.66	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*53*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*87*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*69*			*40-140 %*			"	"	"	"	"	
Re-analysis of Subcontracted Analyses Prepared by method SW-846 3546													
91-57-6	2-Methylnaphthalene	< 0.56		mg/kg	0.56	0.11	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 21:03	M-PA009	90640020	
83-32-9	Acenaphthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C19 to C36 Aliphatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 6.7		mg/kg	6.7	6.7	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Soil	22-Feb-19 13:30	26-Feb-19
SC53666-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
Re-analysis of Subcontracted Analyses													
86-73-7	Fluorene	< 0.56		mg/kg	0.56	0.11	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 21:03	M-PA009	0640020	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.2		mg/kg	2.2	0.67	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*55*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*94*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*73*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 0.09		mg/kg	0.09	0.03	38.55	MADEP VPH	22-Feb-19 13:30	06-Mar-19 21:32	M-PA009	9065A54/	
	C5-C8 Aliphatic Hydrocarbons	< 4.30		mg/kg	4.30	2.15	38.55	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 4.30		mg/kg	4.30	2.15	38.55	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 4.30		mg/kg	4.30	2.15	38.55	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.09		mg/kg	0.09	0.04	38.55	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 0.09		mg/kg	0.09	0.04	38.55	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 0.09		mg/kg	0.09	0.04	38.55	"	"	"	"	"	
91-20-3	Naphthalene	< 0.3		mg/kg	0.3	0.1	38.55	"	"	"	"	"	
95-47-6	o-Xylene	< 0.09		mg/kg	0.09	0.04	38.55	"	"	"	"	"	
108-88-3	Toluene	< 0.09		mg/kg	0.09	0.04	38.55	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 4.30		mg/kg	4.30	2.15	38.55	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 4.30		mg/kg	4.30	2.15	38.55	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*106*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*106*			*70-130 %*			"	"	"	"	"	
Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
	Moisture	**10.3**		%	0.50	0.50	1	SM 2540 G %Moisture Calc	01-Mar-19 09:39	01-Mar-19 09:39	M-PA009	6082000	
Subcontracted Analyses Prepared by method SW-846 3050B													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-36-0	Antimony	< 3.90		mg/kg	3.90	1.33	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:40	M-PA009	5814049	
7440-38-2	Arsenic	**8.65**		mg/kg	3.90	0.936	1	"	"	"	"	"	
7440-41-7	Beryllium	**1.05**		mg/kg	0.390	0.0780	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.390		mg/kg	0.390	0.0780	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4 SC53666-04	[none]	Soil	22-Feb-19 13:30	26-Feb-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-47-3	Chromium	**21.6**		mg/kg	1.17	0.164	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:40	M-PA009	05814049	
7440-50-8	Copper	**15.2**		mg/kg	1.56	0.390	1	"	"	"	"	"	
7439-92-1	Lead	**12.8**		mg/kg	1.17	0.468	1	"	"	"	"	"	
7440-02-0	Nickel	**15.2**		mg/kg	0.780	0.164	1	"	"	"	"	"	
7782-49-2	Selenium	< 3.90		mg/kg	3.90	1.17	1	"	"	"	"	"	
7440-22-4	Silver	< 0.780		mg/kg	0.780	0.312	1	"	"	"	"	"	
7440-28-0	Thallium	< 11.7		mg/kg	11.7	3.51	5	"	"	"	"	"	
7440-66-6	Zinc	**78.3**		mg/kg	1.56	0.312	1	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	< 0.139		mg/kg	0.139	0.0326	1	SW-846 7471B	28-Feb-19 09:10	01-Mar-19 06:49	M-PA009	05910638	
Subcontracted Analyses													
Prepared by method SW-846 5035A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 170		ug/kg	170	17	29.88	SW-846 8260C	22-Feb-19 13:30	05-Mar-19 12:33	M-PA009	190641A	
71-55-6	1,1,1-Trichloroethane	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 330		ug/kg	330	170	29.88	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 330		ug/kg	330	170	29.88	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 270		ug/kg	270	130	29.88	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 8300		ug/kg	8300	1200	29.88	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
78-93-3	2-Butanone	< 330		ug/kg	330	33	29.88	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
591-78-6	2-Hexanone	< 330		ug/kg	330	33	29.88	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 330		ug/kg	330	33	29.88	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Soil	22-Feb-19 13:30	26-Feb-19
SC53666-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
67-64-1	Acetone	< 670		ug/kg	670	200	29.88	SW-846 8260C	22-Feb-19 13:30	05-Mar-19 12:33	M-PA009	190641A	
107-13-1	Acrylonitrile	< 670		ug/kg	670	27	29.88	"	"	"	"	"	
71-43-2	Benzene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
108-86-1	Bromobenzene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
74-97-5	Bromochloromethane	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
75-25-2	Bromoform	< 330		ug/kg	330	170	29.88	"	"	"	"	"	
74-83-9	Bromomethane	< 170		ug/kg	170	23	29.88	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
108-90-7	Chlorobenzene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
75-00-3	Chloroethane	< 170		ug/kg	170	33	29.88	"	"	"	"	"	
67-66-3	Chloroform	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
74-87-3	Chloromethane	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
74-95-3	Dibromomethane	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
64-17-5	Ethanol	< 25000		ug/kg	25000	9300	29.88	"	"	"	"	"	
60-29-7	Ethyl Ether	< 170		ug/kg	170	33	29.88	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
100-41-4	Ethylbenzene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
76-13-1	Freon 113	< 330		ug/kg	330	20	29.88	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 330		ug/kg	330	170	29.88	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 170		ug/kg	170	33	29.88	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
75-09-2	Methylene Chloride	< 170		ug/kg	170	67	29.88	"	"	"	"	"	
91-20-3	Naphthalene	< 170		ug/kg	170	67	29.88	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 270		ug/kg	270	100	29.88	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
95-47-6	o-Xylene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 170		ug/kg	170	67	29.88	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 170		ug/kg	170	67	29.88	"	"	"	"	"	
100-42-5	Styrene	< 170		ug/kg	170	10	29.88	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 170		ug/kg	170	27	29.88	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 3300		ug/kg	3300	500	29.88	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 170		ug/kg	170	27	29.88	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 270		ug/kg	270	33	29.88	"	"	"	"	"	
108-88-3	Toluene	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Soil	22-Feb-19 13:30	26-Feb-19
SC53666-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
10061-02-6	trans-1,3-Dichloropropene	< 170		ug/kg	170	10	29.88	SW-846 8260C	22-Feb-19 13:30	05-Mar-19 12:33	M-PA009	190641A	
110-57-6	trans-1,4-Dichloro-2-butene	< 1700		ug/kg	1700	230	29.88	"	"	"	"	"	
79-01-6	Trichloroethene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 170		ug/kg	170	23	29.88	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*95*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*88*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*90*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*90*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
92-52-4	1,1'-Biphenyl	< 41		ug/kg	41	19	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 14:23	M-PA009	063SLC0	
95-94-3	1,2,4,5-Tetrachlorobenzene	< 41		ug/kg	41	19	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 56		ug/kg	56	26	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 56		ug/kg	56	19	1	"	"	"	"	"	
122-66-7	1,2-Diphenylhydrazine	< 48		ug/kg	48	22	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 41		ug/kg	41	19	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 41		ug/kg	41	19	1	"	"	"	"	"	
90-12-0	1-Methylnaphthalene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
58-90-2	2,3,4,6-Tetrachlorophenol	< 190		ug/kg	190	74	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 74		ug/kg	74	33	1	"	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	< 63		ug/kg	63	30	1	"	"	"	"	"	
120-83-2	2,4-Dichlorophenol	< 48		ug/kg	48	22	1	"	"	"	"	"	
105-67-9	2,4-Dimethylphenol	< 74		ug/kg	74	33	1	"	"	"	"	"	
51-28-5	2,4-Dinitrophenol	< 1100		ug/kg	1100	370	1	"	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	< 190		ug/kg	190	74	1	"	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	< 56		ug/kg	56	26	1	"	"	"	"	"	
91-58-7	2-Chloronaphthalene	< 37		ug/kg	37	7.4	1	"	"	"	"	"	
95-57-8	2-Chlorophenol	< 41		ug/kg	41	19	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 37		ug/kg	37	3.7	1	"	"	"	"	"	
95-48-7	2-Methylphenol	< 74		ug/kg	74	19	1	"	"	"	"	"	
88-74-4	2-Nitroaniline	< 56		ug/kg	56	19	1	"	"	"	"	"	
88-75-5	2-Nitrophenol	< 63		ug/kg	63	30	1	"	"	"	"	"	
91-94-1	3,3'-Dichlorobenzidine	< 370		ug/kg	370	110	1	"	"	"	"	"	
99-09-2	3-Nitroaniline	< 190		ug/kg	190	74	1	"	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	< 560		ug/kg	560	260	1	"	"	"	"	"	
101-55-3	4-Bromophenyl-phenylether	< 56		ug/kg	56	26	1	"	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	< 56		ug/kg	56	26	1	"	"	"	"	"	
106-47-8	4-Chloroaniline	< 190		ug/kg	190	37	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Soil	22-Feb-19 13:30	26-Feb-19
SC53666-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7005-72-3	4-Chlorophenyl-phenylether	< 48		ug/kg	48	22	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 14:23	M-PA009	063SLC0	
106-44-5	4-Methylphenol	< 37		ug/kg	37	19	1	"	"	"	"	"	
100-01-6	4-Nitroaniline	< 190		ug/kg	190	74	1	"	"	"	"	"	
100-02-7	4-Nitrophenol	< 560		ug/kg	560	190	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
98-86-2	Acetophenone	< 56		ug/kg	56	19	1	"	"	"	"	"	
62-53-3	Aniline	< 560		ug/kg	560	190	1	"	"	"	"	"	
120-12-7	Anthracene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
1912-24-9	Atrazine	< 480		ug/kg	480	220	1	"	"	"	"	"	
100-52-7	Benzaldehyde	< 190		ug/kg	190	74	1	"	"	"	"	"	
92-87-5	Benzidine	< 1100		ug/kg	1100	370	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 19		ug/kg	19	7.4	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
65-85-0	Benzoic acid	< 560		ug/kg	560	190	1	"	"	"	"	"	
100-51-6	Benzyl alcohol	< 560		ug/kg	560	190	1	"	"	"	"	"	
111-91-1	bis(2-Chloroethoxy)methane	< 41		ug/kg	41	19	1	"	"	"	"	"	
111-44-4	bis(2-Chloroethyl)ether	< 56		ug/kg	56	26	1	"	"	"	"	"	
39638-32-9	bis(2-Chloroisopropyl)ether	< 48		ug/kg	48	22	1	"	"	"	"	"	
117-81-7	bis(2-Ethylhexyl)phthalate	< 190		ug/kg	190	74	1	"	"	"	"	"	
85-68-7	Butylbenzylphthalate	< 190		ug/kg	190	74	1	"	"	"	"	"	
105-60-2	Caprolactam	< 190		ug/kg	190	37	1	"	"	"	"	"	
86-74-8	Carbazole	< 41		ug/kg	41	19	1	"	"	"	"	"	
218-01-9	Chrysene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 19		ug/kg	19	7.4	1	"	"	"	"	"	
132-64-9	Dibenzofuran	< 41		ug/kg	41	19	1	"	"	"	"	"	
84-66-2	Diethylphthalate	< 190		ug/kg	190	74	1	"	"	"	"	"	
131-11-3	Dimethylphthalate	< 190		ug/kg	190	74	1	"	"	"	"	"	
84-74-2	Di-n-butylphthalate	< 190		ug/kg	190	74	1	"	"	"	"	"	
117-84-0	Di-n-octylphthalate	< 190		ug/kg	190	74	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
86-73-7	Fluorene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
118-74-1	Hexachlorobenzene	< 19		ug/kg	19	7.4	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 85		ug/kg	85	41	1	"	"	"	"	"	
77-47-4	Hexachlorocyclopentadiene	< 560		ug/kg	560	220	1	"	"	"	"	"	
67-72-1	Hexachloroethane	< 190		ug/kg	190	37	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
78-59-1	Isophorone	< 41		ug/kg	41	19	1	"	"	"	"	"	
91-20-3	Naphthalene	< 19		ug/kg	19	7.4	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Soil	22-Feb-19 13:30	26-Feb-19
SC53666-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
98-95-3	Nitrobenzene	< 74		ug/kg	74	30	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 14:23	M-PA009	063SLC0	
62-75-9	N-Nitrosodimethylamine	< 190		ug/kg	190	74	1	"	"	"	"	"	
621-64-7	N-Nitroso-di-n-propylamine	< 56		ug/kg	56	26	1	"	"	"	"	"	
86-30-6	N-Nitrosodiphenylamine	< 41		ug/kg	41	19	1	"	"	"	"	"	
82-68-8	Pentachloronitrobenzene	< 190		ug/kg	190	74	1	"	"	"	"	"	
87-86-5	Pentachlorophenol	< 190		ug/kg	190	74	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
108-95-2	Phenol	< 41		ug/kg	41	19	1	"	"	"	"	"	
129-00-0	Pyrene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
110-86-1	Pyridine	< 190		ug/kg	190	74	1	"	"	"	"	"	
Surrogate recoveries:													
118-79-6	*2,4,6-Tribromophenol*	*70*			*30-130 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*76*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*67*			*30-130 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*66*			*30-130 %*			"	"	"	"	"	
13127-88-3	*Phenol-d6*	*73*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-d14*	*92*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip Blank SC53666-05	[none]	Trip Blank	25-Feb-19 00:00	26-Feb-19

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 0.1		mg/kg	0.1	0.04	50	MADEP VPH	22-Feb-19	06-Mar-19 22:13	M-PA009	9065A54/	
	C5-C8 Aliphatic Hydrocarbons	< 5.00		mg/kg	5.00	2.50	50	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 5.00		mg/kg	5.00	2.50	50	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 5.00		mg/kg	5.00	2.50	50	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.1		mg/kg	0.1	0.05	50	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 0.1		mg/kg	0.1	0.05	50	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 0.1		mg/kg	0.1	0.05	50	"	"	"	"	"	
91-20-3	Naphthalene	< 0.3		mg/kg	0.3	0.2	50	"	"	"	"	"	
95-47-6	o-Xylene	< 0.1		mg/kg	0.1	0.05	50	"	"	"	"	"	
108-88-3	Toluene	< 0.1		mg/kg	0.1	0.05	50	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 5.00		mg/kg	5.00	2.50	50	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 5.00		mg/kg	5.00	2.50	50	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*99*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*101*			*70-130 %*			"	"	"	"	"	

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH										
Batch 190590017A - SW-846 3546										
LCS (LCS17059Q)					Prepared: 28-Feb-19 Analyzed: 02-Mar-19					
Dibenzo(a,h)anthracene	**3.3**		mg/kg	0.50	4.0		82	40-140		
Anthracene	**3.0**		mg/kg	0.50	4.0		75	40-140		
Benzo(a)anthracene	**3.0**		mg/kg	0.50	4.0		74	40-140		
Benzo(a)pyrene	**3.2**		mg/kg	0.50	4.0		81	40-140		
Benzo(b)fluoranthene	**3.4**		mg/kg	0.50	4.0		85	40-140		
Benzo(g,h,i)perylene	**3.3**		mg/kg	0.50	4.0		81	40-140		
Benzo(k)fluoranthene	**2.9**		mg/kg	0.50	4.0		72	40-140		
C19 to C36 Aliphatics	**89**	*	mg/kg	12	32		277	40-140		
Acenaphthene	**2.7**		mg/kg	0.50	4.0		66	40-140		
Chrysene	**2.8**		mg/kg	0.50	4.0		71	40-140		
2-Methylnaphthalene	**2.3**		mg/kg	0.50	4.0		58	40-140		
Fluoranthene	**3.1**		mg/kg	0.50	4.0		77	40-140		
Fluorene	**2.9**		mg/kg	0.50	4.0		71	40-140		
Indeno(1,2,3-cd)pyrene	**3.5**		mg/kg	0.50	4.0		86	40-140		
Naphthalene	**2.1**		mg/kg	0.50	4.0		52	40-140		
Phenanthrene	**3.4**		mg/kg	0.50	4.0		85	40-140		
Pyrene	**3.1**		mg/kg	2.0	4.0		77	40-140		
Unadjusted C11 - C22 Aromatics	**56**		mg/kg	12	68		82	40-140		
C9 to C18 Aliphatics	**11**		mg/kg	6.0	24		46	40-140		
Acenaphthylene	**2.6**		mg/kg	0.50	4.0		66	40-140		
Surrogate: Orthoterphenyl	*1.5*		mg/kg		*2.0*		*73*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.8*		mg/kg		*2.0*		*91*	*40-140*		
Surrogate: 1-Chloro-octadecane	*1.0*		mg/kg		*2.0*		*51*	*40-140*		
LCSD (P90597AY)					Prepared: 28-Feb-19 Analyzed: 02-Mar-19					
C19 to C36 Aliphatics	**63**	*	mg/kg	12	32		197	40-140	33	50
2-Methylnaphthalene	**1.6**		mg/kg	0.50	4.0		40	40-140	36	50
Acenaphthene	**1.8**		mg/kg	0.50	4.0		46	40-140	37	50
Acenaphthylene	**1.8**		mg/kg	0.50	4.0		45	40-140	37	50
Anthracene	**2.4**		mg/kg	0.50	4.0		59	40-140	25	50
Benzo(a)anthracene	**2.3**		mg/kg	0.50	4.0		56	40-140	27	50
Benzo(a)pyrene	**2.4**		mg/kg	0.50	4.0		61	40-140	28	50
Benzo(b)fluoranthene	**2.5**		mg/kg	0.50	4.0		62	40-140	31	50
Benzo(k)fluoranthene	**2.3**		mg/kg	0.50	4.0		56	40-140	25	50
C9 to C18 Aliphatics	**10**		mg/kg	6.0	24		42	40-140	9	50
Chrysene	**2.2**		mg/kg	0.50	4.0		54	40-140	26	50
Dibenzo(a,h)anthracene	**2.5**		mg/kg	0.50	4.0		63	40-140	26	50
Fluoranthene	**2.3**		mg/kg	0.50	4.0		58	40-140	28	50
Fluorene	**2.0**		mg/kg	0.50	4.0		50	40-140	35	50
Indeno(1,2,3-cd)pyrene	**2.6**		mg/kg	0.50	4.0		64	40-140	30	50
Naphthalene	**1.5**	*	mg/kg	0.50	4.0		37	40-140	33	50
Phenanthrene	**2.3**		mg/kg	0.50	4.0		57	40-140	40	50
Pyrene	**2.4**		mg/kg	2.0	4.0		61	40-140	23	50
Unadjusted C11 - C22 Aromatics	**39**		mg/kg	12	68		57	40-140	36	50
Benzo(g,h,i)perylene	**2.5**		mg/kg	0.50	4.0		61	40-140	28	50
Surrogate: Orthoterphenyl	*1.0*		mg/kg		*2.0*		*51*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.4*		mg/kg		*2.0*		*69*	*40-140*		
Surrogate: 1-Chloro-octadecane	*0.91*		mg/kg		*2.0*		*45*	*40-140*		
Blank (PBLK17059B)					Prepared: 28-Feb-19 Analyzed: 02-Mar-19					
Phenanthrene	< 0.50		mg/kg	0.50				-		
C11 to C22 Aromatics	< 12		mg/kg	12				-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH										
Batch 190590017A - SW-846 3546										
Blank (PBLK17059B)						Prepared: 28-Feb-19 Analyzed: 02-Mar-19				
2-Methylnaphthalene	< 0.50		mg/kg	0.50				-		
Acenaphthene	< 0.50		mg/kg	0.50				-		
Acenaphthylene	< 0.50		mg/kg	0.50				-		
Anthracene	< 0.50		mg/kg	0.50				-		
Benzo(a)anthracene	< 0.50		mg/kg	0.50				-		
Benzo(a)pyrene	< 0.50		mg/kg	0.50				-		
Benzo(b)fluoranthene	< 0.50		mg/kg	0.50				-		
Benzo(k)fluoranthene	< 0.50		mg/kg	0.50				-		
Unadjusted C11 - C22 Aromatics	< 12		mg/kg	12				-		
C19 to C36 Aliphatics	**120**		mg/kg	12				-		
C9 to C18 Aliphatics	< 6.0		mg/kg	6.0				-		
Chrysene	< 0.50		mg/kg	0.50				-		
Dibenzo(a,h)anthracene	< 0.50		mg/kg	0.50				-		
Fluoranthene	< 0.50		mg/kg	0.50				-		
Fluorene	< 0.50		mg/kg	0.50				-		
Indeno(1,2,3-cd)pyrene	< 0.50		mg/kg	0.50				-		
Naphthalene	< 0.50		mg/kg	0.50				-		
Pyrene	< 2.0		mg/kg	2.0				-		
Benzo(g,h,i)perylene	< 0.50		mg/kg	0.50				-		
Surrogate: Orthoterphenyl	*1.3*		mg/kg		*2.0*		*66*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.7*		mg/kg		*2.0*		*86*	*40-140*		
Surrogate: 1-Chloro-octadecane	*0.91*		mg/kg		*2.0*		*45*	*40-140*		
Batch 190640020A - SW-846 3546										
LCS (LCS20064Q)						Prepared: 05-Mar-19 Analyzed: 09-Mar-19				
Phenanthrene	**2.8**		mg/kg	0.50	4.0		70	40-140		
2-Methylnaphthalene	**2.2**		mg/kg	0.50	4.0		55	40-140		
Unadjusted C11 - C22 Aromatics	**52**		mg/kg	12	68		76	40-140		
Acenaphthene	**2.5**		mg/kg	0.50	4.0		62	40-140		
Acenaphthylene	**2.5**		mg/kg	0.50	4.0		63	40-140		
Anthracene	**3.5**		mg/kg	0.50	4.0		88	40-140		
Benzo(a)anthracene	**2.9**		mg/kg	0.50	4.0		73	40-140		
Benzo(a)pyrene	**3.5**		mg/kg	0.50	4.0		88	40-140		
Benzo(b)fluoranthene	**3.1**		mg/kg	0.50	4.0		77	40-140		
Benzo(g,h,i)perylene	**3.1**		mg/kg	0.50	4.0		78	40-140		
Benzo(k)fluoranthene	**3.5**		mg/kg	0.50	4.0		87	40-140		
C19 to C36 Aliphatics	**22**		mg/kg	12	32		69	40-140		
Chrysene	**3.7**		mg/kg	0.50	4.0		91	40-140		
Dibenzo(a,h)anthracene	**3.2**		mg/kg	0.50	4.0		80	40-140		
Fluoranthene	**3.2**		mg/kg	0.50	4.0		80	40-140		
Fluorene	**2.7**		mg/kg	0.50	4.0		67	40-140		
Indeno(1,2,3-cd)pyrene	**3.0**		mg/kg	0.50	4.0		75	40-140		
Naphthalene	**2.1**		mg/kg	0.50	4.0		52	40-140		
Pyrene	**3.7**		mg/kg	2.0	4.0		93	40-140		
C9 to C18 Aliphatics	**12**		mg/kg	6.0	24		52	40-140		
Surrogate: 1-Chloro-octadecane	*1.1*		mg/kg		*2.0*		*54*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.8*		mg/kg		*2.0*		*90*	*40-140*		
Surrogate: Orthoterphenyl	*1.5*		mg/kg		*2.0*		*73*	*40-140*		
LCSD (P90640AY)						Prepared: 05-Mar-19 Analyzed: 09-Mar-19				
Benzo(k)fluoranthene	**1.3**	*	mg/kg	0.50	4.0		32	40-140	93	50

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH										
Batch 190640020A - SW-846 3546										
LCSD (P90640AY)					Prepared: 05-Mar-19 Analyzed: 09-Mar-19					
C19 to C36 Aliphatics	**7.8**	*	mg/kg	12	32		24	40-140	97	50
C9 to C18 Aliphatics	**4.2**	*	mg/kg	6.0	24		17	40-140	100	50
Chrysene	**1.3**	*	mg/kg	0.50	4.0		33	40-140	95	50
Dibenzo(a,h)anthracene	**1.2**	*	mg/kg	0.50	4.0		29	40-140	94	50
Benzo(g,h,i)perylene	**1.1**	*	mg/kg	0.50	4.0		29	40-140	93	50
Fluorene	**0.88**	*	mg/kg	0.50	4.0		22	40-140	102	50
2-Methylnaphthalene	**0.73**	*	mg/kg	0.50	4.0		18	40-140	101	50
Indeno(1,2,3-cd)pyrene	**1.0**	*	mg/kg	0.50	4.0		26	40-140	98	50
Fluoranthene	**1.1**	*	mg/kg	0.50	4.0		27	40-140	99	50
Benzo(b)fluoranthene	**1.0**	*	mg/kg	0.50	4.0		26	40-140	100	50
Benzo(a)pyrene	**1.2**	*	mg/kg	0.50	4.0		30	40-140	97	50
Benzo(a)anthracene	**1.0**	*	mg/kg	0.50	4.0		26	40-140	97	50
Anthracene	**1.2**	*	mg/kg	0.50	4.0		30	40-140	99	50
Acenaphthene	**0.80**	*	mg/kg	0.50	4.0		20	40-140	102	50
Phenanthrene	**0.92**	*	mg/kg	0.50	4.0		23	40-140	102	50
Naphthalene	**0.68**	*	mg/kg	0.50	4.0		17	40-140	102	50
Unadjusted C11 - C22 Aromatics	**18**	*	mg/kg	12	68		26	40-140	98	50
Pyrene	**1.3**	*	mg/kg	2.0	4.0		31	40-140	99	50
Acenaphthylene	**0.82**	*	mg/kg	0.50	4.0		20	40-140	102	50
Surrogate: Orthoterphenyl	*0.53*	*	mg/kg		*2.0*		*26*	*40-140*		
Surrogate: 1-Chloro-octadecane	*0.41*	*	mg/kg		*2.0*		*21*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.7*		mg/kg		*2.0*		*84*	*40-140*		
Matrix Spike Dup (P993887M321822A)			**Source: SC53666-02**		Prepared: 05-Mar-19 Analyzed: 09-Mar-19					
Fluorene	**2.1**		mg/kg	0.50	4.0	BRL	52	40-140	41	50
Benzo(a)pyrene	**2.7**		mg/kg	0.50	4.0	BRL	69	40-140	38	50
Acenaphthylene	**1.9**		mg/kg	0.50	4.0	BRL	48	40-140	43	50
Acenaphthene	**1.9**		mg/kg	0.50	4.0	BRL	48	40-140	42	50
2-Methylnaphthalene	**1.6**		mg/kg	0.50	4.0	BRL	41	40-140	47	50
Naphthalene	**1.5**	*	mg/kg	0.50	4.0	BRL	38	40-140	50	50
Benzo(a)anthracene	**2.3**		mg/kg	0.50	4.0	BRL	57	40-140	38	50
Benzo(b)fluoranthene	**2.5**		mg/kg	0.50	4.0	BRL	62	40-140	42	50
Benzo(g,h,i)perylene	**2.6**		mg/kg	0.50	4.0	BRL	65	40-140	40	50
Benzo(k)fluoranthene	**2.7**		mg/kg	0.50	4.0	BRL	67	40-140	35	50
Chrysene	**2.6**		mg/kg	0.50	4.0	BRL	66	40-140	40	50
Unadjusted C11 - C22 Aromatics	**41**		mg/kg	12	68	BRL	60	40-140	40	50
Fluoranthene	**2.7**		mg/kg	0.50	4.0	BRL	66	40-140	36	50
Anthracene	**2.7**		mg/kg	0.50	4.0	BRL	67	40-140	42	50
Indeno(1,2,3-cd)pyrene	**2.5**		mg/kg	0.50	4.0	BRL	62	40-140	38	50
Phenanthrene	**2.2**		mg/kg	0.50	4.0	BRL	55	40-140	43	50
Pyrene	**3.0**		mg/kg	2.0	4.0	BRL	76	40-140	32	50
Dibenzo(a,h)anthracene	**2.5**		mg/kg	0.50	4.0	BRL	62	40-140	40	50
Surrogate: Orthoterphenyl	*1.2*		mg/kg		*2.0*	*1.2*	*58*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.7*		mg/kg		*2.0*	*1.7*	*84*	*40-140*		
Matrix Spike Dup (P993887M321902A)			**Source: SC53666-02**		Prepared: 05-Mar-19 Analyzed: 09-Mar-19					
C19 to C36 Aliphatics	**20**		mg/kg	12	32	BRL	61	40-140	34	50
C9 to C18 Aliphatics	**10**		mg/kg	6.0	24	BRL	42	40-140	42	50
Surrogate: 1-Chloro-octadecane	*1.1*		mg/kg		*2.0*	*1.1*	*55*	*40-140*		
Matrix Spike (P993887R321702A)			**Source: SC53666-02**		Prepared: 05-Mar-19 Analyzed: 09-Mar-19					
Benzo(a)pyrene	**4.0**		mg/kg	0.50	4.0	BRL	101	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH										
Batch 190640020A - SW-846 3546										
Matrix Spike (P993887R321702A)			**Source: SC53666-02**			Prepared: 05-Mar-19 Analyzed: 09-Mar-19				
Chrysene	**3.9**		mg/kg	0.50	4.0	BRL	98	40-140		
Unadjusted C11 - C22 Aromatics	**61**		mg/kg	12	68	BRL	90	40-140		
Pyrene	**4.2**		mg/kg	2.0	4.0	BRL	105	40-140		
Phenanthrene	**3.4**		mg/kg	0.50	4.0	BRL	85	40-140		
Naphthalene	**2.5**		mg/kg	0.50	4.0	BRL	63	40-140		
Indeno(1,2,3-cd)pyrene	**3.7**		mg/kg	0.50	4.0	BRL	91	40-140		
Fluorene	**3.2**		mg/kg	0.50	4.0	BRL	79	40-140		
Fluoranthene	**3.8**		mg/kg	0.50	4.0	BRL	95	40-140		
Dibenzo(a,h)anthracene	**3.7**		mg/kg	0.50	4.0	BRL	92	40-140		
Benzo(k)fluoranthene	**3.8**		mg/kg	0.50	4.0	BRL	95	40-140		
Benzo(b)fluoranthene	**3.8**		mg/kg	0.50	4.0	BRL	95	40-140		
Benzo(g,h,i)perylene	**3.9**		mg/kg	0.50	4.0	BRL	98	40-140		
Benzo(a)anthracene	**3.4**		mg/kg	0.50	4.0	BRL	84	40-140		
Anthracene	**4.1**		mg/kg	0.50	4.0	BRL	102	40-140		
Acenaphthylene	**3.0**		mg/kg	0.50	4.0	BRL	74	40-140		
Acenaphthene	**2.9**		mg/kg	0.50	4.0	BRL	73	40-140		
2-Methylnaphthalene	**2.6**		mg/kg	0.50	4.0	BRL	66	40-140		
Surrogate: Orthoterphenyl	*1.7*		mg/kg		*2.0*	*1.7*	*86*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.7*		mg/kg		*2.0*	*1.7*	*84*	*40-140*		
Matrix Spike (P993887R321742A)			**Source: SC53666-02**			Prepared: 05-Mar-19 Analyzed: 09-Mar-19				
C19 to C36 Aliphatics	**28**		mg/kg	12	32	BRL	87	40-140		
C9 to C18 Aliphatics	**15**		mg/kg	6.0	24	BRL	64	40-140		
Surrogate: 1-Chloro-octadecane	*1.6*		mg/kg		*2.0*	*1.6*	*80*	*40-140*		
Blank (PBLK20064B)						Prepared: 05-Mar-19 Analyzed: 09-Mar-19				
Acenaphthene	< 0.50		mg/kg	0.50				-		
C19 to C36 Aliphatics	< 12		mg/kg	12				-		
2-Methylnaphthalene	< 0.50		mg/kg	0.50				-		
Acenaphthylene	< 0.50		mg/kg	0.50				-		
Anthracene	< 0.50		mg/kg	0.50				-		
Benzo(a)anthracene	< 0.50		mg/kg	0.50				-		
Benzo(a)pyrene	< 0.50		mg/kg	0.50				-		
Benzo(b)fluoranthene	< 0.50		mg/kg	0.50				-		
Benzo(g,h,i)perylene	< 0.50		mg/kg	0.50				-		
Benzo(k)fluoranthene	< 0.50		mg/kg	0.50				-		
C11 to C22 Aromatics	< 12		mg/kg	12				-		
Phenanthrene	< 0.50		mg/kg	0.50				-		
C9 to C18 Aliphatics	< 6.0		mg/kg	6.0				-		
Pyrene	< 2.0		mg/kg	2.0				-		
Unadjusted C11 - C22 Aromatics	< 12		mg/kg	12				-		
Naphthalene	< 0.50		mg/kg	0.50				-		
Indeno(1,2,3-cd)pyrene	< 0.50		mg/kg	0.50				-		
Fluorene	< 0.50		mg/kg	0.50				-		
Fluoranthene	< 0.50		mg/kg	0.50				-		
Dibenzo(a,h)anthracene	< 0.50		mg/kg	0.50				-		
Chrysene	< 0.50		mg/kg	0.50				-		
Surrogate: Orthoterphenyl	*1.4*		mg/kg		*2.0*		*70*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.7*		mg/kg		*2.0*		*87*	*40-140*		
Surrogate: 1-Chloro-octadecane	*1.3*		mg/kg		*2.0*		*63*	*40-140*		
MADEP VPH										

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP VPH										
Batch 19065A54A - METHOD										
Blank (BLKIXB)						Prepared: 22-Feb-19 Analyzed: 06-Mar-19				
m,p-Xylenes	< 0.1		mg/kg	0.1				-		
Unadjusted C5-C8 Aliphatics	< 5.00		mg/kg	5.00				-		
o-Xylene	< 0.1		mg/kg	0.1				-		
Naphthalene	< 0.3		mg/kg	0.3				-		
Methyl t-butyl ether	< 0.1		mg/kg	0.1				-		
Ethylbenzene	< 0.1		mg/kg	0.1				-		
C9-C12 Aliphatic Hydrocarbons	< 5.00		mg/kg	5.00				-		
C9-C10 Aromatic Hydrocarbons	< 5.00		mg/kg	5.00				-		
C5-C8 Aliphatic Hydrocarbons	< 5.00		mg/kg	5.00				-		
Unadjusted C9-C12 Aliphatics	< 5.00		mg/kg	5.00				-		
Toluene	< 0.1		mg/kg	0.1				-		
Benzene	< 0.1		mg/kg	0.1				-		
Surrogate: Trifluorotoluene-P	*1.56*		mg/kg		*1.50*		*104*	*70-130*		
Surrogate: Trifluorotoluene-F	*1.56*		mg/kg		*1.50*		*104*	*70-130*		
LCS (LCS62Q)						Prepared: 22-Feb-19 Analyzed: 06-Mar-19				
Naphthalene	**2.53**		mg/kg	0.3	2.51		101	70-130		
Unadjusted C9-C12 Aliphatics	**19.4**		mg/kg	5.00	20.1		97	70-130		
Unadjusted C5-C8 Aliphatics	**15.0**		mg/kg	5.00	15.1		99	70-130		
o-Xylene	**2.44**		mg/kg	0.1	2.50		98	70-130		
Methyl t-butyl ether	**2.57**		mg/kg	0.1	2.50		103	70-130		
m,p-Xylenes	**5.05**		mg/kg	0.1	5.02		101	70-130		
Ethylbenzene	**2.48**		mg/kg	0.1	2.51		99	70-130		
C9-C12 Aliphatic Hydrocarbons	**6.84**		mg/kg	5.00	7.53		91	70-130		
C9-C10 Aromatic Hydrocarbons	**2.54**		mg/kg	5.00	2.50		102	70-130		
C5-C8 Aliphatic Hydrocarbons	**7.31**		mg/kg	5.00	7.54		97	70-130		
Benzene	**2.55**		mg/kg	0.1	2.51		102	70-130		
Toluene	**2.52**		mg/kg	0.1	2.51		100	70-130		
Surrogate: Trifluorotoluene-F	*1.52*		mg/kg		*1.50*		*101*	*70-130*		
Surrogate: Trifluorotoluene-P	*1.55*		mg/kg		*1.50*		*103*	*70-130*		
LCSD (P90654AY)						Prepared: 22-Feb-19 Analyzed: 06-Mar-19				
Methyl t-butyl ether	**2.63**		mg/kg	0.1	2.50		105	70-130	2	25
Unadjusted C5-C8 Aliphatics	**15.5**		mg/kg	5.00	15.1		103	70-130	4	25
Unadjusted C9-C12 Aliphatics	**20.4**		mg/kg	5.00	20.1		101	70-130	5	25
o-Xylene	**2.54**		mg/kg	0.1	2.50		102	70-130	4	25
Naphthalene	**2.82**		mg/kg	0.3	2.51		112	70-130	11	25
Benzene	**2.62**		mg/kg	0.1	2.51		105	70-130	3	25
m,p-Xylenes	**5.23**		mg/kg	0.1	5.02		104	70-130	3	25
Toluene	**2.59**		mg/kg	0.1	2.51		103	70-130	3	25
C5-C8 Aliphatic Hydrocarbons	**7.67**		mg/kg	5.00	7.54		102	70-130	5	25
C9-C10 Aromatic Hydrocarbons	**2.64**		mg/kg	5.00	2.50		105	70-130	4	25
C9-C12 Aliphatic Hydrocarbons	**7.39**		mg/kg	5.00	7.53		98	70-130	8	25
Ethylbenzene	**2.56**		mg/kg	0.1	2.51		102	70-130	3	25
Surrogate: Trifluorotoluene-F	*1.54*		mg/kg		*1.50*		*103*	*70-130*		
Surrogate: Trifluorotoluene-P	*1.59*		mg/kg		*1.50*		*106*	*70-130*		
SM 2540 G %Moisture Calc										
Batch 19060820002B - General Preparation										
LCS (L06012Q)						Prepared & Analyzed: 01-Mar-19				
Moisture	**89.4**		%	0.50	89.5		100	99-101		
SW-846 6010C										

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 6010C										
Batch 190581404906 - SW-846 3050B										
Blank (P05804FBB)						Prepared: 27-Feb-19 Analyzed: 28-Feb-19				
Cadmium	< 0.500		mg/kg	0.500				-		
Nickel	< 1.00		mg/kg	1.00				-		
Zinc	< 2.00		mg/kg	2.00				-		
Thallium	< 3.00		mg/kg	3.00				-		
Silver	< 1.00		mg/kg	1.00				-		
Selenium	< 5.00		mg/kg	5.00				-		
Lead	< 1.50		mg/kg	1.50				-		
Chromium	< 1.50		mg/kg	1.50				-		
Beryllium	< 0.500		mg/kg	0.500				-		
Arsenic	< 5.00		mg/kg	5.00				-		
Antimony	< 5.00		mg/kg	5.00				-		
Copper	< 2.00		mg/kg	2.00				-		
LCS (P05804FQQ)						Prepared: 27-Feb-19 Analyzed: 28-Feb-19				
Lead	**16.3**		mg/kg	1.50	15.0		109	90-115		
Copper	**25.9**		mg/kg	2.00	25.0		104	80-120		
Zinc	**54.5**		mg/kg	2.00	50.0		109	90-115		
Thallium	**16.8**		mg/kg	3.00	15.0		112	85-115		
Silver	**5.27**		mg/kg	1.00	5.00		105	80-120		
Selenium	**14.9**		mg/kg	5.00	15.0		100	80-120		
Antimony	**55.7**		mg/kg	5.00	50.0		111	90-116		
Chromium	**21.5**		mg/kg	1.50	20.0		108	90-110		
Cadmium	**5.51**		mg/kg	0.500	5.00		110	90-115		
Beryllium	**5.26**		mg/kg	0.500	5.00		105	85-110		
Arsenic	**15.8**		mg/kg	5.00	15.0		105	80-120		
Nickel	**56.0**		mg/kg	1.00	50.0		112	90-115		
SW-846 7471B										
Batch 190591063801 - METHOD										
Blank (P05963ABB)						Prepared: 28-Feb-19 Analyzed: 01-Mar-19				
Mercury	< 0.133		mg/kg	0.133				-		
LCS (P05963AQQ)						Prepared: 28-Feb-19 Analyzed: 01-Mar-19				
Mercury	**0.0996**		mg/kg	0.0800	0.100		100	80-115		
SW-846 8260C										
Batch Q190641AA - SW-846 5035A										
LCS (LCSQ25Q)						Prepared: 22-Feb-19 Analyzed: 05-Mar-19				
Acetone	**10000**	*	ug/kg	1000	7500		136	70-130		
4-Methyl-2-pentanone	**4900**		ug/kg	500	5000		98	70-130		
4-Chlorotoluene	**960**		ug/kg	250	1000		96	70-130		
2-Hexanone	**5000**		ug/kg	500	5000		100	70-130		
2-Chlorotoluene	**980**		ug/kg	250	1000		98	70-130		
Acrylonitrile	**4600**		ug/kg	1000	5000		92	70-130		
2,2-Dichloropropane	**1100**		ug/kg	250	1000		110	70-130		
Bromoform	**950**		ug/kg	500	1000		95	70-130		
1,4-Dioxane	**25000**		ug/kg	13000	25000		99	70-130		
2-Butanone	**7500**		ug/kg	500	7500		100	70-130		
Benzene	**1100**		ug/kg	250	1000		105	70-130		
Bromobenzene	**970**		ug/kg	250	1000		97	70-130		
Bromodichloromethane	**1100**		ug/kg	250	1000		107	70-130		
1,1,1,2-Tetrachloroethane	**1000**		ug/kg	250	1000		101	70-130		
Bromomethane	**970**		ug/kg	250	1000		97	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch Q190641AA - SW-846 5035A										
LCS (LCSQ25Q)							Prepared: 22-Feb-19 Analyzed: 05-Mar-19			
Chlorobenzene	**1000**		ug/kg	250	1000		100	70-130		
Carbon Disulfide	**940**		ug/kg	250	1000		94	70-130		
Carbon Tetrachloride	**1100**		ug/kg	250	1000		113	70-130		
1,4-Dichlorobenzene	**960**		ug/kg	250	1000		96	70-130		
Bromochloromethane	**960**		ug/kg	250	1000		96	70-130		
1,2,4-Trimethylbenzene	**970**		ug/kg	250	1000		97	70-130		
1,1,1-Trichloroethane	**1100**		ug/kg	250	1000		109	70-130		
Chloroethane	**990**		ug/kg	250	1000		99	70-130		
1,1,2,2-Tetrachloroethane	**910**		ug/kg	250	1000		91	70-130		
1,1-Dichloroethane	**1000**		ug/kg	250	1000		103	70-130		
1,1-Dichloroethene	**1100**		ug/kg	250	1000		113	70-130		
1,1-Dichloropropene	**1100**		ug/kg	250	1000		108	70-130		
1,2,3-Trichlorobenzene	**960**		ug/kg	500	1000		96	70-130		
1,1,2-Trichloroethane	**1000**		ug/kg	250	1000		100	70-130		
1,2,4-Trichlorobenzene	**980**		ug/kg	500	1000		98	70-130		
1,3-Dichloropropane	**970**		ug/kg	250	1000		97	70-130		
1,2-Dibromo-3-chloropropane	**880**		ug/kg	250	1000		88	70-130		
1,2-Dibromoethane	**980**		ug/kg	250	1000		98	70-130		
1,2-Dichlorobenzene	**990**		ug/kg	250	1000		99	70-130		
1,2-Dichloroethane	**1100**		ug/kg	250	1000		114	70-130		
1,2-Dichloropropane	**1000**		ug/kg	250	1000		105	70-130		
1,3,5-Trichlorobenzene	**1000**		ug/kg	400	1000		100	70-130		
1,3,5-Trimethylbenzene	**980**		ug/kg	250	1000		98	70-130		
1,3-Dichlorobenzene	**950**		ug/kg	250	1000		95	70-130		
1,2,3-Trichloropropane	**980**		ug/kg	250	1000		98	70-130		
Tetrachloroethene	**1000**		ug/kg	250	1000		101	70-130		
n-Butylbenzene	**1000**		ug/kg	400	1000		102	70-130		
n-Propylbenzene	**950**		ug/kg	250	1000		95	70-130		
o-Xylene	**980**		ug/kg	250	1000		98	70-130		
p-Isopropyltoluene	**980**		ug/kg	250	1000		98	70-130		
sec-Butylbenzene	**970**		ug/kg	250	1000		97	70-130		
Styrene	**980**		ug/kg	250	1000		98	70-130		
t-Amyl methyl ether	**1000**		ug/kg	250	1000		103	70-130		
Naphthalene	**870**		ug/kg	250	1000		87	70-130		
tert-Butylbenzene	**950**		ug/kg	250	1000		95	70-130		
Trichloroethene	**1100**		ug/kg	250	1000		108	70-130		
Tetrahydrofuran	**4300**		ug/kg	400	5000		85	70-130		
Toluene	**980**		ug/kg	250	1000		98	70-130		
trans-1,2-Dichloroethene	**1100**		ug/kg	250	1000		107	70-130		
trans-1,3-Dichloropropene	**990**		ug/kg	250	1000		99	70-130		
trans-1,4-Dichloro-2-butene	**4700**		ug/kg	2500	5000		95	70-130		
Trichlorofluoromethane	**940**		ug/kg	250	1000		94	70-130		
Chloroform	**1100**		ug/kg	250	1000		106	70-130		
t-Butyl alcohol	**9700**		ug/kg	5000	10000		97	70-130		
Ethylbenzene	**980**		ug/kg	250	1000		98	70-130		
Methylene Chloride	**1000**		ug/kg	250	1000		105	70-130		
cis-1,3-Dichloropropene	**1100**		ug/kg	250	1000		109	70-130		
cis-1,2-Dichloroethene	**1100**		ug/kg	250	1000		109	70-130		
Dichlorodifluoromethane	**790**		ug/kg	250	1000		79	70-130		
di-Isopropyl ether	**990**		ug/kg	250	1000		99	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch Q190641AA - SW-846 5035A										
LCS (LCSQ25Q)					Prepared: 22-Feb-19 Analyzed: 05-Mar-19					
Ethanol	**58000**		ug/kg	38000	50000		116	70-130		
Dibromochloromethane	**980**		ug/kg	250	1000		98	70-130		
Chloromethane	**810**		ug/kg	250	1000		81	70-130		
Dibromomethane	**1100**		ug/kg	250	1000		109	70-130		
Freon 113	**1200**		ug/kg	500	1000		121	70-130		
Hexachlorobutadiene	**1100**		ug/kg	500	1000		107	70-130		
Isopropylbenzene	**990**		ug/kg	250	1000		99	70-130		
Vinyl Chloride	**880**		ug/kg	250	1000		88	70-130		
m+p-Xylene	**2000**		ug/kg	250	2000		101	70-130		
Methyl Tertiary Butyl Ether	**1000**		ug/kg	250	1000		102	70-130		
Ethyl t-butyl ether	**1000**		ug/kg	250	1000		100	70-130		
Surrogate: Toluene-d8	*46*		ug/kg		*50*		*92*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52*		ug/kg		*50*		*104*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*46*		ug/kg		*50*		*92*	*70-130*		
Surrogate: Dibromofluoromethane	*50*		ug/kg		*50*		*101*	*70-130*		
LCSD (LCSQ25Y)					Prepared: 22-Feb-19 Analyzed: 05-Mar-19					
1,4-Dioxane	**31000**		ug/kg	13000	25000		125	70-130	23	30
2,2-Dichloropropane	**1100**		ug/kg	250	1000		111	70-130	1	30
2-Butanone	**7200**		ug/kg	500	7500		96	70-130	5	30
2-Chlorotoluene	**980**		ug/kg	250	1000		98	70-130	0	30
2-Hexanone	**4900**		ug/kg	500	5000		98	70-130	2	30
4-Chlorotoluene	**980**		ug/kg	250	1000		98	70-130	2	30
4-Methyl-2-pentanone	**4800**		ug/kg	500	5000		97	70-130	1	30
Acetone	**9100**		ug/kg	1000	7500		121	70-130	12	30
Acrylonitrile	**4500**		ug/kg	1000	5000		90	70-130	1	30
Benzene	**1100**		ug/kg	250	1000		106	70-130	1	30
Bromobenzene	**990**		ug/kg	250	1000		99	70-130	2	30
Bromochloromethane	**970**		ug/kg	250	1000		97	70-130	0	30
Bromodichloromethane	**1100**		ug/kg	250	1000		109	70-130	2	30
Bromoform	**930**		ug/kg	500	1000		93	70-130	3	30
1,4-Dichlorobenzene	**960**		ug/kg	250	1000		96	70-130	1	30
Carbon Disulfide	**930**		ug/kg	250	1000		93	70-130	0	30
1,2,4-Trichlorobenzene	**1000**		ug/kg	500	1000		101	70-130	3	30
Bromomethane	**940**		ug/kg	250	1000		94	70-130	4	30
1,2,4-Trimethylbenzene	**970**		ug/kg	250	1000		97	70-130	0	30
n-Propylbenzene	**960**		ug/kg	250	1000		96	70-130	1	30
Carbon Tetrachloride	**1100**		ug/kg	250	1000		112	70-130	0	30
1,1,2-Trichloroethane	**1000**		ug/kg	250	1000		101	70-130	1	30
1,1-Dichloroethane	**1000**		ug/kg	250	1000		103	70-130	0	30
1,1-Dichloroethene	**1100**		ug/kg	250	1000		110	70-130	3	30
1,1-Dichloropropene	**1100**		ug/kg	250	1000		109	70-130	1	30
1,2-Dibromo-3-chloropropane	**890**		ug/kg	250	1000		89	70-130	1	30
1,2,3-Trichloropropane	**980**		ug/kg	250	1000		98	70-130	0	30
1,3-Dichloropropane	**980**		ug/kg	250	1000		98	70-130	1	30
1,2-Dibromoethane	**980**		ug/kg	250	1000		98	70-130	0	30
1,2-Dichlorobenzene	**990**		ug/kg	250	1000		99	70-130	1	30
1,2-Dichloroethane	**1200**		ug/kg	250	1000		116	70-130	1	30
1,2-Dichloropropane	**1100**		ug/kg	250	1000		107	70-130	2	30
1,3,5-Trichlorobenzene	**1000**		ug/kg	400	1000		105	70-130	4	30
1,3,5-Trimethylbenzene	**990**		ug/kg	250	1000		99	70-130	1	30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch Q190641AA - SW-846 5035A										
LCSD (LCSQ25Y)						Prepared: 22-Feb-19 Analyzed: 05-Mar-19				
1,3-Dichlorobenzene	**980**		ug/kg	250	1000		98	70-130	3	30
1,2,3-Trichlorobenzene	**1000**		ug/kg	500	1000		101	70-130	5	30
Tetrahydrofuran	**4500**		ug/kg	400	5000		89	70-130	5	30
n-Butylbenzene	**1000**		ug/kg	400	1000		104	70-130	2	30
Styrene	**980**		ug/kg	250	1000		98	70-130	0	30
o-Xylene	**980**		ug/kg	250	1000		98	70-130	0	30
p-Isopropyltoluene	**1000**		ug/kg	250	1000		101	70-130	3	30
sec-Butylbenzene	**990**		ug/kg	250	1000		99	70-130	2	30
t-Amyl methyl ether	**1100**		ug/kg	250	1000		106	70-130	2	30
Naphthalene	**890**		ug/kg	250	1000		89	70-130	2	30
Tetrachloroethene	**1000**		ug/kg	250	1000		102	70-130	1	30
Methyl Tertiary Butyl Ether	**1000**		ug/kg	250	1000		102	70-130	0	30
Toluene	**990**		ug/kg	250	1000		99	70-130	1	30
trans-1,2-Dichloroethene	**1100**		ug/kg	250	1000		108	70-130	1	30
trans-1,3-Dichloropropene	**990**		ug/kg	250	1000		99	70-130	0	30
trans-1,4-Dichloro-2-butene	**4900**		ug/kg	2500	5000		98	70-130	3	30
Trichloroethene	**1100**		ug/kg	250	1000		108	70-130	0	30
Trichlorofluoromethane	**910**		ug/kg	250	1000		91	70-130	3	30
Vinyl Chloride	**850**		ug/kg	250	1000		85	70-130	3	30
tert-Butylbenzene	**950**		ug/kg	250	1000		95	70-130	1	30
Ethanol	**63000**		ug/kg	38000	50000		127	70-130	9	30
Chloroethane	**980**		ug/kg	250	1000		98	70-130	1	30
Chloroform	**1100**		ug/kg	250	1000		107	70-130	2	30
Chloromethane	**800**		ug/kg	250	1000		80	70-130	1	30
cis-1,2-Dichloroethene	**1100**		ug/kg	250	1000		108	70-130	1	30
cis-1,3-Dichloropropene	**1100**		ug/kg	250	1000		107	70-130	2	30
Dibromochloromethane	**1000**		ug/kg	250	1000		101	70-130	3	30
Dibromomethane	**1100**		ug/kg	250	1000		108	70-130	1	30
1,1,2,2-Tetrachloroethane	**950**		ug/kg	250	1000		95	70-130	5	30
di-Isopropyl ether	**1000**		ug/kg	250	1000		100	70-130	1	30
Methylene Chloride	**1000**		ug/kg	250	1000		104	70-130	0	30
Ethyl t-butyl ether	**1000**		ug/kg	250	1000		101	70-130	1	30
Ethylbenzene	**980**		ug/kg	250	1000		98	70-130	0	30
Freon 113	**1200**		ug/kg	500	1000		116	70-130	4	30
Hexachlorobutadiene	**1100**		ug/kg	500	1000		109	70-130	2	30
Isopropylbenzene	**990**		ug/kg	250	1000		99	70-130	0	30
m+p-Xylene	**2000**		ug/kg	250	2000		99	70-130	2	30
Chlorobenzene	**1000**		ug/kg	250	1000		101	70-130	0	30
Dichlorodifluoromethane	**760**		ug/kg	250	1000		76	70-130	4	30
t-Butyl alcohol	**9800**		ug/kg	5000	10000		98	70-130	0	30
1,1,1,2-Tetrachloroethane	**1000**		ug/kg	250	1000		100	70-130	1	30
1,1,1-Trichloroethane	**1100**		ug/kg	250	1000		109	70-130	0	30
Surrogate: Toluene-d8	*46*		ug/kg		*50*		*93*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51*		ug/kg		*50*		*103*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*46*		ug/kg		*50*		*91*	*70-130*		
Surrogate: Dibromofluoromethane	*50*		ug/kg		*50*		*100*	*70-130*		
LCS (LCSQ26Q)						Prepared: 22-Feb-19 Analyzed: 05-Mar-19				
Ethyl Ether	**1100**		ug/kg	250	1000		109	70-130		
LCSD (LCSQ26Y)						Prepared: 22-Feb-19 Analyzed: 05-Mar-19				
Ethyl Ether	**1100**		ug/kg	250	1000		106	70-130	2	30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch Q190641AA - SW-846 5035A										
Blank (VBLKQ25B)					Prepared: 22-Feb-19 Analyzed: 05-Mar-19					
Ethylbenzene	< 250		ug/kg	250				-		
Freon 113	< 500		ug/kg	500				-		
Hexachlorobutadiene	< 500		ug/kg	500				-		
Isopropylbenzene	< 250		ug/kg	250				-		
Methyl Tertiary Butyl Ether	< 250		ug/kg	250				-		
Methylene Chloride	< 250		ug/kg	250				-		
m+p-Xylene	< 250		ug/kg	250				-		
Ethyl t-butyl ether	< 250		ug/kg	250				-		
Ethanol	< 38000		ug/kg	38000				-		
p-Isopropyltoluene	< 250		ug/kg	250				-		
di-Isopropyl ether	< 250		ug/kg	250				-		
Dichlorodifluoromethane	< 250		ug/kg	250				-		
Dibromomethane	< 250		ug/kg	250				-		
Dibromochloromethane	< 250		ug/kg	250				-		
cis-1,3-Dichloropropene	< 250		ug/kg	250				-		
cis-1,2-Dichloroethene	< 250		ug/kg	250				-		
Ethyl Ether	< 250		ug/kg	250				-		
Tetrachloroethene	< 250		ug/kg	250				-		
1,2,4-Trimethylbenzene	< 250		ug/kg	250				-		
Trichlorofluoromethane	< 250		ug/kg	250				-		
Trichloroethene	< 250		ug/kg	250				-		
trans-1,4-Dichloro-2-butene	< 2500		ug/kg	2500				-		
trans-1,3-Dichloropropene	< 250		ug/kg	250				-		
trans-1,2-Dichloroethene	< 250		ug/kg	250				-		
Vinyl Chloride	< 250		ug/kg	250				-		
n-Butylbenzene	< 400		ug/kg	400				-		
Tetrahydrofuran	< 400		ug/kg	400				-		
Chloromethane	< 250		ug/kg	250				-		
tert-Butylbenzene	< 250		ug/kg	250				-		
t-Butyl alcohol	< 5000		ug/kg	5000				-		
t-Amyl methyl ether	< 250		ug/kg	250				-		
Styrene	< 250		ug/kg	250				-		
sec-Butylbenzene	< 250		ug/kg	250				-		
Naphthalene	< 250		ug/kg	250				-		
o-Xylene	< 250		ug/kg	250				-		
Toluene	< 250		ug/kg	250				-		
1,1,1-Trichloroethane	< 250		ug/kg	250				-		
1,3-Dichloropropane	< 250		ug/kg	250				-		
1,3-Dichlorobenzene	< 250		ug/kg	250				-		
1,3,5-Trimethylbenzene	< 250		ug/kg	250				-		
1,3,5-Trichlorobenzene	< 400		ug/kg	400				-		
1,2-Dichloropropane	< 250		ug/kg	250				-		
1,2-Dichloroethane	< 250		ug/kg	250				-		
1,2-Dichlorobenzene	< 250		ug/kg	250				-		
1,2-Dibromoethane	< 250		ug/kg	250				-		
1,4-Dichlorobenzene	< 250		ug/kg	250				-		
1,1,1,2-Tetrachloroethane	< 250		ug/kg	250				-		
1,1-Dichloropropene	< 250		ug/kg	250				-		
1,1,2,2-Tetrachloroethane	< 250		ug/kg	250				-		
1,1,2-Trichloroethane	< 250		ug/kg	250				-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch Q190641AA - SW-846 5035A										
Blank (VBLKQ25B)						Prepared: 22-Feb-19 Analyzed: 05-Mar-19				
1,1-Dichloroethane	< 250		ug/kg	250				-		
1,1-Dichloroethene	< 250		ug/kg	250				-		
Chloroform	< 250		ug/kg	250				-		
1,2,3-Trichlorobenzene	< 500		ug/kg	500				-		
n-Propylbenzene	< 250		ug/kg	250				-		
1,2,3-Trichloropropane	< 250		ug/kg	250				-		
1,2,4-Trichlorobenzene	< 500		ug/kg	500				-		
1,2-Dibromo-3-chloropropane	< 250		ug/kg	250				-		
4-Methyl-2-pentanone	< 500		ug/kg	500				-		
Bromomethane	< 250		ug/kg	250				-		
Bromoform	< 500		ug/kg	500				-		
Bromodichloromethane	< 250		ug/kg	250				-		
Bromochloromethane	< 250		ug/kg	250				-		
Bromobenzene	< 250		ug/kg	250				-		
Benzene	< 250		ug/kg	250				-		
Acrylonitrile	< 1000		ug/kg	1000				-		
Carbon Disulfide	< 250		ug/kg	250				-		
Acetone	< 1000		ug/kg	1000				-		
Carbon Tetrachloride	< 250		ug/kg	250				-		
4-Chlorotoluene	< 250		ug/kg	250				-		
Chlorobenzene	< 250		ug/kg	250				-		
1,4-Dioxane	< 13000		ug/kg	13000				-		
2-Hexanone	< 500		ug/kg	500				-		
2-Chlorotoluene	< 250		ug/kg	250				-		
2-Butanone	< 500		ug/kg	500				-		
2,2-Dichloropropane	< 250		ug/kg	250				-		
Chloroethane	< 250		ug/kg	250				-		
Surrogate: Dibromofluoromethane	*47*		ug/kg		*50*		*94*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*45*		ug/kg		*50*		*91*	*70-130*		
Surrogate: Toluene-d8	*44*		ug/kg		*50*		*89*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*50*		ug/kg		*50*		*100*	*70-130*		
SW-846 8270D										
Batch 19063SLC026 - SW-846 3546										
LCS (063LCLCS2Q)						Prepared: 05-Mar-19 Analyzed: 06-Mar-19				
Pentachloronitrobenzene	**1500**		ug/kg	170	1670		90	40-140		
LCS (063LCLCSQ)						Prepared: 05-Mar-19 Analyzed: 06-Mar-19				
4-Chlorophenyl-phenylether	**1160**		ug/kg	43	1670		69	40-140		
4-Methylphenol	**1280**		ug/kg	33	1670		77	30-130		
4-Nitroaniline	**1140**		ug/kg	170	1670		68	40-140		
4-Nitrophenol	**1470**		ug/kg	500	1670		88	30-130		
Acenaphthene	**1280**		ug/kg	17	1670		77	40-140		
Acenaphthylene	**1360**		ug/kg	17	1670		82	40-140		
Acetophenone	**1240**		ug/kg	50	1670		74	40-140		
Aniline	**841**		ug/kg	500	1670		50	40-140		
Benzo(g,h,i)perylene	**1650**		ug/kg	17	1670		99	40-140		
Atrazine	**1490**		ug/kg	430	1670		90	40-140		
2,4-Dinitrotoluene	**1340**		ug/kg	170	1670		81	40-140		
Benzaldehyde	**1160**		ug/kg	170	1670		70	40-140		
Benzidine	**4020**		ug/kg	1000	8330		48	40-140		
Benzo(a)anthracene	**1490**		ug/kg	17	1670		90	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8270D										
Batch 19063SLC026 - SW-846 3546										
LCS (063LCLCSQ)							Prepared: 05-Mar-19 Analyzed: 06-Mar-19			
Benzo(a)pyrene	**1590**		ug/kg	17	1670		95	40-140		
Benzo(b)fluoranthene	**1480**		ug/kg	17	1670		89	40-140		
4-Chloroaniline	**533**	*	ug/kg	170	1670		32	40-140		
Anthracene	**1530**		ug/kg	17	1670		92	40-140		
2-Chlorophenol	**1300**		ug/kg	37	1670		78	30-130		
Benzo(k)fluoranthene	**1600**		ug/kg	17	1670		96	40-140		
1-Methylnaphthalene	**1220**		ug/kg	17	1670		73	40-140		
2,3,4,6-Tetrachlorophenol	**1210**		ug/kg	170	1670		73	30-130		
2,4,5-Trichlorophenol	**1300**		ug/kg	67	1670		78	30-130		
2,4,6-Trichlorophenol	**1260**		ug/kg	57	1670		76	30-130		
2,4-Dichlorophenol	**1260**		ug/kg	43	1670		76	30-130		
2,4-Dimethylphenol	**1090**		ug/kg	67	1670		65	30-130		
2,4-Dinitrophenol	**2270**		ug/kg	1000	3330		68	30-130		
2-Chloronaphthalene	**1560**		ug/kg	33	1670		94	40-140		
1,4-Dichlorobenzene	**1110**		ug/kg	37	1670		67	40-140		
4-Chloro-3-methylphenol	**1390**		ug/kg	50	1670		84	30-130		
2-Methylnaphthalene	**1190**		ug/kg	33	1670		72	40-140		
2-Methylphenol	**1200**		ug/kg	67	1670		72	30-130		
2-Nitroaniline	**1440**		ug/kg	50	1670		87	40-140		
2-Nitrophenol	**1260**		ug/kg	57	1670		76	30-130		
3,3'-Dichlorobenzidine	**826**		ug/kg	330	1670		50	40-140		
3-Nitroaniline	**1200**		ug/kg	170	1670		72	40-140		
4,6-Dinitro-2-methylphenol	**1430**		ug/kg	500	1670		86	30-130		
4-Bromophenyl-phenylether	**1290**		ug/kg	50	1670		77	40-140		
2,6-Dinitrotoluene	**1350**		ug/kg	50	1670		81	40-140		
Phenanthrene	**1520**		ug/kg	17	1670		91	40-140		
Hexachloroethane	**1100**		ug/kg	170	1670		66	40-140		
Benzoic acid	**2820**		ug/kg	500	3330		85	30-130		
Isophorone	**1280**		ug/kg	37	1670		77	40-140		
1,2,4-Trichlorobenzene	**1090**		ug/kg	50	1670		65	40-140		
Nitrobenzene	**1250**		ug/kg	67	1670		75	40-140		
N-Nitrosodimethylamine	**1200**		ug/kg	170	1670		72	40-140		
N-Nitroso-di-n-propylamine	**1270**		ug/kg	50	1670		76	40-140		
Hexachlorocyclopentadiene	**1600**		ug/kg	500	3330		48	40-140		
Pentachlorophenol	**1240**		ug/kg	170	1670		74	30-130		
Indeno(1,2,3-cd)pyrene	**1640**		ug/kg	17	1670		98	40-140		
Phenol	**1260**		ug/kg	37	1670		76	30-130		
Pyrene	**1450**		ug/kg	17	1670		87	40-140		
Pyridine	**667**		ug/kg	170	1670		40	40-140		
1,1'-Biphenyl	**1350**		ug/kg	37	1670		81	40-140		
1,2-Diphenylhydrazine	**1750**		ug/kg	43	1670		105	40-140		
1,2,4,5-Tetrachlorobenzene	**1060**		ug/kg	37	1670		63	40-140		
1,3-Dichlorobenzene	**1070**		ug/kg	37	1670		64	40-140		
1,2-Dichlorobenzene	**1120**		ug/kg	50	1670		67	40-140		
N-Nitrosodiphenylamine	**1570**		ug/kg	37	1670		94	40-140		
Dibenz(a,h)anthracene	**1720**		ug/kg	17	1670		103	40-140		
Benzyl alcohol	**1500**		ug/kg	500	1670		90	30-130		
bis(2-Chloroethoxy)methane	**1280**		ug/kg	37	1670		77	40-140		
bis(2-Chloroethyl)ether	**1220**		ug/kg	50	1670		73	40-140		
bis(2-Chloroisopropyl)ether	**1210**		ug/kg	43	1670		73	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8270D										
Batch 19063SLC026 - SW-846 3546										
LCS (063LCLCSQ)						Prepared: 05-Mar-19 Analyzed: 06-Mar-19				
bis(2-Ethylhexyl)phthalate	**1740**		ug/kg	170	1670		105	40-140		
Butylbenzylphthalate	**1720**		ug/kg	170	1670		103	40-140		
Caprolactam	**1360**		ug/kg	170	1670		82	40-140		
Naphthalene	**1160**		ug/kg	17	1670		70	40-140		
Chrysene	**1480**		ug/kg	17	1670		89	40-140		
Hexachlorobutadiene	**966**		ug/kg	77	1670		58	40-140		
Dibenzofuran	**1250**		ug/kg	37	1670		75	40-140		
Diethylphthalate	**1360**		ug/kg	170	1670		82	40-140		
Dimethylphthalate	**1320**		ug/kg	170	1670		79	40-140		
Di-n-butylphthalate	**1700**		ug/kg	170	1670		102	40-140		
Di-n-octylphthalate	**1830**		ug/kg	170	1670		110	40-140		
Fluoranthene	**1440**		ug/kg	17	1670		87	40-140		
Fluorene	**1310**		ug/kg	17	1670		78	40-140		
Hexachlorobenzene	**1310**		ug/kg	17	1670		79	40-140		
Carbazole	**1620**		ug/kg	37	1670		97	40-140		
Surrogate: 2-Fluorobiphenyl	*2480*		ug/kg		*3330*		*74*	*30-130*		
Surrogate: 2-Fluorophenol	*4990*		ug/kg		*6670*		*75*	*30-130*		
Surrogate: Phenol-d6	*5080*		ug/kg		*6670*		*76*	*30-130*		
Surrogate: Nitrobenzene-d5	*2460*		ug/kg		*3330*		*74*	*30-130*		
Surrogate: Terphenyl-d14	*2890*		ug/kg		*3330*		*87*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*4530*		ug/kg		*6670*		*68*	*30-130*		
LCSD (P3LCLCSY)						Prepared: 05-Mar-19 Analyzed: 06-Mar-19				
Pentachloronitrobenzene	**1420**		ug/kg	170	1670		85	40-140	5	30
Surrogate: 2-Fluorobiphenyl	*2360*		ug/kg		*3330*		*71*	*30-130*		
Surrogate: Terphenyl-d14	*3240*		ug/kg		*3330*		*97*	*30-130*		
Surrogate: Nitrobenzene-d5	*2210*		ug/kg		*3330*		*66*	*30-130*		
Blank (SBLKLC063B)						Prepared: 05-Mar-19 Analyzed: 06-Mar-19				
Benzidine	< 1000		ug/kg	1000				-		
4-Methylphenol	< 33		ug/kg	33				-		
Benzaldehyde	< 170		ug/kg	170				-		
2-Nitrophenol	< 57		ug/kg	57				-		
3,3'-Dichlorobenzidine	< 330		ug/kg	330				-		
3-Nitroaniline	< 170		ug/kg	170				-		
4,6-Dinitro-2-methylphenol	< 500		ug/kg	500				-		
4-Bromophenyl-phenylether	< 50		ug/kg	50				-		
4-Chloro-3-methylphenol	< 50		ug/kg	50				-		
2-Methylphenol	< 67		ug/kg	67				-		
4-Chlorophenyl-phenylether	< 43		ug/kg	43				-		
2-Methylnaphthalene	< 33		ug/kg	33				-		
4-Nitroaniline	< 170		ug/kg	170				-		
4-Nitrophenol	< 500		ug/kg	500				-		
Acenaphthene	< 17		ug/kg	17				-		
Acenaphthylene	< 17		ug/kg	17				-		
Acetophenone	< 50		ug/kg	50				-		
Aniline	< 500		ug/kg	500				-		
Anthracene	< 17		ug/kg	17				-		
Benzo(a)pyrene	< 17		ug/kg	17				-		
4-Chloroaniline	< 170		ug/kg	170				-		
2,4,5-Trichlorophenol	< 67		ug/kg	67				-		
1,1'-Biphenyl	< 37		ug/kg	37				-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8270D										
Batch 19063SLC026 - SW-846 3546										
Blank (SBLKLC063B)						Prepared: 05-Mar-19 Analyzed: 06-Mar-19				
1,2,4,5-Tetrachlorobenzene	< 37		ug/kg	37				-		
1,2,4-Trichlorobenzene	< 50		ug/kg	50				-		
1,2-Dichlorobenzene	< 50		ug/kg	50				-		
1,2-Diphenylhydrazine	< 43		ug/kg	43				-		
1,3-Dichlorobenzene	< 37		ug/kg	37				-		
1,4-Dichlorobenzene	< 37		ug/kg	37				-		
2-Nitroaniline	< 50		ug/kg	50				-		
2,3,4,6-Tetrachlorophenol	< 170		ug/kg	170				-		
Benzo(a)anthracene	< 17		ug/kg	17				-		
2,4,6-Trichlorophenol	< 57		ug/kg	57				-		
2,4-Dichlorophenol	< 43		ug/kg	43				-		
2,4-Dimethylphenol	< 67		ug/kg	67				-		
2,4-Dinitrophenol	< 1000		ug/kg	1000				-		
2,4-Dinitrotoluene	< 170		ug/kg	170				-		
2,6-Dinitrotoluene	< 50		ug/kg	50				-		
2-Chloronaphthalene	< 33		ug/kg	33				-		
2-Chlorophenol	< 37		ug/kg	37				-		
1-Methylnaphthalene	< 17		ug/kg	17				-		
N-Nitrosodimethylamine	< 170		ug/kg	170				-		
Hexachlorobenzene	< 17		ug/kg	17				-		
Atrazine	< 430		ug/kg	430				-		
Hexachlorobutadiene	< 77		ug/kg	77				-		
Hexachlorocyclopentadiene	< 500		ug/kg	500				-		
Hexachloroethane	< 170		ug/kg	170				-		
Indeno(1,2,3-cd)pyrene	< 17		ug/kg	17				-		
Isophorone	< 37		ug/kg	37				-		
Benzo(b)fluoranthene	< 17		ug/kg	17				-		
Nitrobenzene	< 67		ug/kg	67				-		
Fluorene	< 17		ug/kg	17				-		
N-Nitroso-di-n-propylamine	< 50		ug/kg	50				-		
N-Nitrosodiphenylamine	< 37		ug/kg	37				-		
Pentachloronitrobenzene	< 170		ug/kg	170				-		
Pentachlorophenol	< 170		ug/kg	170				-		
Phenanthrene	< 17		ug/kg	17				-		
Phenol	< 37		ug/kg	37				-		
Pyrene	< 17		ug/kg	17				-		
Pyridine	< 170		ug/kg	170				-		
Naphthalene	< 17		ug/kg	17				-		
Carbazole	< 37		ug/kg	37				-		
Benzoic acid	< 500		ug/kg	500				-		
Benzyl alcohol	< 500		ug/kg	500				-		
bis(2-Chloroethoxy)methane	< 37		ug/kg	37				-		
bis(2-Chloroethyl)ether	< 50		ug/kg	50				-		
bis(2-Chloroisopropyl)ether	< 43		ug/kg	43				-		
bis(2-Ethylhexyl)phthalate	< 170		ug/kg	170				-		
Benzo(g,h,i)perylene	< 17		ug/kg	17				-		
Benzo(k)fluoranthene	< 17		ug/kg	17				-		
Caprolactam	< 170		ug/kg	170				-		
Butylbenzylphthalate	< 170		ug/kg	170				-		
Chrysene	< 17		ug/kg	17				-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8270D										
Batch 19063SLC026 - SW-846 3546										
Blank (SBLKLC063B)						Prepared: 05-Mar-19 Analyzed: 06-Mar-19				
Dibenz(a,h)anthracene	< 17		ug/kg	17				-		
Dibenzofuran	< 37		ug/kg	37				-		
Diethylphthalate	< 170		ug/kg	170				-		
Dimethylphthalate	< 170		ug/kg	170				-		
Di-n-butylphthalate	< 170		ug/kg	170				-		
Di-n-octylphthalate	< 170		ug/kg	170				-		
Fluoranthene	< 17		ug/kg	17				-		
Surrogate: Phenol-d6	*4220*		ug/kg		*6670*		*63*	*30-130*		
Surrogate: Terphenyl-d14	*2810*		ug/kg		*3330*		*84*	*30-130*		
Surrogate: 2-Fluorophenol	*4400*		ug/kg		*6670*		*66*	*30-130*		
Surrogate: Nitrobenzene-d5	*2160*		ug/kg		*3330*		*65*	*30-130*		
Surrogate: 2-Fluorobiphenyl	*2140*		ug/kg		*3330*		*64*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*3860*		ug/kg		*6670*		*58*	*30-130*		

Notes and Definitions

*	Outside of specification
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

SC 53666 PW

eurofins | Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page: 1 of 1

Special Handling:

X Standard TAT - 7 to 10 business days

Rush TAT - Date Needed: _____

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: samsel@cdwconsultants.com

Telephone #:

Project Mgr: Sue Cabalon

Invoice To: CDW Consultants Inc
6 Huron Drive
Natick MA 01760
508-875-2657

P.O No.: _____ Quote #: _____

Project No: _____

Site Name: Manchester Memorial School

Location: Manchester-by the sea State: MA

Sampler(s): S. Amsel

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=_____ 12=_____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

List Preservative Code below: 7 | 7

QA/QC Reporting Notes:
* additional charges may apply

MA DEP MCP CAM Report? Yes No
CT DPH RCP Report? Yes No
Standard No QC
DQA*
ASP A* ASP B*
NJ Reduced* NJ Full*
Tier II* Tier IV*
Other:
State-specific reporting standards:

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analysis: VPH	EPH	PAH	VOCs	TPP metals (PAH)	Check if chlorinated
SC 53666-01	CDW-MW-1	2/22/19	900	G	So	3	3			X	X	X	X	X	
-02	CDW-MW2	2/22/19	1006	G	So	3	3			X	X	X	X	X	
-03	CDW-MW-3	2/22/19	1130	G	So	3	3			X	X	X	X	X	
-04	CDW-MW-4	2/22/19	1330	G	So	3	3			X	X	X	X	X	

Relinquished by:	Received by:	Date:	Time:	Temp °C
		2-26-19	1005	Observed 2.6
		2/26/19	1554	Correction Factor 0
				Corrected 2.6
				IR ID # 01

EDD format: _____

E-mail to: samsel@cdwconsultants.com

Condition upon receipt: Custody Seals: Present Intact Broken

Ambient Iced X Refrigerated DI VOA Frozen Soil Jar Frozen

S.C 53666 PW VIA

eurofins | Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

X Standard TAT - 7 to 10 business days

Rush TAT - Date Needed: _____

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: samsel@cdwconsultants.com

Telephone #:

Project Mgr: Sue Cahalan

Invoice To: CDW Consultants Inc
6 Huron Drive
Natick MA 01760
508-875-2657

P.O No.: _____ Quote #: _____

Project No: _____

Site Name: Manchester Memorial School

Location: Manchester-by the Sea State: MA

Sampler(s): S. Amsel

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=_____ 12=_____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	List Preservative Code below: 7	Analysis: VPH	EPH	PAH	VOCs	TPP metals (PAHs)					Check if chlorinated
SC 53666-01	CDW-MW-1	2/22/19	900	G	So	3	3			X	X	X	X	X	X					
-02	CDW-MW2	2/22/19	1006	G	So	3	3			X	X	X	X	X	X					
-03	CDW-MW-3	2/22/19	1130	G	So	3	3			X	X	X	X	X	X					
-04	CDW-MW-4	2/22/19	1330	G	So	3	3			X	X	X	X	X	X					

QA/QC Reporting Notes:
* additional charges may apply

MA DEP MCP CAM Report? Yes No
CT DPH RCP Report? Yes No
Standard No QC
DQA*
ASP A* ASP B*
NJ Reduced* NJ Full*
Tier II* Tier IV*
Other: _____
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:
		2-26-19	1005
		2/26/19	1554

Temp °C: Observed 2.6 Correction Factor 0 Corrected 2.6 IR ID # 01

EDD format: _____

E-mail to: samsel@cdwconsultants.com

Condition upon receipt: Custody Seals: Present Intact Broken
Ambient Iced Refrigerated DI VOA Frozen Soil Jar Frozen

S.C 53666 PW: V14

eurofins | Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- [X] Standard TAT - 7 to 10 business days
- [ ] Rush TAT - Date Needed: _____

All TAT's subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: samsel@cdwconsultants.com

Telephone #:

Project Mgr: Sue Cabalon

Invoice To: CDW Consultants Inc
6 Huron Drive
Natick MA 01760
508-875-2657

P.O No.: _____ Quote #: _____

Project No:

Site Name: Manchester Memorial School

Location: Manchester-by the Sea State: MA

Sampler(s): S. Amsel

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=_____ 12=_____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=_____ X2=_____ X3=_____

G= Grab C=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analysis: VPH	EPH	PAH	VOCs	TPP metals (PAH)	List Preservative Code below: 7	7	Check if chlorinated	QA/QC Reporting Notes: * additional charges may appply
SC53666-01	CDW-MW-1	2/22/19	900	G	So	3	3			X	X	X	X	X			☐	
-02	CDW-MW2	2/22/19	1006	G	So	3	3			X	X	X	X	X			☐	
-03	CDW-MW-3	2/22/19	1130	G	So	3	3			X	X	X	X	X			☐	
-04	CDW-MW-4	2/22/19	1330	G	So	3	3			X	X	X	X	X			☐	
-05	Trip Blank	2/22/19			T	1				X							☐	client notified TB was added 2/28/19 e
																	☐	
																	☐	
																	☐	
																	☐	
																	☐	

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC ☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: _____
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp °C
		2-26-19	1005	Observed 2.6
		2/26/19	1559	Correction Factor 0
				Corrected 2.6
				IR ID # 01

EDD format:

E-mail to: samsel@cdwconsultants.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☑ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

PW

Batch Summary

190581404906

Subcontracted Analyses

P05804FBB
P05804FQQ
SC53666-01 (CDW-MW-1)
SC53666-02 (CDW-MW-2)
SC53666-03 (CDW-MW-3)
SC53666-04 (CDW-MW-4)

190590017A

Subcontracted Analyses

LCS17059Q
P90597AY
PBLK17059B
SC53666-01 (CDW-MW-1)
SC53666-02 (CDW-MW-2)
SC53666-03 (CDW-MW-3)
SC53666-04 (CDW-MW-4)

190591063801

Subcontracted Analyses

P05963ABB
P05963AQQ
SC53666-01 (CDW-MW-1)
SC53666-02 (CDW-MW-2)
SC53666-03 (CDW-MW-3)
SC53666-04 (CDW-MW-4)

19060820002B

Subcontracted Analyses

L06012Q
SC53666-01 (CDW-MW-1)
SC53666-02 (CDW-MW-2)
SC53666-03 (CDW-MW-3)
SC53666-04 (CDW-MW-4)

19063SLC026

Subcontracted Analyses

063LCLCS2Q
063LCLCSQ
P3LCLCSY
SBLKLC063B
SC53666-01 (CDW-MW-1)
SC53666-02 (CDW-MW-2)
SC53666-03 (CDW-MW-3)
SC53666-04 (CDW-MW-4)

190640020A

Subcontracted Analyses

LCS20064Q
P90640AY
P993887M321822A
P993887M321902A
P993887R321702A
P993887R321742A
PBLK20064B
SC53666-01RE1 (CDW-MW-1)
SC53666-02RE1 (CDW-MW-2)
SC53666-03RE1 (CDW-MW-3)
SC53666-04RE1 (CDW-MW-4)

19065A54A

Subcontracted Analyses

BLKIXB
LCS62Q
P90654AY
SC53666-01 (CDW-MW-1)
SC53666-02 (CDW-MW-2)
SC53666-03 (CDW-MW-3)
SC53666-04 (CDW-MW-4)
SC53666-05 (Trip Blank)

Q190641AA

Subcontracted Analyses

LCSQ25Q
LCSQ25Y
LCSQ26Q
LCSQ26Y
SC53666-01 (CDW-MW-1)
SC53666-02 (CDW-MW-2)
SC53666-03 (CDW-MW-3)
SC53666-04 (CDW-MW-4)
VBLKQ25B

APPENDIX C

eurofins | Spectrum Analytical

☑ Final Report
☐ Revised Report

Report Date:
18-Mar-19 16:09

Laboratory Report
SC53767

CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760
Attn: Susan Cahalan-Roach

Project: Manchester Memorial School - MA
Project #: [none]

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393

Authorized by:

Andrew Fenton
Quality Services Manager



Eurofins Spectrum Analytical holds primary certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 40 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. is currently accredited for the specific method or analyte indicated. Please refer to our 'Quality' web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Eurofins Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC53767

Project: Manchester Memorial School - MA

Project Number: [none]

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC53767-01	CDW-MW-1	Ground Water	01-Mar-19 14:00	05-Mar-19 15:20
SC53767-02	CDW-MW-2	Ground Water	01-Mar-19 10:00	05-Mar-19 15:20
SC53767-03	CDW-MW-3	Ground Water	01-Mar-19 11:30	05-Mar-19 15:20
SC53767-04	CDW-MW-4	Ground Water	01-Mar-19 13:00	05-Mar-19 15:20
SC53767-05	Trip Blank	Trip Blank	01-Mar-19 00:00	05-Mar-19 15:20

The following outlines the condition of all VPH samples contained within this report upon laboratory receipt.

Matrices	Ground Water		
Containers	✓ Satisfactory		
Sample Preservative	**Aqueous** (acid preserved)	✓ N/A pH≤2 pH>2	
	Soil or Sediment	N/A Samples not received in Methanol	ml Methanol/g soil 1:1 +/-25% Other
		Samples received in Methanol: covering soil/sediment not covering soil/sediment	
		Samples received in air-tight container	
Temperature	Received on ice ✓ Received at 4 ± 2 ºC		

Were all QA/QC procedures followed as required by the VPH method? *Yes*
Were any significant modifications made to the VPH method as specified in section 11.3? *No*
Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

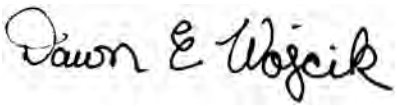
The following outlines the condition of all EPH samples contained within this report upon laboratory receipt.

Matrices	Ground Water
Containers	✓ Satisfactory
Aqueous Preservative	✓ N/A pH≤2 pH>2 pH adjusted to <2 in lab
Temperature	Received on ice ✓ Received at 4 ± 2 ºC

Were all QA/QC procedures followed as required by the EPH method? *Yes*
Were any significant modifications made to the EPH method as specified in Section 11.3? *No*
Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Authorized by:



Dawn E. Wojcik
Laboratory Director

MassDEP Analytical Protocol Certification Form

Laboratory Name: Eurofins Spectrum Analytical, Inc.	**Project #:** [none]
Project Location: Manchester Memorial School - MA	**RTN:**
This form provides certifications for the following data set:	SC53767-01 through SC53767-05
Matrices: Ground Water Trip Blank	

CAM Protocol

✓ 8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	✓ MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	✓ MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
✓ 6010 Metals CAM III A	✓ 6020 Metals CAM III D	8082 PCB CAM V A	9012 Total Cyanide/PAC CAM VI A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B

Affirmative responses to questions A through F are required for Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	✓ Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	✓ Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	✓ Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	✓ Yes No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	✓ Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?	✓ Yes No

Responses to questions G, H and I below are required for Presumptive Certainty status

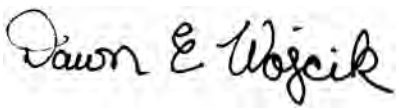
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	✓ Yes No

***Data User Note:* Data that achieve Presumptive Certainty status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes ✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes ✓ No

All negative responses are addressed in a case narrative on the cover page of this report.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.



Dawn E. Wojcik
Laboratory Director
Date: 3/18/2019

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 2.0 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

SW-846 8260C, GC/MS Volatiles
Sample #s: 1001627, 1001628, 1001629, 1001630, 1001631
The percent drift for the following is >20% in the continuing calibration verification standard associated with this sample: 2-Butanone, Tetrahydrofuran, 2-Hexanone and trans-1,2-Dichloro-2-Butene.
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.
The MA MCP required reporting limit could not be attained using the laboratory LOQ.
Batch #: L190704AA (Sample number(s): 1001627-1001631)
The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Ethanol
The relative percent difference(s) for the following analyte(s) in the LCS/LCSD were outside acceptance windows: Ethanol
SW-846 8270D SIM, GC/MS Semivolatiles
Sample #s: 1001627, 1001628, 1001629, 1001630
Reporting limits were raised due to interference from the sample matrix.
The MA MCP analyte list requirement was not met for Method 8270D.
The client specified list is reported.
MA EPH 5/04, GC Petroleum Hydrocarbons
Sample #s: 1001627, 1001628, 1001629, 1001630
The surrogate data is outside the QC limits due to unresolvable matrix problems evident during the sample preparation.
Reporting limits were raised due to interference from the sample matrix.
Batch #: 190660020A (Sample number(s): 1001627-1001630)
The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1001627, 1001628, 1001629, 1001630
SW-846 6020A, Metals
Sample #s: 1001627, 1001628, 1001629, 1001630
The MA MCP analyte list requirement was not met for Metals.
Batch #: 190661404704A (Sample number(s): 1001627-1001630 UNSPK: 1001628 BKG: 1001628)
The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Thallium, Zinc
The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Antimony, Arsenic
The duplicate RPD for the following analyte(s) exceeded the acceptance window: Arsenic, Beryllium, Chromium, Copper, Lead, Nickel, Thallium, Zinc
Batch #: 190661404704B (Sample number(s): 1001627-1001630 UNSPK: 1001628 BKG: 1001628)
The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Selenium
The duplicate RPD for the following analyte(s) exceeded the acceptance window: Selenium
SW-846 7470A, Metals
Batch #: 190660571304 (Sample number(s): 1001627-1001630 UNSPK: 1001630 BKG: 1001630)
The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Mercury
The duplicate RPD for the following analyte(s) exceeded the acceptance window: Mercury

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW-846 6020A

Spikes:

P001628M220826A *Source: SC53767-02*

Outside of specification

Antimony
Arsenic
Cadmium
Chromium
Copper
Nickel
Zinc

P001628M220927A *Source: SC53767-02*

SW-846 6020A

Spikes:

P001628M220927A *Source: SC53767-02*

Outside of specification

Beryllium

P001628M221833A *Source: SC53767-02*

Outside of specification

Lead
Thallium

P001628R220824A *Source: SC53767-02*

Outside of specification

Antimony
Arsenic
Chromium
Copper
Nickel
Zinc

P001628R220925A *Source: SC53767-02*

Outside of specification

Beryllium

P001628R221830A *Source: SC53767-02*

Outside of specification

Lead
Thallium

Samples:

SC53767-01 *CDW-MW-1*

ICAL Verification & CCAL Verification are above QC limits; Sample result is ND

Silver

SW-846 7470A

Spikes:

P001630M221136 *Source: SC53767-04*

Outside of specification

Mercury

P001630R221134 *Source: SC53767-04*

Outside of specification

Mercury

SW-846 8260C

LCSL86Y

Outside of specification

Ethanol

Sample Acceptance Check Form

Client:	CDW Consultants, Inc.
Project:	Manchester Memorial School - MA / [none]
Work Order:	SC53767
Sample(s) received on:	3/5/2019

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Summary of Hits

Lab ID: SC53767-01 **Client ID:** CDW-MW-1

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	0.323		0.0020	mg/l	SW-846 6020A
Beryllium	0.0796		0.00050	mg/l	SW-846 6020A
Cadmium	0.0129		0.0010	mg/l	SW-846 6020A
Chromium	0.273		0.0040	mg/l	SW-846 6020A
Copper	0.559		0.0400	mg/l	SW-846 6020A
Lead	0.335		0.0030	mg/l	SW-846 6020A
Nickel	0.389		0.0040	mg/l	SW-846 6020A
Selenium	0.0055		0.0020	mg/l	SW-846 6020A
Thallium	0.0020		0.00050	mg/l	SW-846 6020A
Zinc	4.13		0.0150	mg/l	SW-846 6020A

Lab ID: SC53767-02 **Client ID:** CDW-MW-2

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Beryllium	0.0239		0.00050	mg/l	SW-846 6020A
Lead	0.498		0.0030	mg/l	SW-846 6020A
Selenium	0.0030		0.0020	mg/l	SW-846 6020A
Thallium	0.0016		0.00050	mg/l	SW-846 6020A

Lab ID: SC53767-02RE1 **Client ID:** CDW-MW-2

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	0.402		0.0200	mg/l	SW-846 6020A
Chromium	0.359		0.0400	mg/l	SW-846 6020A
Copper	0.844		0.400	mg/l	SW-846 6020A
Nickel	0.539		0.0400	mg/l	SW-846 6020A
Zinc	2.78		0.150	mg/l	SW-846 6020A

Lab ID: SC53767-03 **Client ID:** CDW-MW-3

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	0.398		0.0020	mg/l	SW-846 6020A
Beryllium	0.0288		0.00050	mg/l	SW-846 6020A
Cadmium	0.0102		0.0010	mg/l	SW-846 6020A
Chromium	0.278		0.0040	mg/l	SW-846 6020A
Copper	0.659		0.0400	mg/l	SW-846 6020A
Lead	0.363		0.0030	mg/l	SW-846 6020A
Nickel	0.506		0.0040	mg/l	SW-846 6020A
Selenium	0.0053		0.0020	mg/l	SW-846 6020A
Thallium	0.0013		0.00050	mg/l	SW-846 6020A
Zinc	2.94		0.0150	mg/l	SW-846 6020A

Lab ID: SC53767-04 **Client ID:** CDW-MW-4

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	0.562		0.0020	mg/l	SW-846 6020A
Beryllium	0.0797		0.00050	mg/l	SW-846 6020A
Cadmium	0.0090		0.0010	mg/l	SW-846 6020A
Chromium	1.07		0.0040	mg/l	SW-846 6020A
Copper	1.01		0.0400	mg/l	SW-846 6020A
Lead	0.898		0.0030	mg/l	SW-846 6020A
Nickel	0.847		0.0040	mg/l	SW-846 6020A
Selenium	0.0101		0.0020	mg/l	SW-846 6020A
Silver	0.00085		0.00050	mg/l	SW-846 6020A
Thallium	0.0048		0.00050	mg/l	SW-846 6020A
Zinc	6.67		0.0150	mg/l	SW-846 6020A
Mercury	0.0014		0.00020	mg/l	SW-846 7470A
Benzo(b)fluoranthene	0.7		0.5	ug/l	SW-846 8270D SIM
Chrysene	0.5		0.5	ug/l	SW-846 8270D SIM
Fluoranthene	0.8		0.5	ug/l	SW-846 8270D SIM
Phenanthrene	0.6		0.5	ug/l	SW-846 8270D SIM
Pyrene	0.8		0.5	ug/l	SW-846 8270D SIM

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1	[none]	Ground Water	01-Mar-19 14:00	05-Mar-19
SC53767-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
	C11 to C22 Aromatics	< 400		ug/l	400	400	1	MADEP EPH	08-Mar-19 01:45	13-Mar-19 07:21	M-PA009	0660020	
	C19 to C36 Aliphatics	< 500		ug/l	500	500	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 300		ug/l	300	300	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 400		ug/l	400	400	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*19*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*84*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*73*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 5.00		ug/l	5.00	2.00	1	MADEP VPH	11-Mar-19 21:43	11-Mar-19 21:43	M-PA009	9070A54	
	C5-C8 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 100		ug/l	100	20.0	1	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 10.0		ug/l	10.0	5.00	1	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.00		ug/l	5.00	3.00	1	"	"	"	"	"	
95-47-6	o-Xylene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
108-88-3	Toluene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*100*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*99*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3020A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-36-0	Antimony	< 0.0020		mg/l	0.0020	0.00041	1	SW-846 6020A	08-Mar-19 06:03	14-Mar-19 09:44	M-PA009	6614047	
7440-38-2	Arsenic	**0.323**		mg/l	0.0020	0.00068	1	"	"	"	"	"	
7440-41-7	Beryllium	**0.0796**		mg/l	0.00050	0.000091	1	"	"	"	"	"	
7440-43-9	Cadmium	**0.0129**		mg/l	0.0010	0.00015	1	"	"	"	"	"	
7440-47-3	Chromium	**0.273**		mg/l	0.0040	0.00070	1	"	"	"	"	"	
7440-50-8	Copper	**0.559**		mg/l	0.0400	0.0099	1	"	"	"	"	"	
7439-92-1	Lead	**0.335**		mg/l	0.0030	0.0011	1	"	"	"	"	"	
7440-02-0	Nickel	**0.389**		mg/l	0.0040	0.00060	1	"	"	"	"	"	
7782-49-2	Selenium	**0.0055**		mg/l	0.0020	0.00065	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1 SC53767-01	[none]	Ground Water	01-Mar-19 14:00	05-Mar-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-22-4	Silver	< 0.00050	K3	mg/l	0.00050	0.00017	1	SW-846 6020A	08-Mar-19 06:03	14-Mar-19 09:44	M-PA009	66140470	
7440-28-0	Thallium	**0.0020**		mg/l	0.00050	0.00011	1	"	"	"	"	"	
7440-66-6	Zinc	**4.13**		mg/l	0.0150	0.0062	1	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.000050	1	SW-846 7470A	08-Mar-19 07:00	12-Mar-19 11:43	M-PA009	66057 13	
Subcontracted Analyses Prepared by method SW-846 5030C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:09	12-Mar-19 04:10	M-PA009	190704A/	
71-55-6	1,1,1-Trichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 5		ug/l	5	0.4	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 5		ug/l	5	1	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 5		ug/l	5	0.3	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 250		ug/l	250	29	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-93-3	2-Butanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 10		ug/l	10	0.5	1	"	"	"	"	"	
67-64-1	Acetone	< 20		ug/l	20	0.7	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 20		ug/l	20	0.3	1	"	"	"	"	"	
71-43-2	Benzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 5		ug/l	5	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1	[none]	Ground Water	01-Mar-19 14:00	05-Mar-19
SC53767-01				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
75-27-4	Bromodichloromethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:09	12-Mar-19 04:10	M-PA009	190704A/	
75-25-2	Bromoform	< 4		ug/l	4	0.2	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 5		ug/l	5	0.2	1	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-00-3	Chloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
67-66-3	Chloroform	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
64-17-5	Ethanol	< 750		ug/l	750	280	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5		ug/l	5	0.2	1	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
76-13-1	Freon 113	< 10		ug/l	10	0.2	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 5		ug/l	5	0.7	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 5		ug/l	5	1	1	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-09-2	Methylene Chloride	< 1		ug/l	1	0.3	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5		ug/l	5	1	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
100-42-5	Styrene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 5		ug/l	5	0.8	1	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 30		ug/l	30	12	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 10		ug/l	10	0.7	1	"	"	"	"	"	
108-88-3	Toluene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-buten e	< 50		ug/l	50	6	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1	[none]	Ground Water	01-Mar-19 14:00	05-Mar-19
SC53767-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
75-01-4	Vinyl Chloride	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:09	12-Mar-19 04:10	M-PA009	190704A/	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*102*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*100*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*105*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3510C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.5		ug/l	0.5	0.1	1	SW-846 8270D SIM	08-Mar-19 01:45	08-Mar-19 11:59	M-PA009	066WAJ0	
83-32-9	Acenaphthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.5		ug/l	0.5	0.3	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.5		ug/l	0.5	0.3	1	"	"	"	"	"	
129-00-0	Pyrene	< 0.5		ug/l	0.5	0.2	1	"	"	"	"	"	
Surrogate recoveries:													
38072-94-5	*1-Methylnaphthalene-d10*	*85*			*30-130 %*			"	"	"	"	"	
63466-71-7	*Benzo(a)pyrene-d12*	*72*			*30-130 %*			"	"	"	"	"	
93951-69-0	*Fluoranthene-d10*	*90*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2 SC53767-02	[none]	Ground Water	01-Mar-19 10:00	05-Mar-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
	C11 to C22 Aromatics	< 400		ug/l	400	400	1	MADEP EPH	08-Mar-19 01:45	13-Mar-19 08:42	M-PA009	9066002	0
	C19 to C36 Aliphatics	< 500		ug/l	500	500	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 300		ug/l	300	300	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 400		ug/l	400	400	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*26*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*79*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*71*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 5.00		ug/l	5.00	2.00	1	MADEP VPH	11-Mar-19 22:24	11-Mar-19 22:24	M-PA009	9070A54	
	C5-C8 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 100		ug/l	100	20.0	1	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 10.0		ug/l	10.0	5.00	1	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.00		ug/l	5.00	3.00	1	"	"	"	"	"	
95-47-6	o-Xylene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
108-88-3	Toluene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*100*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*99*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3020A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-41-7	Beryllium	**0.0239**		mg/l	0.00050	0.000091	1	SW-846 6020A	08-Mar-19 06:03	14-Mar-19 09:19	M-PA009	6614047	
7439-92-1	Lead	**0.498**		mg/l	0.0030	0.0011	1	"	"	"	"	"	
7782-49-2	Selenium	**0.0030**		mg/l	0.0020	0.00065	1	"	"	"	"	"	
7440-28-0	Thallium	**0.0016**		mg/l	0.00050	0.00011	1	"	"	"	"	"	
Re-analysis of Subcontracted Analyses Prepared by method SW-846 3020A													
7440-36-0	Antimony	< 0.0200		mg/l	0.0200	0.0041	10	SW-846 6020A	08-Mar-19 06:03	15-Mar-19 08:18	M-PA009	6614047	
7440-38-2	Arsenic	**0.402**		mg/l	0.0200	0.0068	10	"	"	"	"	"	
7440-43-9	Cadmium	< 0.0100		mg/l	0.0100	0.0015	10	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2	[none]	Ground Water	01-Mar-19 10:00	05-Mar-19
SC53767-02				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
Re-analysis of Subcontracted Analyses													
7440-47-3	Chromium	**0.359**		mg/l	0.0400	0.0070	10	SW-846 6020A	08-Mar-19 06:03	15-Mar-19 08:18	M-PA009	66140470	
7440-50-8	Copper	**0.844**		mg/l	0.400	0.0991	10	"	"	"	"	"	
7440-02-0	Nickel	**0.539**		mg/l	0.0400	0.0060	10	"	"	"	"	"	
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0017	10	"	"	"	"	"	
7440-66-6	Zinc	**2.78**		mg/l	0.150	0.0618	10	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.000050	1	SW-846 7470A	08-Mar-19 07:00	12-Mar-19 11:38	M-PA009	66057133	
Subcontracted Analyses													
Prepared by method SW-846 5030C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:31	12-Mar-19 04:32	M-PA009	190704A/	
71-55-6	1,1,1-Trichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 5		ug/l	5	0.4	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 5		ug/l	5	1	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 5		ug/l	5	0.3	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 250		ug/l	250	29	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-93-3	2-Butanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 10		ug/l	10	0.5	1	"	"	"	"	"	
67-64-1	Acetone	< 20		ug/l	20	0.7	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 20		ug/l	20	0.3	1	"	"	"	"	"	
71-43-2	Benzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2	[none]	Ground Water	01-Mar-19 10:00	05-Mar-19
SC53767-02				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
108-86-1	Bromobenzene	< 5		ug/l	5	0.2	1	SW-846 8260C	12-Mar-19 04:31	12-Mar-19 04:32	M-PA009	190704A/	
74-97-5	Bromochloromethane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-25-2	Bromoform	< 4		ug/l	4	0.2	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 5		ug/l	5	0.2	1	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-00-3	Chloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
67-66-3	Chloroform	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
64-17-5	Ethanol	< 750		ug/l	750	280	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5		ug/l	5	0.2	1	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
76-13-1	Freon 113	< 10		ug/l	10	0.2	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 5		ug/l	5	0.7	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 5		ug/l	5	1	1	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-09-2	Methylene Chloride	< 1		ug/l	1	0.3	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5		ug/l	5	1	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
100-42-5	Styrene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 5		ug/l	5	0.8	1	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 30		ug/l	30	12	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 10		ug/l	10	0.7	1	"	"	"	"	"	
108-88-3	Toluene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-buten e	< 50		ug/l	50	6	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2	[none]	Ground Water	01-Mar-19 10:00	05-Mar-19
SC53767-02				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
79-01-6	Trichloroethene	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:31	12-Mar-19 04:32	M-PA009	190704A/	
75-69-4	Trichlorofluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*100*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*99*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*103*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3510C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.5		ug/l	0.5	0.1	1	SW-846 8270D SIM	08-Mar-19 01:45	08-Mar-19 12:30	M-PA009	066WAJ0	
83-32-9	Acenaphthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.5		ug/l	0.5	0.3	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.5		ug/l	0.5	0.3	1	"	"	"	"	"	
129-00-0	Pyrene	< 0.5		ug/l	0.5	0.2	1	"	"	"	"	"	
Surrogate recoveries:													
38072-94-5	*1-Methylnaphthalene-d10*	*85*			*30-130 %*			"	"	"	"	"	
63466-71-7	*Benzo(a)pyrene-d12*	*68*			*30-130 %*			"	"	"	"	"	
93951-69-0	*Fluoranthene-d10*	*90*			*30-130 %*			"	"	"	"	"	

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
	C11 to C22 Aromatics	< 400		ug/l	400	400	1	MADEP EPH	08-Mar-19 01:45	13-Mar-19 10:03	M-PA009	0660020	
	C19 to C36 Aliphatics	< 500		ug/l	500	500	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 300		ug/l	300	300	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 400		ug/l	400	400	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*24*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*79*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*73*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 5.00		ug/l	5.00	2.00	1	MADEP VPH	11-Mar-19 23:04	11-Mar-19 23:04	M-PA009	9070A54	
	C5-C8 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 100		ug/l	100	20.0	1	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 10.0		ug/l	10.0	5.00	1	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.00		ug/l	5.00	3.00	1	"	"	"	"	"	
95-47-6	o-Xylene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
108-88-3	Toluene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*100*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*100*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3020A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-36-0	Antimony	< 0.0020		mg/l	0.0020	0.00041	1	SW-846 6020A	08-Mar-19 06:03	14-Mar-19 09:47	M-PA009	6614047	
7440-38-2	Arsenic	**0.398**		mg/l	0.0020	0.00068	1	"	"	"	"	"	
7440-41-7	Beryllium	**0.0288**		mg/l	0.00050	0.000091	1	"	"	"	"	"	
7440-43-9	Cadmium	**0.0102**		mg/l	0.0010	0.00015	1	"	"	"	"	"	
7440-47-3	Chromium	**0.278**		mg/l	0.0040	0.00070	1	"	"	"	"	"	
7440-50-8	Copper	**0.659**		mg/l	0.0400	0.0099	1	"	"	"	"	"	
7439-92-1	Lead	**0.363**		mg/l	0.0030	0.0011	1	"	"	"	"	"	
7440-02-0	Nickel	**0.506**		mg/l	0.0040	0.00060	1	"	"	"	"	"	
7782-49-2	Selenium	**0.0053**		mg/l	0.0020	0.00065	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3	[none]	Ground Water	01-Mar-19 11:30	05-Mar-19
SC53767-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-22-4	Silver	< 0.00050		mg/l	0.00050	0.00017	1	SW-846 6020A	08-Mar-19 06:03	14-Mar-19 09:47	M-PA009	66140470	
7440-28-0	Thallium	**0.0013**		mg/l	0.00050	0.00011	1	"	"	"	"	"	
7440-66-6	Zinc	**2.94**		mg/l	0.0150	0.0062	1	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.000050	1	SW-846 7470A	08-Mar-19 07:00	12-Mar-19 11:45	M-PA009	66057 13	
Subcontracted Analyses													
Prepared by method SW-846 5030C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:53	12-Mar-19 04:54	M-PA009	190704A/	
71-55-6	1,1,1-Trichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 5		ug/l	5	0.4	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 5		ug/l	5	1	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 5		ug/l	5	0.3	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 250		ug/l	250	29	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-93-3	2-Butanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 10		ug/l	10	0.5	1	"	"	"	"	"	
67-64-1	Acetone	< 20		ug/l	20	0.7	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 20		ug/l	20	0.3	1	"	"	"	"	"	
71-43-2	Benzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 5		ug/l	5	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3	[none]	Ground Water	01-Mar-19 11:30	05-Mar-19
SC53767-03				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
75-27-4	Bromodichloromethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:53	12-Mar-19 04:54	M-PA009	190704A/	
75-25-2	Bromoform	< 4		ug/l	4	0.2	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 5		ug/l	5	0.2	1	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-00-3	Chloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
67-66-3	Chloroform	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
64-17-5	Ethanol	< 750		ug/l	750	280	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5		ug/l	5	0.2	1	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
76-13-1	Freon 113	< 10		ug/l	10	0.2	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 5		ug/l	5	0.7	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 5		ug/l	5	1	1	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-09-2	Methylene Chloride	< 1		ug/l	1	0.3	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5		ug/l	5	1	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
100-42-5	Styrene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 5		ug/l	5	0.8	1	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 30		ug/l	30	12	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 10		ug/l	10	0.7	1	"	"	"	"	"	
108-88-3	Toluene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-buten e	< 50		ug/l	50	6	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3	[none]	Ground Water	01-Mar-19 11:30	05-Mar-19
SC53767-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
75-01-4	Vinyl Chloride	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:53	12-Mar-19 04:54	M-PA009	190704A/	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*101*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*101*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*102*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3510C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.5		ug/l	0.5	0.1	1	SW-846 8270D SIM	08-Mar-19 01:45	08-Mar-19 13:01	M-PA009	066WAJ0	
83-32-9	Acenaphthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.5		ug/l	0.5	0.3	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.5		ug/l	0.5	0.3	1	"	"	"	"	"	
129-00-0	Pyrene	< 0.5		ug/l	0.5	0.2	1	"	"	"	"	"	
Surrogate recoveries:													
38072-94-5	*1-Methylnaphthalene-d10*	*86*			*30-130 %*			"	"	"	"	"	
63466-71-7	*Benzo(a)pyrene-d12*	*68*			*30-130 %*			"	"	"	"	"	
93951-69-0	*Fluoranthene-d10*	*88*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Ground Water	01-Mar-19 13:00	05-Mar-19
SC53767-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA0009													
	C11 to C22 Aromatics	< 400		ug/l	400	400	1	MADEP EPH	08-Mar-19 01:45	13-Mar-19 11:23	M-PA009	0660020	
	C19 to C36 Aliphatics	< 500		ug/l	500	500	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 300		ug/l	300	300	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 400		ug/l	400	400	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*15*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*84*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*77*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA0009													
71-43-2	Benzene	< 5.00		ug/l	5.00	2.00	1	MADEP VPH	11-Mar-19 23:45	11-Mar-19 23:45	M-PA009	9070A54	
	C5-C8 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 100		ug/l	100	20.0	1	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 10.0		ug/l	10.0	5.00	1	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.00		ug/l	5.00	3.00	1	"	"	"	"	"	
95-47-6	o-Xylene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
108-88-3	Toluene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*99*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*100*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3020A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA0009													
7440-36-0	Antimony	< 0.0020		mg/l	0.0020	0.00041	1	SW-846 6020A	08-Mar-19 06:03	14-Mar-19 09:40	M-PA009	6614047	
7440-38-2	Arsenic	**0.562**		mg/l	0.0020	0.00068	1	"	"	"	"	"	
7440-41-7	Beryllium	**0.0797**		mg/l	0.00050	0.000091	1	"	"	"	"	"	
7440-43-9	Cadmium	**0.0090**		mg/l	0.0010	0.00015	1	"	"	"	"	"	
7440-47-3	Chromium	**1.07**		mg/l	0.0040	0.00070	1	"	"	"	"	"	
7440-50-8	Copper	**1.01**		mg/l	0.0400	0.0099	1	"	"	"	"	"	
7439-92-1	Lead	**0.898**		mg/l	0.0030	0.0011	1	"	"	"	"	"	
7440-02-0	Nickel	**0.847**		mg/l	0.0040	0.00060	1	"	"	"	"	"	
7782-49-2	Selenium	**0.0101**		mg/l	0.0020	0.00065	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Ground Water	01-Mar-19 13:00	05-Mar-19
SC53767-04				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-22-4	Silver	**0.00085**		mg/l	0.00050	0.00017	1	SW-846 6020A	08-Mar-19 06:03	14-Mar-19 09:40	M-PA009	66140470	
7440-28-0	Thallium	**0.0048**		mg/l	0.00050	0.00011	1	"	"	"	"	"	
7440-66-6	Zinc	**6.67**		mg/l	0.0150	0.0062	1	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	**0.0014**		mg/l	0.00020	0.000050	1	SW-846 7470A	08-Mar-19 07:00	12-Mar-19 11:30	M-PA009	66057 13	
Subcontracted Analyses													
Prepared by method SW-846 5030C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 05:14	12-Mar-19 05:15	M-PA009	190704A	
71-55-6	1,1,1-Trichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 5		ug/l	5	0.4	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 5		ug/l	5	1	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 5		ug/l	5	0.3	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 250		ug/l	250	29	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-93-3	2-Butanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 10		ug/l	10	0.5	1	"	"	"	"	"	
67-64-1	Acetone	< 20		ug/l	20	0.7	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 20		ug/l	20	0.3	1	"	"	"	"	"	
71-43-2	Benzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 5		ug/l	5	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Ground Water	01-Mar-19 13:00	05-Mar-19
SC53767-04				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
75-27-4	Bromodichloromethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 05:14	12-Mar-19 05:15	M-PA009	190704A/	
75-25-2	Bromoform	< 4		ug/l	4	0.2	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 5		ug/l	5	0.2	1	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-00-3	Chloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
67-66-3	Chloroform	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
64-17-5	Ethanol	< 750		ug/l	750	280	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5		ug/l	5	0.2	1	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
76-13-1	Freon 113	< 10		ug/l	10	0.2	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 5		ug/l	5	0.7	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 5		ug/l	5	1	1	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-09-2	Methylene Chloride	< 1		ug/l	1	0.3	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5		ug/l	5	1	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
100-42-5	Styrene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 5		ug/l	5	0.8	1	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 30		ug/l	30	12	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 10		ug/l	10	0.7	1	"	"	"	"	"	
108-88-3	Toluene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-buten e	< 50		ug/l	50	6	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4 SC53767-04	[none]	Ground Water	01-Mar-19 13:00	05-Mar-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
75-01-4	Vinyl Chloride	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 05:14	12-Mar-19 05:15	M-PA009	190704A/	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*103*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*99*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*104*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3510C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.5		ug/l	0.5	0.1	1	SW-846 8270D SIM	08-Mar-19 01:45	08-Mar-19 13:33	M-PA009	066WAJ0	
83-32-9	Acenaphthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	**0.7**		ug/l	0.5	0.1	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
218-01-9	Chrysene	**0.5**		ug/l	0.5	0.1	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
206-44-0	Fluoranthene	**0.8**		ug/l	0.5	0.1	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.5		ug/l	0.5	0.3	1	"	"	"	"	"	
85-01-8	Phenanthrene	**0.6**		ug/l	0.5	0.3	1	"	"	"	"	"	
129-00-0	Pyrene	**0.8**		ug/l	0.5	0.2	1	"	"	"	"	"	
Surrogate recoveries:													
38072-94-5	*1-Methylnaphthalene-d10*	*85*			*30-130 %*			"	"	"	"	"	
63466-71-7	*Benzo(a)pyrene-d12*	*76*			*30-130 %*			"	"	"	"	"	
93951-69-0	*Fluoranthene-d10*	*90*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip Blank	[none]	Trip Blank	01-Mar-19 00:00	05-Mar-19
SC53767-05				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses Prepared by method SW-846 5030C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 05:36	12-Mar-19 05:37	M-PA009	190704A/	
71-55-6	1,1,1-Trichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 5		ug/l	5	0.4	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 5		ug/l	5	1	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 5		ug/l	5	0.3	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 250		ug/l	250	29	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-93-3	2-Butanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 10		ug/l	10	0.5	1	"	"	"	"	"	
67-64-1	Acetone	< 20		ug/l	20	0.7	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 20		ug/l	20	0.3	1	"	"	"	"	"	
71-43-2	Benzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-25-2	Bromoform	< 4		ug/l	4	0.2	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 5		ug/l	5	0.2	1	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-00-3	Chloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
67-66-3	Chloroform	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip Blank SC53767-05	[none]	Trip Blank	01-Mar-19 00:00	05-Mar-19

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
156-59-2	cis-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 05:36	12-Mar-19 05:37	M-PA009	190704A/	
10061-01-5	cis-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
64-17-5	Ethanol	< 750		ug/l	750	280	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5		ug/l	5	0.2	1	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
76-13-1	Freon 113	< 10		ug/l	10	0.2	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 5		ug/l	5	0.7	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 5		ug/l	5	1	1	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-09-2	Methylene Chloride	< 1		ug/l	1	0.3	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5		ug/l	5	1	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
100-42-5	Styrene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 5		ug/l	5	0.8	1	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 30		ug/l	30	12	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 10		ug/l	10	0.7	1	"	"	"	"	"	
108-88-3	Toluene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-buten e	< 50		ug/l	50	6	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*102*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*101*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*103*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99*			*70-130 %*			"	"	"	"	"	

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH										
Batch 190660020A - METHOD										
LCS (LCS20066Q)						Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Anthracene	**39**		ug/l	2.0	40		96	40-140		
Naphthalene	**24**		ug/l	2.0	40		59	40-140		
Dibenzo(a,h)anthracene	**33**		ug/l	2.0	40		83	40-140		
Indeno(1,2,3-cd)pyrene	**32**		ug/l	2.0	40		79	40-140		
Fluorene	**31**		ug/l	2.0	40		77	40-140		
Fluoranthene	**34**		ug/l	2.0	40		85	40-140		
2-Methylnaphthalene	**24**		ug/l	2.0	40		59	40-140		
Pyrene	**40**		ug/l	12	40		99	40-140		
Acenaphthylene	**29**		ug/l	2.0	40		72	40-140		
Phenanthrene	**31**		ug/l	2.0	40		77	40-140		
Benzo(a)anthracene	**30**		ug/l	2.0	40		75	40-140		
Benzo(a)pyrene	**35**		ug/l	2.0	40		88	40-140		
Benzo(b)fluoranthene	**33**		ug/l	2.0	40		82	40-140		
Benzo(g,h,i)perylene	**34**		ug/l	2.0	40		86	40-140		
Benzo(k)fluoranthene	**36**		ug/l	4.0	40		89	40-140		
Chrysene	**37**		ug/l	2.0	40		91	40-140		
Acenaphthene	**28**		ug/l	2.0	40		71	40-140		
C9 to C18 Aliphatics	**120**		ug/l	30	240		49	40-140		
C19 to C36 Aliphatics	**240**		ug/l	50	320		74	40-140		
Unadjusted C11 - C22 Aromatics	**550**		ug/l	40	680		81	40-140		
Surrogate: 1-Chloro-octadecane	*11*		ug/l		*20*		*56*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*17*		ug/l		*20*		*87*	*40-140*		
Surrogate: Orthoterphenyl	*16*		ug/l		*20*		*80*	*40-140*		
LCSD (P90660AY)						Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Benzo(g,h,i)perylene	**35**		ug/l	2.0	40		87	40-140	2	25
Pyrene	**40**		ug/l	12	40		99	40-140	1	25
Phenanthrene	**31**		ug/l	2.0	40		77	40-140	1	25
Naphthalene	**19**		ug/l	2.0	40		48	40-140	20	25
Indeno(1,2,3-cd)pyrene	**32**		ug/l	2.0	40		81	40-140	2	25
Fluorene	**30**		ug/l	2.0	40		74	40-140	4	25
Fluoranthene	**35**		ug/l	2.0	40		86	40-140	1	25
Chrysene	**38**		ug/l	2.0	40		94	40-140	3	25
Benzo(a)pyrene	**37**		ug/l	2.0	40		92	40-140	3	25
Benzo(a)anthracene	**31**		ug/l	2.0	40		77	40-140	2	25
Anthracene	**39**		ug/l	2.0	40		97	40-140	0	25
Acenaphthylene	**26**		ug/l	2.0	40		64	40-140	11	25
Acenaphthene	**26**		ug/l	2.0	40		65	40-140	9	25
2-Methylnaphthalene	**20**		ug/l	2.0	40		50	40-140	15	25
Benzo(b)fluoranthene	**35**		ug/l	2.0	40		86	40-140	5	25
Dibenzo(a,h)anthracene	**34**		ug/l	2.0	40		85	40-140	2	25
Benzo(k)fluoranthene	**35**		ug/l	4.0	40		87	40-140	3	25
C19 to C36 Aliphatics	**230**		ug/l	50	320		72	40-140	2	25
Unadjusted C11 - C22 Aromatics	**540**		ug/l	40	680		79	40-140	1	25
C9 to C18 Aliphatics	**110**		ug/l	30	240		44	40-140	11	25
Surrogate: Orthoterphenyl	*16*		ug/l		*20*		*79*	*40-140*		
Surrogate: 1-Chloro-octadecane	*12*		ug/l		*20*		*59*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*16*		ug/l		*20*		*82*	*40-140*		
Blank (PBLK20066B)						Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
2-Methylnaphthalene	< 2.0		ug/l	2.0				-		
Acenaphthene	< 2.0		ug/l	2.0				-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH										
Batch 190660020A - METHOD										
Blank (PBLK20066B)						Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Acenaphthylene	< 2.0		ug/l	2.0				-		
Anthracene	< 2.0		ug/l	2.0				-		
Benzo(a)anthracene	< 2.0		ug/l	2.0				-		
Benzo(a)pyrene	< 2.0		ug/l	2.0				-		
Benzo(b)fluoranthene	< 2.0		ug/l	2.0				-		
Benzo(g,h,i)perylene	< 2.0		ug/l	2.0				-		
Fluorene	< 2.0		ug/l	2.0				-		
Pyrene	< 12		ug/l	12				-		
Phenanthrene	< 2.0		ug/l	2.0				-		
Indeno(1,2,3-cd)pyrene	< 2.0		ug/l	2.0				-		
Benzo(k)fluoranthene	< 4.0		ug/l	4.0				-		
Fluoranthene	< 2.0		ug/l	2.0				-		
Dibenzo(a,h)anthracene	< 2.0		ug/l	2.0				-		
Chrysene	< 2.0		ug/l	2.0				-		
Naphthalene	< 2.0		ug/l	2.0				-		
C9 to C18 Aliphatics	< 30		ug/l	30				-		
C19 to C36 Aliphatics	< 50		ug/l	50				-		
Unadjusted C11 - C22 Aromatics	< 40		ug/l	40				-		
C11 to C22 Aromatics	< 40		ug/l	40				-		
Surrogate: Orthoterphenyl	*13*		ug/l		*20*		*67*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*17*		ug/l		*20*		*85*	*40-140*		
Surrogate: 1-Chloro-octadecane	*9.5*		ug/l		*20*		*47*	*40-140*		
MADEP VPH										
Batch 19070A54A - General Preparation										
Blank (BLKJBB)						Prepared & Analyzed: 11-Mar-19				
Unadjusted C5-C8 Aliphatics	< 100		ug/l	100				-		
Toluene	< 5.00		ug/l	5.00				-		
o-Xylene	< 5.00		ug/l	5.00				-		
Naphthalene	< 5.00		ug/l	5.00				-		
Unadjusted C9-C12 Aliphatics	< 100		ug/l	100				-		
m,p-Xylenes	< 10.0		ug/l	10.0				-		
C9-C12 Aliphatic Hydrocarbons	< 100		ug/l	100				-		
C9-C10 Aromatic Hydrocarbons	< 100		ug/l	100				-		
C5-C8 Aliphatic Hydrocarbons	< 100		ug/l	100				-		
Benzene	< 5.00		ug/l	5.00				-		
Methyl t-butyl ether	< 5.00		ug/l	5.00				-		
Ethylbenzene	< 5.00		ug/l	5.00				-		
Surrogate: Trifluorotoluene-F	*29.1*		ug/l		*30.0*		*97*	*70-130*		
Surrogate: Trifluorotoluene-P	*29.2*		ug/l		*30.0*		*97*	*70-130*		
LCS (LCS6GQ)						Prepared & Analyzed: 11-Mar-19				
o-Xylene	**49.7**		ug/l	5.00	50.0		99	70-130		
Unadjusted C9-C12 Aliphatics	**397**		ug/l	100	401		99	70-130		
Unadjusted C5-C8 Aliphatics	**309**		ug/l	100	301		103	70-130		
Toluene	**50.9**		ug/l	5.00	50.3		101	70-130		
Naphthalene	**50.5**		ug/l	5.00	50.2		101	70-130		
Methyl t-butyl ether	**49.0**		ug/l	5.00	50.0		98	70-130		
Ethylbenzene	**49.9**		ug/l	5.00	50.2		99	70-130		
C9-C12 Aliphatic Hydrocarbons	**144**		ug/l	100	151		95	70-130		
C9-C10 Aromatic Hydrocarbons	**51.2**		ug/l	100	50.1		102	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP VPH										
Batch 19070A54A - General Preparation										
LCS (LCS6GQ)						Prepared & Analyzed: 11-Mar-19				
C5-C8 Aliphatic Hydrocarbons	**157**		ug/l	100	151		104	70-130		
Benzene	**51.9**		ug/l	5.00	50.2		103	70-130		
m,p-Xylenes	**103**		ug/l	10.0	100		102	70-130		
Surrogate: Trifluorotoluene-P	*29.8*		ug/l		*30.0*		*99*	*70-130*		
Surrogate: Trifluorotoluene-F	*29.9*		ug/l		*30.0*		*100*	*70-130*		
LCSD (P90704AY)						Prepared & Analyzed: 11-Mar-19				
C5-C8 Aliphatic Hydrocarbons	**157**		ug/l	100	151		104	70-130	0	25
Unadjusted C5-C8 Aliphatics	**310**		ug/l	100	301		103	70-130	0	25
Toluene	**51.1**		ug/l	5.00	50.3		102	70-130	0	25
o-Xylene	**50.0**		ug/l	5.00	50.0		100	70-130	1	25
Naphthalene	**57.0**		ug/l	5.00	50.2		114	70-130	12	25
Methyl t-butyl ether	**50.3**		ug/l	5.00	50.0		101	70-130	3	25
m,p-Xylenes	**103**		ug/l	10.0	100		102	70-130	0	25
Ethylbenzene	**50.2**		ug/l	5.00	50.2		100	70-130	1	25
C9-C10 Aromatic Hydrocarbons	**51.6**		ug/l	100	50.1		103	70-130	1	25
Benzene	**51.8**		ug/l	5.00	50.2		103	70-130	0	25
Unadjusted C9-C12 Aliphatics	**398**		ug/l	100	401		99	70-130	0	25
C9-C12 Aliphatic Hydrocarbons	**144**		ug/l	100	151		95	70-130	0	25
Surrogate: Trifluorotoluene-F	*29.9*		ug/l		*30.0*		*100*	*70-130*		
Surrogate: Trifluorotoluene-P	*30.4*		ug/l		*30.0*		*101*	*70-130*		
SW-846 6020A										
Batch 190661404704A - SW-846 3020A										
Laboratory Dup (P001628D220822A)			**Source: SC53767-02**			Prepared: 08-Mar-19 Analyzed: 15-Mar-19				
Zinc	**3.85**		mg/l	0.150		2.78		-	32	20
Silver	< 0.0050		mg/l	0.0050		BRL		-	0	20
Nickel	**0.737**		mg/l	0.0400		0.539		-	31	20
Chromium	**0.546**		mg/l	0.0400		0.359		-	41	20
Cadmium	**0.0071**		mg/l	0.0100		0.0058		-	19	20
Arsenic	**0.512**		mg/l	0.0200		0.402		-	24	20
Antimony	< 0.0200		mg/l	0.0200		BRL		-	0	20
Copper	**1.13**		mg/l	0.400		0.844		-	29	20
Laboratory Dup (P001628D220923A)			**Source: SC53767-02**			Prepared: 08-Mar-19 Analyzed: 14-Mar-19				
Beryllium	**0.0311**		mg/l	0.00050		0.0239		-	26	20
Laboratory Dup (P001628D221828A)			**Source: SC53767-02**			Prepared & Analyzed: 08-Mar-19				
Thallium	**0.0025**		mg/l	0.00050		0.0016		-	42	20
Lead	**0.670**		mg/l	0.0030		0.498		-	29	20
Matrix Spike Dup (P001628M220826A)			**Source: SC53767-02**			Prepared: 08-Mar-19 Analyzed: 15-Mar-19				
Silver	**0.0519**		mg/l	0.0050	0.0500	BRL	104	75-125	2	20
Nickel	**0.805**	*	mg/l	0.0400	0.0500	0.539	534	75-125	1	20
Copper	**1.19**	*	mg/l	0.400	0.0500	0.844	693	75-125	0	20
Chromium	**0.583**	*	mg/l	0.0400	0.0500	0.359	448	75-125	3	20
Cadmium	**0.0122**	*	mg/l	0.0100	0.0050	0.0058	127	75-125	8	20
Arsenic	**0.466**	*	mg/l	0.0200	0.0100	0.402	633	75-125	15	20
Antimony	< 0.0200	*	mg/l	0.0200	0.0060	BRL	0	75-125	0	20
Zinc	**4.35**	*	mg/l	0.150	0.500	2.78	314	75-125	1	20
Matrix Spike Dup (P001628M220927A)			**Source: SC53767-02**			Prepared: 08-Mar-19 Analyzed: 14-Mar-19				
Beryllium	**0.0345**	*	mg/l	0.00050	0.0040	0.0239	265	75-125	2	20
Matrix Spike Dup (P001628M221833A)			**Source: SC53767-02**			Prepared & Analyzed: 08-Mar-19				
Thallium	**0.0045**	*	mg/l	0.00050	0.0020	0.0016	144	75-125	0	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 6020A										
Batch 190661404704A - SW-846 3020A										
Matrix Spike Dup (P001628M221833A)			**Source: SC53767-02**			Prepared & Analyzed: 08-Mar-19				
Lead	**0.713**	*	mg/l	0.0030	0.0150	0.498	1434	75-125	2	20
Matrix Spike (P001628R220824A)			**Source: SC53767-02**			Prepared: 08-Mar-19 Analyzed: 15-Mar-19				
Antimony	< 0.0200	*	mg/l	0.0200	0.0060	0.0028	0	75-125		
Arsenic	**0.402**	*	mg/l	0.0200	0.0100	0.402	-6	75-125		
Cadmium	**0.0113**		mg/l	0.0100	0.0050	0.0058	109	75-125		
Chromium	**0.600**	*	mg/l	0.0400	0.0500	0.359	481	75-125		
Copper	**1.20**	*	mg/l	0.400	0.0500	0.844	704	75-125		
Nickel	**0.813**	*	mg/l	0.0400	0.0500	0.539	549	75-125		
Silver	**0.0508**		mg/l	0.0050	0.0500	0.00071	102	75-125		
Zinc	**4.38**	*	mg/l	0.150	0.500	2.78	319	75-125		
Matrix Spike (P001628R220925A)			**Source: SC53767-02**			Prepared: 08-Mar-19 Analyzed: 14-Mar-19				
Beryllium	**0.0351**	*	mg/l	0.00050	0.0040	0.0239	281	75-125		
Matrix Spike (P001628R221830A)			**Source: SC53767-02**			Prepared & Analyzed: 08-Mar-19				
Lead	**0.697**	*	mg/l	0.0030	0.0150	0.498	1330	75-125		
Thallium	**0.0045**	*	mg/l	0.00050	0.0020	0.0016	144	75-125		
Blank (P06604DBB)						Prepared: 08-Mar-19 Analyzed: 14-Mar-19				
Cadmium	< 0.0010		mg/l	0.0010				-		
Lead	< 0.0030		mg/l	0.0030				-		
Copper	< 0.0400		mg/l	0.0400				-		
Zinc	< 0.0150		mg/l	0.0150				-		
Chromium	**0.00071**		mg/l	0.0040				-		
Beryllium	< 0.00050		mg/l	0.00050				-		
Arsenic	< 0.0020		mg/l	0.0020				-		
Antimony	< 0.0020		mg/l	0.0020				-		
Selenium	< 0.0020		mg/l	0.0020				-		
Silver	< 0.00050		mg/l	0.00050				-		
Thallium	< 0.00050		mg/l	0.00050				-		
Nickel	**0.00063**		mg/l	0.0040				-		
LCS (P06604DQQ)						Prepared: 08-Mar-19 Analyzed: 14-Mar-19				
Copper	**0.0522**		mg/l	0.0400	0.0500		104	89-120		
Selenium	**0.0103**		mg/l	0.0020	0.0100		103	90-113		
Nickel	**0.0533**		mg/l	0.0040	0.0500		107	90-114		
Thallium	**0.0023**		mg/l	0.00050	0.0020		117	80-120		
Zinc	**0.522**		mg/l	0.0150	0.500		104	90-115		
Lead	**0.0155**		mg/l	0.0030	0.0150		103	90-110		
Silver	**0.0503**		mg/l	0.00050	0.0500		101	88-113		
Antimony	**0.0058**		mg/l	0.0020	0.0060		97	80-120		
Arsenic	**0.0109**		mg/l	0.0020	0.0100		109	85-120		
Beryllium	**0.0042**		mg/l	0.00050	0.0040		105	90-112		
Cadmium	**0.0054**		mg/l	0.0010	0.0050		107	84-120		
Chromium	**0.0535**		mg/l	0.0040	0.0500		107	90-115		
SW-846 7470A										
Batch 190660571304 - METHOD										
Laboratory Dup (P001630D221132)			**Source: SC53767-04**			Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Mercury	**0.0022**		mg/l	0.00020		0.0014		-	48	20
Matrix Spike Dup (P001630M221136)			**Source: SC53767-04**			Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Mercury	**0.0032**	*	mg/l	0.00020	0.0010	0.0014	186	80-120	2	20
Matrix Spike (P001630R221134)			**Source: SC53767-04**			Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Mercury	**0.0033**	*	mg/l	0.00020	0.0010	0.0014	194	80-120		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 7470A										
Batch 190660571304 - METHOD										
Blank (P06671DBB)						Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Mercury	< 0.00020		mg/l	0.00020				-		
LCS (P06671DQQ)						Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Mercury	**0.0010**		mg/l	0.00020	0.0010		104	80-114		
SW-846 8260C										
Batch L190704AA - SW-846 5030C										
LCS (LCSL85Q)						Prepared & Analyzed: 11-Mar-19				
1,1-Dichloroethane	**20**		ug/l	1	20		101	70-130		
1,2-Dibromo-3-chloropropane	**20**		ug/l	5	20		101	70-130		
1,3-Dichlorobenzene	**21**		ug/l	5	20		103	70-130		
1,3,5-Trimethylbenzene	**21**		ug/l	5	20		107	70-130		
1,3,5-Trichlorobenzene	**20**		ug/l	5	20		99	70-130		
1,4-Dichlorobenzene	**21**		ug/l	5	20		104	70-130		
1,2-Dichloropropane	**19**		ug/l	1	20		96	70-130		
1,4-Dioxane	**450**		ug/l	250	500		90	70-130		
1,2-Dichloroethane	**24**		ug/l	1	20		119	70-130		
1,2-Dichlorobenzene	**21**		ug/l	5	20		103	70-130		
1,2-Dibromoethane	**20**		ug/l	1	20		102	70-130		
1,3-Dichloropropane	**20**		ug/l	1	20		100	70-130		
1,2,4-Trimethylbenzene	**21**		ug/l	5	20		107	70-130		
1,2,4-Trichlorobenzene	**20**		ug/l	5	20		99	70-130		
1,2,3-Trichloropropane	**20**		ug/l	5	20		102	70-130		
1,2,3-Trichlorobenzene	**20**		ug/l	5	20		100	70-130		
1,1-Dichloroethene	**23**		ug/l	1	20		113	70-130		
1,1,2-Trichloroethane	**21**		ug/l	1	20		105	70-130		
1,1,2,2-Tetrachloroethane	**19**		ug/l	1	20		97	70-130		
1,1,1-Trichloroethane	**24**		ug/l	1	20		122	70-130		
1,1,1,2-Tetrachloroethane	**21**		ug/l	1	20		107	70-130		
Freon 113	**25**		ug/l	10	20		125	70-130		
2,2-Dichloropropane	**23**		ug/l	1	20		117	70-130		
1,1-Dichloropropene	**21**		ug/l	5	20		107	70-130		
t-Amyl methyl ether	**19**		ug/l	5	20		97	70-130		
Ethylbenzene	**21**		ug/l	1	20		105	70-130		
Hexachlorobutadiene	**19**		ug/l	5	20		95	70-130		
Isopropylbenzene	**22**		ug/l	5	20		108	70-130		
m+p-Xylene	**43**		ug/l	5	40		107	70-130		
Methyl Tertiary Butyl Ether	**19**		ug/l	1	20		97	70-130		
Methylene Chloride	**20**		ug/l	1	20		102	70-130		
Naphthalene	**20**		ug/l	5	20		100	70-130		
n-Butylbenzene	**20**		ug/l	5	20		102	70-130		
n-Propylbenzene	**21**		ug/l	5	20		105	70-130		
o-Xylene	**21**		ug/l	1	20		104	70-130		
p-Isopropyltoluene	**22**		ug/l	5	20		108	70-130		
Ethyl ether	**17**		ug/l	5	20		87	70-130		
Styrene	**21**		ug/l	5	20		106	70-130		
Tetrahydrofuran	**92**		ug/l	10	100		92	70-130		
t-Butyl alcohol	**190**		ug/l	30	200		96	70-130		
tert-Butylbenzene	**21**		ug/l	5	20		104	70-130		
Tetrachloroethene	**21**		ug/l	1	20		106	70-130		
Toluene	**20**		ug/l	1	20		102	70-130		
trans-1,2-Dichloroethene	**21**		ug/l	1	20		107	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch L190704AA - SW-846 5030C										
LCS (LCSL85Q)					Prepared & Analyzed: 11-Mar-19					
trans-1,3-Dichloropropene	**20**		ug/l	1	20		100	70-130		
trans-1,4-Dichloro-2-butene	**71**		ug/l	50	100		71	70-130		
Trichloroethene	**22**		ug/l	1	20		108	70-130		
Trichlorofluoromethane	**22**		ug/l	1	20		111	70-130		
Vinyl Chloride	**18**		ug/l	1	20		92	70-130		
2-Butanone	**140**		ug/l	10	150		91	70-130		
Ethyl t-butyl ether	**18**		ug/l	1	20		90	70-130		
sec-Butylbenzene	**21**		ug/l	5	20		105	70-130		
Acrylonitrile	**83**		ug/l	20	100		83	70-130		
2-Chlorotoluene	**21**		ug/l	5	20		104	70-130		
2-Hexanone	**88**		ug/l	10	100		88	70-130		
di-Isopropyl ether	**17**		ug/l	1	20		84	70-130		
4-Chlorotoluene	**21**		ug/l	5	20		103	70-130		
Acetone	**150**		ug/l	20	150		99	70-130		
Benzene	**20**		ug/l	1	20		102	70-130		
Bromobenzene	**20**		ug/l	5	20		102	70-130		
Bromochloromethane	**18**		ug/l	5	20		92	70-130		
Bromodichloromethane	**22**		ug/l	1	20		110	70-130		
Bromoform	**19**		ug/l	4	20		93	70-130		
Bromomethane	**18**		ug/l	1	20		90	70-130		
Carbon Disulfide	**19**		ug/l	5	20		94	70-130		
Dibromochloromethane	**21**		ug/l	1	20		105	70-130		
Chlorobenzene	**21**		ug/l	1	20		107	70-130		
Chloroethane	**18**		ug/l	1	20		91	70-130		
Chloroform	**22**		ug/l	1	20		112	70-130		
Chloromethane	**15**		ug/l	1	20		77	70-130		
cis-1,2-Dichloroethene	**21**		ug/l	1	20		106	70-130		
cis-1,3-Dichloropropene	**20**		ug/l	1	20		102	70-130		
Dibromomethane	**21**		ug/l	1	20		107	70-130		
4-Methyl-2-pentanone	**88**		ug/l	10	100		88	70-130		
Carbon Tetrachloride	**25**		ug/l	1	20		127	70-130		
Dichlorodifluoromethane	**19**		ug/l	1	20		96	70-130		
Surrogate: Toluene-d8	*49*		ug/l		*50*		*99*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*52*		ug/l		*50*		*105*	*70-130*		
Surrogate: Dibromofluoromethane	*53*		ug/l		*50*		*106*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51*		ug/l		*50*		*103*	*70-130*		
LCSD (LCSL85Y)					Prepared & Analyzed: 11-Mar-19					
Ethyl t-butyl ether	**18**		ug/l	1	20		90	70-130	0	20
cis-1,2-Dichloroethene	**21**		ug/l	1	20		105	70-130	1	20
Isopropylbenzene	**22**		ug/l	5	20		108	70-130	1	20
Freon 113	**24**		ug/l	10	20		121	70-130	3	20
Chlorobenzene	**21**		ug/l	1	20		106	70-130	0	20
m+p-Xylene	**42**		ug/l	5	40		106	70-130	1	20
Ethylbenzene	**21**		ug/l	1	20		105	70-130	0	20
Methyl Tertiary Butyl Ether	**19**		ug/l	1	20		96	70-130	1	20
Hexachlorobutadiene	**19**		ug/l	5	20		96	70-130	1	20
Ethyl ether	**17**		ug/l	5	20		83	70-130	5	20
di-Isopropyl ether	**17**		ug/l	1	20		87	70-130	3	20
Dichlorodifluoromethane	**19**		ug/l	1	20		94	70-130	2	20
Dibromomethane	**21**		ug/l	1	20		107	70-130	0	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch L190704AA - SW-846 5030C										
LCSD (LCSL85Y)					Prepared & Analyzed: 11-Mar-19					
cis-1,3-Dichloropropene	**21**		ug/l	1	20		103	70-130	1	20
Chloromethane	**16**		ug/l	1	20		80	70-130	4	20
Methylene Chloride	**20**		ug/l	1	20		102	70-130	1	20
Toluene	**21**		ug/l	1	20		104	70-130	2	20
Chloroform	**22**		ug/l	1	20		110	70-130	2	20
Chloroethane	**19**		ug/l	1	20		93	70-130	2	20
Dibromochloromethane	**21**		ug/l	1	20		103	70-130	1	20
tert-Butylbenzene	**21**		ug/l	5	20		107	70-130	3	20
Vinyl Chloride	**18**		ug/l	1	20		91	70-130	1	20
1,2-Dibromo-3-chloropropane	**20**		ug/l	5	20		100	70-130	1	20
Carbon Tetrachloride	**25**		ug/l	1	20		124	70-130	2	20
Trichlorofluoromethane	**21**		ug/l	1	20		107	70-130	4	20
Trichloroethene	**22**		ug/l	1	20		111	70-130	3	20
trans-1,4-Dichloro-2-butene	**74**		ug/l	50	100		74	70-130	4	20
trans-1,3-Dichloropropene	**20**		ug/l	1	20		100	70-130	0	20
Tetrachloroethene	**21**		ug/l	1	20		105	70-130	1	20
Tetrahydrofuran	**89**		ug/l	10	100		89	70-130	3	20
Naphthalene	**20**		ug/l	5	20		99	70-130	1	20
t-Butyl alcohol	**190**		ug/l	30	200		96	70-130	0	20
t-Amyl methyl ether	**19**		ug/l	5	20		93	70-130	4	20
Styrene	**21**		ug/l	5	20		105	70-130	1	20
sec-Butylbenzene	**21**		ug/l	5	20		106	70-130	1	20
p-Isopropyltoluene	**21**		ug/l	5	20		107	70-130	1	20
o-Xylene	**21**		ug/l	1	20		104	70-130	0	20
n-Propylbenzene	**21**		ug/l	5	20		106	70-130	1	20
n-Butylbenzene	**21**		ug/l	5	20		103	70-130	1	20
trans-1,2-Dichloroethene	**22**		ug/l	1	20		109	70-130	2	20
1,2,3-Trichlorobenzene	**20**		ug/l	5	20		99	70-130	1	20
Carbon Disulfide	**19**		ug/l	5	20		94	70-130	0	20
1,3,5-Trimethylbenzene	**22**		ug/l	5	20		108	70-130	1	20
1,2-Dichlorobenzene	**21**		ug/l	5	20		103	70-130	1	20
1,2-Dichloropropane	**20**		ug/l	1	20		98	70-130	3	20
1,2-Dichloroethane	**24**		ug/l	1	20		119	70-130	1	20
1,2-Dibromoethane	**21**		ug/l	1	20		105	70-130	3	20
1,2,4-Trimethylbenzene	**21**		ug/l	5	20		106	70-130	1	20
1,3-Dichloropropane	**20**		ug/l	1	20		101	70-130	1	20
1,2,3-Trichloropropane	**21**		ug/l	5	20		104	70-130	2	20
1,3-Dichlorobenzene	**21**		ug/l	5	20		103	70-130	0	20
1,1-Dichloropropene	**22**		ug/l	5	20		109	70-130	1	20
1,1-Dichloroethene	**23**		ug/l	1	20		113	70-130	0	20
1,1-Dichloroethane	**20**		ug/l	1	20		100	70-130	0	20
1,1,2-Trichloroethane	**21**		ug/l	1	20		106	70-130	1	20
1,1,2,2-Tetrachloroethane	**20**		ug/l	1	20		98	70-130	1	20
1,1,1-Trichloroethane	**24**		ug/l	1	20		119	70-130	3	20
1,1,1,2-Tetrachloroethane	**21**		ug/l	1	20		105	70-130	2	20
1,2,4-Trichlorobenzene	**20**		ug/l	5	20		98	70-130	1	20
Acrylonitrile	**84**		ug/l	20	100		84	70-130	1	20
Bromomethane	**18**		ug/l	1	20		89	70-130	1	20
Bromoform	**18**		ug/l	4	20		92	70-130	1	20
Bromodichloromethane	**22**		ug/l	1	20		111	70-130	0	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch L190704AA - SW-846 5030C										
LCSD (LCSL85Y)					Prepared & Analyzed: 11-Mar-19					
Bromochloromethane	**18**		ug/l	5	20		90	70-130	2	20
Bromobenzene	**21**		ug/l	5	20		103	70-130	0	20
1,3,5-Trichlorobenzene	**20**		ug/l	5	20		100	70-130	1	20
Benzene	**20**		ug/l	1	20		101	70-130	1	20
1,4-Dichlorobenzene	**21**		ug/l	5	20		103	70-130	1	20
Acetone	**130**		ug/l	20	150		88	70-130	12	20
4-Methyl-2-pentanone	**90**		ug/l	10	100		90	70-130	2	20
4-Chlorotoluene	**21**		ug/l	5	20		104	70-130	1	20
2-Hexanone	**90**		ug/l	10	100		90	70-130	2	20
2-Chlorotoluene	**21**		ug/l	5	20		103	70-130	1	20
2-Butanone	**140**		ug/l	10	150		93	70-130	3	20
2,2-Dichloropropane	**23**		ug/l	1	20		116	70-130	1	20
1,4-Dioxane	**420**		ug/l	250	500		84	70-130	7	20
Surrogate: 4-Bromofluorobenzene	*52*		ug/l		*50*		*105*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*50*		ug/l		*50*		*101*	*70-130*		
Surrogate: Toluene-d8	*50*		ug/l		*50*		*99*	*70-130*		
Surrogate: Dibromofluoromethane	*52*		ug/l		*50*		*105*	*70-130*		
LCS (LCSL86Q)					Prepared & Analyzed: 11-Mar-19					
Ethanol	**530**		ug/l	750	500		105	70-130		
LCSD (LCSL86Y)					Prepared & Analyzed: 11-Mar-19					
Ethanol	**800**	*	ug/l	750	500		160	70-130	41	20
Blank (VBLKL85B)					Prepared & Analyzed: 11-Mar-19					
p-Isopropyltoluene	< 5		ug/l	5				-		
Dibromomethane	< 1		ug/l	1				-		
Isopropylbenzene	< 5		ug/l	5				-		
Hexachlorobutadiene	< 5		ug/l	5				-		
Freon 113	< 10		ug/l	10				-		
Ethylbenzene	< 1		ug/l	1				-		
Ethyl t-butyl ether	< 1		ug/l	1				-		
Ethyl ether	< 5		ug/l	5				-		
Ethanol	< 750		ug/l	750				-		
Carbon Tetrachloride	< 1		ug/l	1				-		
Dichlorodifluoromethane	< 1		ug/l	1				-		
Methylene Chloride	< 1		ug/l	1				-		
Dibromochloromethane	< 1		ug/l	1				-		
cis-1,3-Dichloropropene	< 1		ug/l	1				-		
cis-1,2-Dichloroethene	< 1		ug/l	1				-		
Chloromethane	< 1		ug/l	1				-		
Chloroform	< 1		ug/l	1				-		
Chloroethane	< 1		ug/l	1				-		
Chlorobenzene	< 1		ug/l	1				-		
di-Isopropyl ether	< 1		ug/l	1				-		
1,1,1,2-Tetrachloroethane	< 1		ug/l	1				-		
Vinyl Chloride	< 1		ug/l	1				-		
Trichlorofluoromethane	< 1		ug/l	1				-		
Trichloroethene	< 1		ug/l	1				-		
trans-1,4-Dichloro-2-butene	< 50		ug/l	50				-		
trans-1,3-Dichloropropene	< 1		ug/l	1				-		
trans-1,2-Dichloroethene	< 1		ug/l	1				-		
Toluene	< 1		ug/l	1				-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch L190704AA - SW-846 5030C										
Blank (VBLKL85B)						Prepared & Analyzed: 11-Mar-19				
m+p-Xylene	< 5		ug/l	5				-		
Tetrachloroethene	< 1		ug/l	1				-		
Methyl Tertiary Butyl Ether	< 1		ug/l	1				-		
t-Butyl alcohol	< 30		ug/l	30				-		
t-Amyl methyl ether	< 5		ug/l	5				-		
Styrene	< 5		ug/l	5				-		
sec-Butylbenzene	< 5		ug/l	5				-		
o-Xylene	< 1		ug/l	1				-		
n-Butylbenzene	< 5		ug/l	5				-		
Naphthalene	< 5		ug/l	5				-		
tert-Butylbenzene	< 5		ug/l	5				-		
n-Propylbenzene	< 5		ug/l	5				-		
1,2,3-Trichlorobenzene	< 5		ug/l	5				-		
1,3,5-Trimethylbenzene	< 5		ug/l	5				-		
1,3,5-Trichlorobenzene	< 5		ug/l	5				-		
1,2-Dichloropropane	< 1		ug/l	1				-		
1,2-Dichloroethane	< 1		ug/l	1				-		
1,2-Dichlorobenzene	< 5		ug/l	5				-		
1,2-Dibromoethane	< 1		ug/l	1				-		
1,1,1-Trichloroethane	< 1		ug/l	1				-		
1,3-Dichlorobenzene	< 5		ug/l	5				-		
1,2,3-Trichloropropane	< 5		ug/l	5				-		
1,2-Dibromo-3-chloropropane	< 5		ug/l	5				-		
1,1-Dichloropropene	< 5		ug/l	5				-		
1,1-Dichloroethene	< 1		ug/l	1				-		
1,1-Dichloroethane	< 1		ug/l	1				-		
1,1,2-Trichloroethane	< 1		ug/l	1				-		
1,1,2,2-Tetrachloroethane	< 1		ug/l	1				-		
Carbon Disulfide	< 5		ug/l	5				-		
Tetrahydrofuran	< 10		ug/l	10				-		
1,2,4-Trimethylbenzene	< 5		ug/l	5				-		
2-Hexanone	< 10		ug/l	10				-		
Bromoform	< 4		ug/l	4				-		
Bromobenzene	< 5		ug/l	5				-		
Bromodichloromethane	< 1		ug/l	1				-		
Acetone	< 20		ug/l	20				-		
Bromochloromethane	< 5		ug/l	5				-		
4-Methyl-2-pentanone	< 10		ug/l	10				-		
Benzene	< 1		ug/l	1				-		
1,3-Dichloropropane	< 1		ug/l	1				-		
Acrylonitrile	< 20		ug/l	20				-		
2-Chlorotoluene	< 5		ug/l	5				-		
1,2,4-Trichlorobenzene	< 5		ug/l	5				-		
Bromomethane	< 1		ug/l	1				-		
2-Butanone	< 10		ug/l	10				-		
2,2-Dichloropropane	< 1		ug/l	1				-		
1,4-Dioxane	< 250		ug/l	250				-		
1,4-Dichlorobenzene	< 5		ug/l	5				-		
4-Chlorotoluene	< 5		ug/l	5				-		
Surrogate: Dibromofluoromethane	*53*		ug/l		*50*		*107*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch L190704AA - SW-846 5030C										
Blank (VBLKL85B)						Prepared & Analyzed: 11-Mar-19				
Surrogate: 4-Bromofluorobenzene	*51*		ug/l		*50*		*103*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52*		ug/l		*50*		*103*	*70-130*		
Surrogate: Toluene-d8	*49*		ug/l		*50*		*98*	*70-130*		
SW-846 8270D SIM										
Batch 19066WAJ026 - SW-846 3510C										
LCS (066WJLCSQ)						Prepared & Analyzed: 08-Mar-19				
Acenaphthene	**0.9**		ug/l	0.05	1		93	40-140		
Acenaphthylene	**0.8**		ug/l	0.05	1		79	40-140		
2-Methylnaphthalene	**0.9**		ug/l	0.05	1		88	40-140		
Anthracene	**0.9**		ug/l	0.05	1		90	40-140		
Benzo(a)anthracene	**0.9**		ug/l	0.05	1		87	40-140		
Benzo(a)pyrene	**0.9**		ug/l	0.05	1		92	40-140		
Benzo(b)fluoranthene	**1**		ug/l	0.05	1		96	40-140		
Benzo(g,h,i)perylene	**0.8**		ug/l	0.05	1		81	40-140		
Benzo(k)fluoranthene	**0.9**		ug/l	0.05	1		85	40-140		
Chrysene	**0.8**		ug/l	0.05	1		84	40-140		
Dibenz(a,h)anthracene	**0.9**		ug/l	0.05	1		94	40-140		
Fluoranthene	**0.9**		ug/l	0.05	1		89	40-140		
Fluorene	**0.9**		ug/l	0.05	1		92	40-140		
Indeno(1,2,3-cd)pyrene	**0.9**		ug/l	0.05	1		90	40-140		
Phenanthrene	**0.9**		ug/l	0.05	1		91	40-140		
Pyrene	**0.9**		ug/l	0.05	1		87	40-140		
Naphthalene	**0.9**		ug/l	0.05	1		88	40-140		
Surrogate: Benzo(a)pyrene-d12	*0.9*		ug/l		*1*		*89*	*30-130*		
Surrogate: Fluoranthene-d10	*0.9*		ug/l		*1*		*92*	*30-130*		
Surrogate: 1-Methylnaphthalene-d10	*0.9*		ug/l		*1*		*94*	*30-130*		
LCSD (P6WJLCSY)						Prepared & Analyzed: 08-Mar-19				
Benzo(k)fluoranthene	**0.9**		ug/l	0.05	1		93	40-140	9	20
Pyrene	**0.9**		ug/l	0.05	1		86	40-140	1	20
Phenanthrene	**0.9**		ug/l	0.05	1		92	40-140	2	20
Indeno(1,2,3-cd)pyrene	**0.9**		ug/l	0.05	1		93	40-140	3	20
Fluorene	**0.9**		ug/l	0.05	1		91	40-140	2	20
Fluoranthene	**0.9**		ug/l	0.05	1		90	40-140	1	20
Naphthalene	**0.9**		ug/l	0.05	1		88	40-140	0	20
Chrysene	**0.8**		ug/l	0.05	1		83	40-140	1	20
2-Methylnaphthalene	**0.9**		ug/l	0.05	1		87	40-140	1	20
Benzo(g,h,i)perylene	**0.8**		ug/l	0.05	1		83	40-140	3	20
Benzo(b)fluoranthene	**0.9**		ug/l	0.05	1		88	40-140	8	20
Benzo(a)pyrene	**0.9**		ug/l	0.05	1		91	40-140	1	20
Benzo(a)anthracene	**0.9**		ug/l	0.05	1		86	40-140	0	20
Anthracene	**0.9**		ug/l	0.05	1		92	40-140	2	20
Acenaphthylene	**0.8**		ug/l	0.05	1		79	40-140	1	20
Acenaphthene	**0.9**		ug/l	0.05	1		89	40-140	4	20
Dibenz(a,h)anthracene	**1**		ug/l	0.05	1		97	40-140	3	20
Surrogate: Benzo(a)pyrene-d12	*0.9*		ug/l		*1*		*87*	*30-130*		
Surrogate: Fluoranthene-d10	*0.9*		ug/l		*1*		*92*	*30-130*		
Surrogate: 1-Methylnaphthalene-d10	*0.9*		ug/l		*1*		*91*	*30-130*		
Blank (SBLKWJ066B)						Prepared & Analyzed: 08-Mar-19				
Benzo(b)fluoranthene	< 0.05		ug/l	0.05				-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8270D SIM										
Batch 19066WAJ026 - SW-846 3510C										
Blank (SBLKWJ066B)						Prepared & Analyzed: 08-Mar-19				
Chrysene	< 0.05		ug/l	0.05				-		
2-Methylnaphthalene	< 0.05		ug/l	0.05				-		
Acenaphthene	< 0.05		ug/l	0.05				-		
Acenaphthylene	< 0.05		ug/l	0.05				-		
Anthracene	< 0.05		ug/l	0.05				-		
Benzo(a)anthracene	< 0.05		ug/l	0.05				-		
Benzo(a)pyrene	< 0.05		ug/l	0.05				-		
Benzo(k)fluoranthene	< 0.05		ug/l	0.05				-		
Benzo(g,h,i)perylene	< 0.05		ug/l	0.05				-		
Pyrene	< 0.05		ug/l	0.05				-		
Dibenz(a,h)anthracene	< 0.05		ug/l	0.05				-		
Fluoranthene	< 0.05		ug/l	0.05				-		
Fluorene	< 0.05		ug/l	0.05				-		
Indeno(1,2,3-cd)pyrene	< 0.05		ug/l	0.05				-		
Naphthalene	< 0.05		ug/l	0.05				-		
Phenanthrene	< 0.05		ug/l	0.05				-		
Surrogate: Fluoranthene-d10	*0.9*		ug/l		*1*		*93*	*30-130*		
Surrogate: 1-Methylnaphthalene-d10	*0.9*		ug/l		*1*		*88*	*30-130*		
Surrogate: Benzo(a)pyrene-d12	*0.9*		ug/l		*1*		*87*	*30-130*		

Notes and Definitions

*	Outside of specification
K3	ICAL Verification & CCAL Verification are above QC limits; Sample result is ND
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

SCS3767 - R3

eurofins | Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- ☐ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: samsel@gmail.com

Invoice To: CDW consultants Inc
6 Huron Drive
Natic MA 01760
508-~~282~~875-2657

Project No:

Site Name: Manchester Memorial School

Location: Manchester By the Sea State: MA

Sampler(s): S. Amsel

Telephone #:

Project Mgr: Sue Cabelhan

P.O No.: _____ Quote #: _____

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=_____ 12=_____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=_____ X2=_____ X3=_____

G= Grab C= Composite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	VPH	EPH	VOCs 8260	PP13 Metals	Check if chlorinated
						Containers				Analysis				
										List Preservative Code below:				
										2	2	2	5	
SCS3767-01	CDW-MW-1	3/1/19	1400	G	GW	3	3		1	X	X	X	X	☐
-02	CDW-MW-2	3/1/19	1000	G	GW	3	3		1	X	X	X	X	☐
-03	CDW-MW-3	3/1/19	1130	G	GW	3	3		1	X	X	X	X	☐
-04	CDW-MW-4	3/1/19	1300	G	GW	3	3		1	X	X	X	X	☐
														☐
														☐
														☐
														☐
														☐
														☐

QA/QC Reporting Notes:
* additional charges may apply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: _____
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:
		3/5/19	1305
		3/5/19	15:20

Temp °C
Observed 2.0
Correction Factor 0
Corrected 2.0
IR Gun # 01

☒ EDD format:
☒ E-mail to: samsel@cdwconsultants.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

SCS3767

eurofins | Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- Standard TAT - 7 to 10 business days
- Rush TAT - Date Needed: _____

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: samsel@gmail.com
Telephone #:
Project Mgr: Sue Cabrelli

Invoice To: CDW consultants Inc
6 Huron Drive
Natick MA 01760
508-~~8~~875-2652
P.O No.: Quote #:

Project No:
Site Name: Manchester Memorial School
Location: Manchester By the Sea State: MA
Sampler(s): S. Amsell

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=_____ 12=_____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=_____ X2=_____ X3=_____

G=Grab C=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	List Preservative Code below: 2 2 2 5	Analysis: VPH	EPH	VOCs 8260	PP13 Metals	Check if chlorinated
SCS3762 01	CDW-MW-1	3/1/19	1400	G	GW	3	3		1		X	X	X	X	☐
02	CDW-MW-2	3/1/19	1000	G	GW	3	3		1		X	X	X	X	☐
03	CDW-MW-3	3/1/19	1130	G	GW	3	3		1		X	X	X	X	☐
04	CDW-MW-4	3/1/19	1300	G	GW	3	3		1		X	X	X	X	☐
05	Trip Blank					1							X		☐
															☐
															☐
															☐
															☐
															☐

TB added per client approval
BM 3/6

QA/QC Reporting Notes:
* additional charges may apply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC ☐ DQA*
☐ NSP A* ☐ NSP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other:
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:
		3/5/19	1305
		3/5/19	15:20

Temp °C: Observed 2.0 Correction Factor 0 Corrected 2.0 IR ID # 01

☒ EDD format:
☒ E-mail to: samsel@cdwconsultants.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Batch Summary

190660020A

Subcontracted Analyses

LCS20066Q
P90660AY
PBLK20066B
SC53767-01 (CDW-MW-1)
SC53767-02 (CDW-MW-2)
SC53767-03 (CDW-MW-3)
SC53767-04 (CDW-MW-4)

190660571304

Subcontracted Analyses

P001630D221132
P001630M221136
P001630R221134
P06671DBB
P06671DQQ
SC53767-01 (CDW-MW-1)
SC53767-02 (CDW-MW-2)
SC53767-03 (CDW-MW-3)
SC53767-04 (CDW-MW-4)

190661404704A

Subcontracted Analyses

P001628D220822A
P001628D220923A
P001628D221828A
P001628M220826A
P001628M220927A
P001628M221833A
P001628R220824A
P001628R220925A
P001628R221830A
P06604DBB
P06604DQQ
SC53767-01 (CDW-MW-1)
SC53767-02 (CDW-MW-2)
SC53767-02RE1 (CDW-MW-2)
SC53767-03 (CDW-MW-3)
SC53767-04 (CDW-MW-4)

19066WAJ026

Subcontracted Analyses

066WJLCSQ
P6WJLCSY
SBLKWJ066B
SC53767-01 (CDW-MW-1)
SC53767-02 (CDW-MW-2)
SC53767-03 (CDW-MW-3)
SC53767-04 (CDW-MW-4)

19070A54A

Subcontracted Analyses

BLKJBB
LCS6GQ
P90704AY
SC53767-01 (CDW-MW-1)
SC53767-02 (CDW-MW-2)
SC53767-03 (CDW-MW-3)
SC53767-04 (CDW-MW-4)

L190704AA

Subcontracted Analyses

LCSL85Q
LCSL85Y
LCSL86Q
LCSL86Y
SC53767-01 (CDW-MW-1)
SC53767-02 (CDW-MW-2)
SC53767-03 (CDW-MW-3)
SC53767-04 (CDW-MW-4)
SC53767-05 (Trip Blank)
VBLKL85B

TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1
1.1 Purpose 1
1.2 Site & Surrounding Area Description 1
2.0 SUMMARY OF PHASE I SITE ASSESSMENT 2
3.0 LIMITED SUBSURFACE INVESTIGATION 2
3.1 Topography and Hydrogeologic Features 2
3.1 Soil Borings and Monitoring Wells 2
3.2 Soil Screening and Laboratory Samples 3
3.3 Groundwater Sampling 4
3.4 Groundwater Gauging 4
4.0 NATURE AND EXTENT OF CONTAMINATION 4
4.1 Soil and Groundwater Classifications 4
4.2 Soil Sample Analysis Results 5
4.3 Groundwater Sample Analysis Results 5
5.0 CONSLUSIONS AND RECOMMENDATIONS 5
6.0 LIMITATIONS 7

FIGURES

Figure 1: Site Location Map
Figure 2: Site Plan with Sampling Locations

TABLES

Table 1: Soil Data Table
Table 2: Groundwater Data Table

APPENDICES

Appendix A: Soil Boring Logs
Appendix B: Soil Laboratory Analytical Report
Appendix C: Groundwater Laboratory Analytical Report

1.0 INTRODUCTION

CDW Consultants, Inc. (CDW), on behalf of our client, JCJ Architects, has conducted a limited subsurface investigation on the Site which is located at 43 Lincoln Street, Manchester-by-the-Sea Massachusetts (Figure 1). The investigation included the advancement of soil borings, soil sampling and analysis, installation of four monitoring wells and groundwater sampling and analysis. This investigation was conducted in February-March 2019. The investigation was conducted in order to determine the presence or likely presence of hazardous substances or petroleum products on the property in areas of concern identified in CDW's Phase I Environmental Site Assessment report from November 2017.

1.1 Purpose

The purpose of the investigation was to evaluate subsurface conditions at the Site in specific areas that will be undergoing Site and/or building demolition and new construction that may have been impacted by identified potential sources of contamination at the Site. This investigation was performed in accordance with Massachusetts General Law (MGL) Chapter 21E.

1.2 Site & Surrounding Area Description

The Site includes 11.31 acres of land. The Site contains one main 66,573 square foot school building constructed in the 1951 with two additions, one in 1954 and 1965. The site is owned by the Town of Manchester by the Sea, and is listed as Book 3507-137, Page 138.

The Site building is connected to municipal water and sewer. The Site building is heated with natural gas. The Site is bound by athletic fields and causeway brook aqueduct to the north, Summer Street to the south with residential properties beyond, Lincoln Street to the east, and north and to the west by residential properties. The Site is located on the United States Geological Survey (USGS) Marblehead North 2012 Quadrangle Map at the following approximate location and elevation:

Universal Transverse Mercator (UTM) Zone 19 Coordinates	
4715387.5	UTM Y (Meters)
4715387.5	UTM X (Meters)
Latitude/Longitude	
42.5792560 - 42° 34' 45.32''	Latitude (North)
70.7642750 - 70° 55' 51.39''	Longitude (West)
Elevation	
32	Feet above sea level

2.0 SUMMARY OF PHASE I SITE ASSESSMENT

CDW completed a Phase I Environmental Site Assessment in October 2017. The investigation conducted by CDW personnel included a review of available federal, state, and local environmental agency records to identify the presence or likely presence of Recognized Environmental Conditions (RECs), Historical Recognized Environmental Condition (HRECs) and Controlled Recognized Environmental Condition (CRECs). No CRECs were identified during the assessment. RECs and HRECs were identified during the assessment. They were:

- Potential contamination from the two 10,000-gallon fuel oil underground storage tanks removed in 1991. This represents a HREC.
- Potential Contamination from the old transformer removed from the electric room in the basement. It is unknown if what chemicals were in the transformer fluids. This represents a HREC.
- Potential contamination from the exterior pad mounted transformer. It is unknown what chemicals were in the transformer fluids.
- Potential dumping of ash from incinerator.

3.0 LIMITED SUBSURFACE INVESTIGATION

3.1 Topography and Hydrogeologic Features

The Site is located 32 feet above sea level, and the topography is level. The bedrock at the Site consists of Cape Ann Granite (Zen et. al. 1983). There are no bedrock outcrops at the Site. According to available information, the site is located within an Interim Wellhead Protection Area (IWPA) and a Zone II of a public water supply well. According to MassGIS the nearest establish wetland resource areas are located to the south, east, and west of the Site. The Site is not located within any FEMA Flood Zones (MassGIS). Surface soils at the Site consist of Udorthents Silty Loam per the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). Groundwater is located approximately 13-21 feet below ground surface. A groundwater elevation survey was performed. Groundwater gauging data points to flow in a northern direction.

3.1 Soil Borings and Monitoring Wells

On February 22, 2019, CDW advanced four (4) soil borings (MW-1, MW2, MW-3, MW-4) at the Site. The soil borings were advanced using a hollow stem auger drill rig. Soil samples were collected continuously in split spoon samples to a depth of 20 feet and classified on-site. CDW's subcontractor, Technical Drilling Services, Inc, of Sterling, MA completed the advancement of the

soil borings. CDW's subcontractor, Eurofins Spectrum Analytical, Inc. of Agawam, Massachusetts, completed the laboratory sample analyses.

The selection of the locations of the borings was based upon the potential source of contamination due to possible onsite presence of contaminants RECs and HRECs at the Site, which may be encountered during construction. The boring locations were chosen to provide coverage surrounding the most probable location of contamination on the Site. This was determined to be the basement boiler room below the kitchen where two 10,000-gallon fuel oil underground storage tanks were removed in 1991 and the old transformer. Soil boring MW-1 was drilled on the eastern part of the building, boring MW-2 on the norther part, near the transformer, MW-3 on the western part of the alcove, and MW-4 on the northern part between 1 and 2.

A two-inch diameter monitoring well was installed to a depth of 20 feet in all four borings. The wells were constructed of a 10-foot length of two-inch diameter slotted polyvinyl chloride (PVC) well screen and a solid PVC riser. Uniformly graded sand was placed around the well screen up to one foot above the screen. One foot of bentonite grout was placed above the sand, followed by native fill to grade. A protective roadway box was installed at grade. The boring/groundwater monitoring well locations are depicted on Figure 2. The soil boring logs are depicted in Appendix A.

3.2 Soil Screening and Laboratory Samples

Soil samples were collected continuously from samples from each boring and field-screened with a photoionization detector (PID) using the headspace method. The soil headspace screening results are provided on the boring logs in Appendix A. The PID is an instrument used to quantify total organic volatiles (TOVs) that ionized at or below 10.6 electron volts (a range which includes gasoline and some fuel oil organics). The detection limit for the instrument is 1 parts per million (ppm). One soil sample from each of four (4) borings was selected and submitted for laboratory analysis for extractable petroleum hydrocarbons (EPH), volatile organic compounds (VOCs), volatile petroleum hydrocarbons (VPH), semi volatile organic compounds (SVOCs) and priority pollutant 13 (PP13) metals. One soil sample from each boring at the depth that exhibited the highest field screening reading or field evidence of contamination was collected. If no field instrumentation readings were registered during drilling, the soil sample was collected from the vadose zone. The samples were preserved by ice, refrigeration and methanol, as appropriate, prior to laboratory analysis, and delivered to the laboratory accompanied by an appropriate chain of custody record.

The field-screening results indicated detectable levels of TOVs in both borings ranging from non-detect to 0.2 ppmv. These detections are very low and were not consistently detected in any area of the borings. The PID headspace analysis results are summarized in the boring logs in Appendix A.

3.3 Groundwater Sampling

On March 1, 2019, CDW collected groundwater samples from the newly installed monitoring wells (MW-1, MW2, MW-3, MW-4). All wells were allowed to equilibrate for at least one week prior to sampling. The wells were purged and sampled using a disposable polyethylene bailers. At least three well volumes were purged from the well prior to collecting the samples. The groundwater collected was turbid with an abundance of silt. The samples were submitted to CDW's subcontractor, Spectrum Analytical, for analysis for EPH, VOCs, VPH, SVOCs and dissolved PP13. The samples for metals analyses were filtered in the field prior to preservation.

3.4 Groundwater Gauging

On March 1, 2019, newly installed monitoring wells were gauged for depth to groundwater and the presence of non-aqueous phase liquid (NAPL) using an oil/water interface probe. Measurements were made to the top of the PVC riser. No NAPL was observed in the well. Depth to groundwater was measured at approximately 14 feet below the ground surface. Groundwater from all four monitoring wells was observed to flow directly downgradient to the Causeway Brook which flows through the north edge of the Site. Depth to groundwater measurements are provided in Table 2.

4.0 NATURE AND EXTENT OF CONTAMINATION

4.1 Soil and Groundwater Classifications

The selection of a soil classification of RCS-1, as defined in the Massachusetts Contingency Plan (MCP), 310 CMR 40.0361(1)(a), for the comparison of Reportable Concentrations, is applicable to the Site because:

- All the soil sample locations are on an elementary school property.

The selection of a groundwater classification of RCGW-1, as defined in the MCP, 310 CMR 40.0362, for the purpose of identifying Reportable Concentrations, was based upon the following criterion:

- Groundwater at the northern part of the Site where all four wells are located, is in a MassDEP Wellhead protection area (Zone I) because of its proximity to a public water supply and recharge area.

4.2 Soil Sample Analysis Results

Laboratory analysis of soil samples revealed detectable concentrations of EPH compounds, SVOCs, VOCs and metals. All compounds detected are reported below MCP RCS-1 Reportable Concentrations. It is important to note that the laboratory detection limits for VOC analytes and one metal were above the MCP RCS-1 standard. The following analytes were affected: bromodichloromethane, bromoform, bromomethane, chloroform, chloromethane, cis-1,2-dichloroethene, cis-1,3-dichloropropene, dibromochloromethane, 1,4-dioxane, 1,2-dichloroethane, 1,2-dichloropropane, 4-methyl-2-pentanone, 1,1,1,2-tetrachloroethane, 1,1,1-trichloroethane, 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane and thallium. The reporting limit (RL) for an individual compound using WSC-CAM-II A is dependent on the concentration of the lowest non-zero standard in the initial calibration, analyzed under identical conditions as the sample, with adjustments made for the sample size, extraction concentration factor, percent solids, dilution factors, etc., as required. The CAM RLs for WSC-CAM-II target analytes are 100-200 µg/kg (wet weight) for high-level soil/sediment samples. Therefore, the above listed compounds RLs are below the target RL. Since no other VOCs were detected in soil and there is no source on property, it is reasonable to assume that these compounds are not likely to be present. Furthermore, there were no PID readings, or olfactory-visual indication of contamination. Analytical test results from all other compounds were below their respective laboratory detection limits. None of these results exceeded the applicable MCP Reportable Concentrations. The results of all soil analyses are summarized in Table 1. A copy of the laboratory analytical report are included in Appendix B.

4.3 Groundwater Sample Analysis Results

Groundwater samples were analyzed for EPH, VPH, VOCs, SVOCs and PP13 metals. No VPH, EPH or VOCs were detected in groundwater above laboratory detection limits. SVOC compounds benzo (b) fluoranthene, chrysene, floranthene, phenanthrene and pyrene were detected above laboratory detection limits, but below MCP GW-1 Reportable Concentrations. The dissolved metals arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, thallium and zinc were detected in all four groundwater samples. The detected concentrations of metals are above the applicable Reportable Concentration for GW-1 classified groundwater. The results of groundwater analyses are included in Table 2. The laboratory analytical report is included in Appendix C.

5.0 CONSLUSIONS AND RECOMMENDATIONS

The Site study area for this Phase II Investigation consists of a portion of the Manchester Memorial Elementary School in Manchester by the Sea, Massachusetts. This investigation focused on subsurface testing in areas of the school property that are proposed for new construction. Based upon the results of subsurface soil and groundwater testing and site observations, CDW is presenting our

conclusions and a summary of the key observations upon which these conclusions are based. Based upon our research, subsurface testing, and site observations, CDW is presenting our conclusions and a summary of the key observations upon which these conclusions are based. From this study, CDW has made the following observations:

On February 22, 2019, CDW advanced four (4) soil borings (MW-1, MW2, MW-3, MW-4) at the Site. A two-inch diameter monitoring well was installed to a depth of 20 feet in all four borings. Soil samples were collected continuously from samples from each boring and field-screened with a PID for TOVs. One soil sample from each of four (4) borings was selected and submitted for laboratory analysis for EPH, VOCs, VPH, SVOCs and PP13. Laboratory analysis of soil samples revealed detectable concentrations of EPH compounds, SVOCs, VOCs and metals. All compounds detected are reported below MCP RCS-1 Reportable Concentrations.

On March 1, 2019, CDW collected groundwater samples from the newly installed monitoring wells (MW-1, MW2, MW-3, MW-4). The samples were submitted for laboratory analysis of EPH, VOCs, VPH, SVOCs and dissolved PP13. No VPH, EPH, VOCs or SVOCs were detected in groundwater above MCP GW-1 Reportable Concentrations. The detected concentrations of metals in all four wells are above the applicable Reportable Concentration for GW-1 classified groundwater.

Based upon the Phase II Investigation, CDW has the following recommendations:

Soil

The soils on the site contain low levels of EPH compounds, SVOCs, VOCs and metals. All compounds detected are reported below MCP RCS-1 Reportable Concentrations. These soils are therefore not regulated by the MCP, and are not considered a remediation waste once excavated. The soils may be re-used on-site without restriction. However, reuse of these soils off-site needs to be evaluated such that the quality of the exported Site soils is acceptable to the destination site pursuant to MassDEP regulations and policies.

The sampling and analytical program was specific to one or more areas of the Site where potential contamination could or occur. As such, contingency plans should be in place to manage any potentially contaminated soil that may be encountered during building demolition or new construction. CDW recommends that a contingency be factored into soil excavation planning to allow for evaluation, testing and disposal of any impacted soils discovered during construction that were not discovered during these limited investigation activities. Historical research does not guarantee that all former Site use, storage and disposal practices have been properly recorded and/or are presently known. If evidence of a release to soil and/or groundwater is encountered, measures must be conducted to properly manage those conditions.

Groundwater

The detected concentrations of metals in all four wells are above the applicable Reportable Concentration for GW-1 classified groundwater, and represent a 120-day reporting condition to the Massachusetts Department of Environmental Protection (MassDEP). However, due to the high levels of turbidity encountered in the groundwater, CDW recommends resampling the four monitoring wells within the 120 day reporting window, to determine if the metals concentrations are an anomaly due to turbidity.

6.0 LIMITATIONS

This investigation was intended to provide a general assessment of current subsurface conditions and was limited in nature and scope. The findings are limited to the information available at the time of the investigation and the scope of services as defined. The results of the limited subsurface exploration performed on this Site provide the basis for the findings and are representative of conditions at the time of the investigation. No other conclusions, interpretations, or recommendations are contained or implied in this report other than those expressed. Also, CDW makes no warranty, expressed or implied, on the accuracy of the work and information completed by others and upon which CDW has relied to prepare this report. No other use of this report is warranted without the written consent of CDW Consultants, Inc.

FIGURES



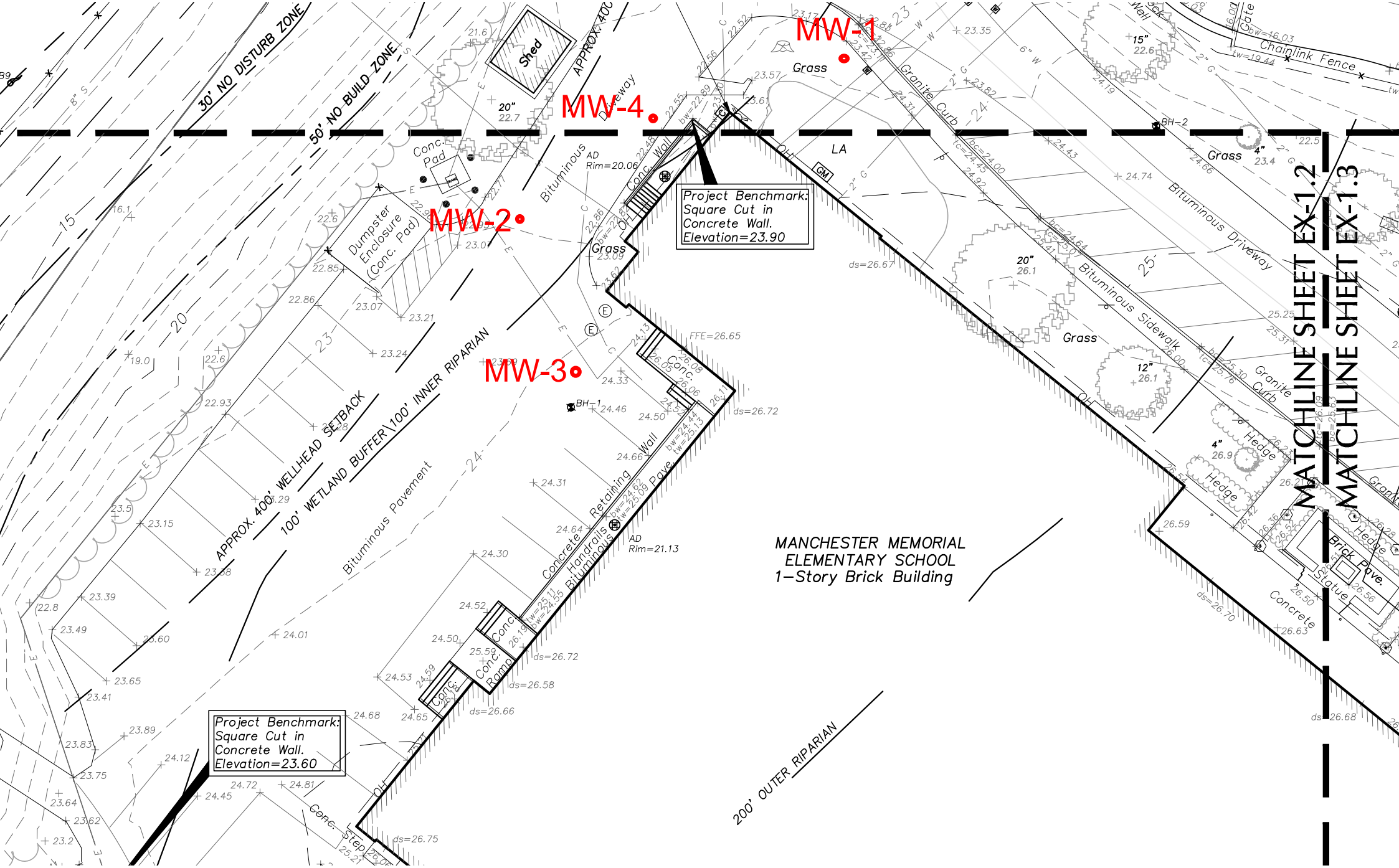
CDW CONSULTANTS, INC.

Manchester Memorial Elementary School
43 Lincoln Street
Manchester-by-the-Sea, MA 01944

Figure 1: Site Location Map

SOURCE: MASSGIS

SCALE: 1 inch = 2,083 feet


MW-1
MW-2
MW-3
MW-4
30' NO DISTURB ZONE
50' NO BUILD ZONE
APPROX. 400' WELLHEAD SETBACK
100' WETLAND BUFFER\100' INNER RIPARIAN
200' OUTER RIPARIAN
Project Benchmark: Square Cut in Concrete Wall. Elevation=23.90
Project Benchmark: Square Cut in Concrete Wall. Elevation=23.60
MANCHESTER MEMORIAL ELEMENTARY SCHOOL
1-Story Brick Building
MATCHLINE SHEET EX-1.2
MATCHLINE SHEET EX-1.3
Shed
Dumpster Enclosure (Conc. Pad)
Conc. Pad
Bituminous Driveway
Bituminous Pavement
Bituminous Sidewalk
Granite Curb
Chainlink Fence
Gate
Concrete Retaining Wall
Concrete Handrails
Conc. Ramp
Conc. Steps
Brick Pave.
Statue
Hedge
Grass
LA
GM
OH
BH-1
BH-2
AD Rim=20.06
AD Rim=21.13
FFE=26.65

TABLES

Table 1
Soil Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCS1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53666-01**	**SC53666-02**	**SC53666-03**	**SC53666-04**
Matrix:		**Soil**	**Soil**	**Soil**	**Soil**
Sampled:		**22-Feb-19**	**22-Feb-19**	**22-Feb-19**	**22-Feb-19**
MADEP EPH (mg/kg)					
2-Methylnaphthalene	0.7	< 0.63	< 0.55	< 0.54	< 0.55
Acenaphthene	4	< 0.63	< 0.55	< 0.54	< 0.55
Acenaphthylene	1	< 0.63	< 0.55	< 0.54	< 0.55
Anthracene	1000	< 0.63	< 0.55	< 0.54	< 0.55
Benzo(a)anthracene	7	< 0.63	< 0.55	< 0.54	< 0.55
Benzo(a)pyrene	2	< 0.63	< 0.55	< 0.54	< 0.55
Benzo(b)fluoranthene	7	< 0.63	< 0.55	< 0.54	< 0.55
Benzo(g,h,i)perylene	1000	< 0.63	< 0.55	< 0.54	< 0.55
Benzo(k)fluoranthene	70	< 0.63	< 0.55	< 0.54	< 0.55
C11 to C22 Aromatics	1000	< 15	< 13	< 13	< 13
C19 to C36 Aliphatics	3000	< 15	< 13	< 13	22
C9 to C18 Aliphatics	1000	< 7.6	< 6.7	< 6.5	< 6.6
Chrysene	70	< 0.63	< 0.55	< 0.54	< 0.55
Dibenzo(a,h)anthracene	0.7	< 0.63	< 0.55	< 0.54	< 0.55
Fluoranthene	1000	< 0.63	< 0.55	< 0.54	< 0.55
Fluorene	1000	< 0.63	< 0.55	< 0.54	< 0.55
Indeno(1,2,3-cd)pyrene	7	< 0.63	< 0.55	< 0.54	< 0.55
Naphthalene	4	< 0.63	< 0.55	< 0.54	< 0.55
Phenanthrene	10	< 0.63	< 0.55	< 0.54	< 0.55
Pyrene	1000	< 2.5	< 2.2	< 2.2	< 2.2
Unadjusted C11 - C22 Aromatics	NA	< 15	< 13	< 13	< 13
MADEP VPH (mg/kg)					
Benzene	2	< 0.3	< 0.1	< 0.1	< 0.09
C5-C8 Aliphatic Hydrocarbons	100	< 13.0	< 7.29	< 6.20	< 4.30
C9-C10 Aromatic Hydrocarbons	100	< 13.0	< 7.29	< 6.20	< 4.30
C9-C12 Aliphatic Hydrocarbons	1000	< 13.0	< 7.29	< 6.20	< 4.30
Ethylbenzene	40	< 0.3	< 0.1	< 0.1	< 0.09
m,p-Xylenes	300	< 0.3	< 0.1	< 0.1	< 0.09
Methyl t-butyl ether	0.1	< 0.3	< 0.1	< 0.1	< 0.09
Naphthalene	4	< 0.8	< 0.4	< 0.4	< 0.3
o-Xylene	500	< 0.3	< 0.1	< 0.1	< 0.09
Toluene	30	< 0.3	< 0.1	< 0.1	< 0.09
Unadjusted C5-C8 Aliphatics	NA	< 13.0	< 7.29	< 6.20	< 4.30
Unadjusted C9-C12 Aliphatics	NA	< 13.0	< 7.29	< 6.20	< 4.30
SM 2540 G %Moisture Calc (%)					
Moisture	NA	24.1	12.7	10.4	10.3

Table 1
Soil Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCS1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53666-01**	**SC53666-02**	**SC53666-03**	**SC53666-04**
Matrix:		**Soil**	**Soil**	**Soil**	**Soil**
Sampled:		**22-Feb-19**	**22-Feb-19**	**22-Feb-19**	**22-Feb-19**
SW-846 6010C (mg/kg)					
Antimony	20	< 5.19	4.11	< 4.69	< 3.90
Arsenic	20	9.96	9.56	9.99	8.65
Beryllium	90	1.38	0.811	0.594	1.05
Cadmium	70	< 0.519	< 0.390	< 0.469	< 0.390
Chromium	100	33.9	17	19.9	21.6
Copper	1000	20.9	< 1.56	< 1.88	15.2
Lead	200	12.5	7.74	7.46	12.8
Nickel	600	21	16.1	14.7	15.2
Selenium	400	< 5.19	< 3.90	< 4.69	< 3.90
Silver	100	< 1.04	< 0.779	< 0.938	< 0.780
Thallium	8	< 15.6	< 11.7	< 14.1	< 11.7
Zinc	1000	110	80.6	64	78.3
SW-846 7471B (mg/kg)					
Mercury	20	< 0.167	< 0.153	< 0.137	< 0.139
SW-846 8260C (ug/kg)					
1,1,1,2-Tetrachloroethane	100	< 660	< 570	< 370	< 170
1,1,1-Trichloroethane	30000	< 660	< 570	< 370	< 170
1,1,2,2-Tetrachloroethane	5	< 660	< 570	< 370	< 170
1,1,2-Trichloroethane	100	< 660	< 570	< 370	< 170
1,1-Dichloroethane	400	< 660	< 570	< 370	< 170
1,1-Dichloroethene	3000	< 660	< 570	< 370	< 170
1,1-Dichloropropene	NA	< 660	< 570	< 370	< 170
1,2,3-Trichlorobenzene	NA	< 1300	< 1100	< 730	< 330
1,2,3-Trichloropropane	100000	< 660	< 570	< 370	< 170
1,2,4-Trichlorobenzene	2000	< 1300	< 1100	< 730	< 330
1,2,4-Trimethylbenzene	1000000	< 660	< 570	< 370	< 170
1,2-Dibromo-3-chloropropane	10000	< 660	< 570	< 370	< 170
1,2-Dibromoethane	100	< 660	< 570	< 370	< 170
1,2-Dichlorobenzene	9000	< 660	< 570	< 370	< 170
1,2-Dichloroethane	100	< 660	< 570	< 370	< 170
1,2-Dichloropropane	100	< 660	< 570	< 370	< 170
1,3,5-Trichlorobenzene	NA	< 1100	< 910	< 590	< 270
1,3,5-Trimethylbenzene	10000	< 660	< 570	< 370	< 170
1,3-Dichlorobenzene	3000	< 660	< 570	< 370	< 170
1,3-Dichloropropane	500000	< 660	< 570	< 370	< 170
1,4-Dichlorobenzene	700	< 660	< 570	< 370	< 170

Table 1
Soil Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCS1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53666-01**	**SC53666-02**	**SC53666-03**	**SC53666-04**
Matrix:		**Soil**	**Soil**	**Soil**	**Soil**
Sampled:		**22-Feb-19**	**22-Feb-19**	**22-Feb-19**	**22-Feb-19**
1,4-Dioxane	200	< 33000	< 28000	< 18000	< 8300
2,2-Dichloropropane	NA	< 660	< 570	< 370	< 170
2-Butanone	4000	< 1300	< 1100	< 730	< 330
2-Chlorotoluene	100000	< 660	< 570	< 370	< 170
2-Hexanone	100000	< 1300	< 1100	< 730	< 330
4-Chlorotoluene	NA	< 660	< 570	< 370	< 170
4-Methyl-2-pentanone	400	< 1300	< 1100	< 730	< 330
Acetone	6000	< 2600	< 2300	< 1500	< 670
Acrylonitrile	100000	< 2600	< 2300	< 1500	< 670
Benzene	2000	< 660	< 570	< 370	< 170
Bromobenzene	100000	< 660	< 570	< 370	< 170
Bromochloromethane	NA	< 660	< 570	< 370	< 170
Bromodichloromethane	100	< 660	< 570	< 370	< 170
Bromoform	100	< 1300	< 1100	< 730	< 330
Bromomethane	500	< 660	< 570	< 370	< 170
Carbon Disulfide	100000	< 660	< 570	< 370	< 170
Carbon Tetrachloride	5000	< 660	< 570	< 370	< 170
Chlorobenzene	1000	< 660	< 570	< 370	< 170
Chloroethane	100000	< 660	< 570	< 370	< 170
Chloroform	200	< 660	< 570	< 370	< 170
Chloromethane	100000	< 660	< 570	< 370	< 170
cis-1,2-Dichloroethene	300	< 660	< 570	< 370	< 170
cis-1,3-Dichloropropene	10	< 660	< 570	< 370	< 170
Dibromochloromethane	5	< 660	< 570	< 370	< 170
Dibromomethane	500000	< 660	< 570	< 370	< 170
Dichlorodifluoromethane	1000000	< 660	< 570	< 370	< 170
di-Isopropyl ether	100000	< 660	< 570	< 370	< 170
Ethanol	100000	< 99000	< 85000	< 55000	< 25000
Ethyl Ether	100000	< 660	< 570	< 370	< 170
Ethyl t-butyl ether	NA	< 660	< 570	< 370	< 170
Ethylbenzene	40000	< 660	< 570	< 370	< 170
Freon 113	NA	< 1300	< 1100	< 730	< 330
Hexachlorobutadiene	30000	< 1300	< 1100	< 730	< 330
Isopropylbenzene	1000000	< 660	< 570	< 370	< 170
m+p-Xylene	300000	< 660	< 570	< 370	< 170
Methyl Tertiary Butyl Ether	100	< 660	< 570	< 370	< 170
Methylene Chloride	100	< 660	< 570	< 370	< 170
Naphthalene	4000	< 660	< 570	< 370	< 170
n-Butylbenzene	NA	< 1100	< 910	< 590	< 270
n-Propylbenzene	100000	< 660	< 570	< 370	< 170

Table 1
Soil Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCS1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53666-01**	**SC53666-02**	**SC53666-03**	**SC53666-04**
Matrix:		**Soil**	**Soil**	**Soil**	**Soil**
Sampled:		**22-Feb-19**	**22-Feb-19**	**22-Feb-19**	**22-Feb-19**
o-Xylene	500000	< 660	< 570	< 370	< 170
p-Isopropyltoluene	100000	< 660	< 570	< 370	< 170
sec-Butylbenzene	NA	< 660	< 570	< 370	< 170
Styrene	3000	< 660	< 570	< 370	< 170
t-Amyl methyl ether	NA	< 660	< 570	< 370	< 170
t-Butyl alcohol	100000	< 13000	< 11000	< 7300	< 3300
tert-Butylbenzene	100000	< 660	< 570	< 370	< 170
Tetrachloroethene	1000	< 660	< 570	< 370	< 170
Tetrahydrofuran	500000	< 1100	< 910	< 590	< 270
Toluene	30000	< 660	< 570	< 370	< 170
trans-1,2-Dichloroethene	1000	< 660	< 570	< 370	< 170
trans-1,3-Dichloropropene	10	< 660	< 570	< 370	< 170
trans-1,4-Dichloro-2-butene	10000	< 6600	< 5700	< 3700	< 1700
Trichloroethene	300	< 660	< 570	< 370	< 170
Trichlorofluoromethane	1000000	< 660	< 570	< 370	< 170
Vinyl Chloride	700	< 660	< 570	< 370	< 170
SW-846 8270D (ug/kg)					
1,1'-Biphenyl	50	< 48	< 42	< 40	< 41
1,2,4,5-Tetrachlorobenzene	1000000	< 48	< 42	< 40	< 41
1,2,4-Trichlorobenzene	2000	< 66	< 57	< 55	< 56
1,2-Dichlorobenzene	9000	< 66	< 57	< 55	< 56
1,2-Diphenylhydrazine	50000	< 57	< 49	< 48	< 48
1,3-Dichlorobenzene	3000	< 48	< 42	< 40	< 41
1,4-Dichlorobenzene	700	< 48	< 42	< 40	< 41
1-Methylnaphthalene	NA	< 22	< 19	< 18	< 19
2,3,4,6-Tetrachlorophenol	50000	< 220	< 190	< 180	< 190
2,4,5-Trichlorophenol	4000	< 88	< 76	< 73	< 74
2,4,6-Trichlorophenol	700	< 75	< 65	< 62	< 63
2,4-Dichlorophenol	700	< 57	< 49	< 48	< 48
2,4-Dimethylphenol	700	< 88	< 76	< 73	< 74
2,4-Dinitrophenol	3000	< 1300	< 1100	< 1100	< 1100
2,4-Dinitrotoluene	700	< 220	< 190	< 180	< 190
2,6-Dinitrotoluene	100000	< 66	< 57	< 55	< 56
2-Chloronaphthalene	1000000	< 44	< 38	< 37	< 37
2-Chlorophenol	700	< 48	< 42	< 40	< 41
2-Methylnaphthalene	700	< 44	< 38	< 37	< 37
2-Methylphenol	500000	< 88	< 76	< 73	< 74
2-Nitroaniline	NA	< 66	< 57	< 55	< 56
2-Nitrophenol	100000	< 75	< 65	< 62	< 63

Table 1
Soil Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCS1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		SC53666-01	SC53666-02	SC53666-03	SC53666-04
Matrix:		Soil	Soil	Soil	Soil
Sampled:		22-Feb-19	22-Feb-19	22-Feb-19	22-Feb-19
3,3'-Dichlorobenzidine	3000	< 440	< 380	< 370	< 370
3-Nitroaniline	NA	< 220	< 190	< 180	< 190
4,6-Dinitro-2-methylphenol	50000	< 660	< 570	< 550	< 560
4-Bromophenyl-phenylether	100000	< 66	< 57	< 55	< 56
4-Chloro-3-methylphenol	1000000	< 66	< 57	< 55	< 56
4-Chloroaniline	1000	< 220	< 190	< 180	< 190
4-Chlorophenyl-phenylether	1000000	< 57	< 49	< 48	< 48
4-Methylphenol	500000	< 44	< 38	< 37	< 37
4-Nitroaniline	1000000	< 220	< 190	< 180	< 190
4-Nitrophenol	100000	< 660	< 570	< 550	< 560
Acenaphthene	4000	< 22	< 19	< 18	< 19
Acenaphthylene	1000	< 22	< 19	< 18	< 19
Acetophenone	1000000	< 66	< 57	< 55	< 56
Aniline	1000000	< 660	< 570	< 550	< 560
Anthracene	1000000	< 22	< 19	< 18	< 19
Atrazine	100000	< 570	< 490	< 480	< 480
Benzaldehyde	100000	< 220	< 190	< 180	< 190
Benzidine	10000	< 1300	< 1100	< 1100	< 1100
Benzo(a)anthracene	7000	< 22	< 19	< 18	< 19
Benzo(a)pyrene	2000	< 22	< 19	< 18	< 19
Benzo(b)fluoranthene	7000	27.3	< 19	< 18	< 19
Benzo(g,h,i)perylene	1000000	< 22	< 19	< 18	< 19
Benzo(k)fluoranthene	70000	< 22	< 19	< 18	< 19
Benzoic acid	1000000	< 660	< 570	< 550	< 560
Benzyl alcohol	NA	< 660	< 570	< 550	< 560
bis(2-Chloroethoxy)methane	500000	< 48	< 42	< 40	< 41
bis(2-Chloroethyl)ether	700	< 66	< 57	< 55	< 56
bis(2-Chloroisopropyl)ether	700	< 57	< 49	< 48	< 48
bis(2-Ethylhexyl)phthalate	90000	< 220	1130	260	< 190
Butylbenzylphthalate	100000	< 220	< 190	< 180	< 190
Caprolactam	NA	< 220	< 190	< 180	< 190
Carbazole	NA	< 48	< 42	< 40	< 41
Chrysene	70000	< 22	< 19	< 18	< 19
Dibenz(a,h)anthracene	700	< 22	< 19	< 18	< 19
Dibenzofuran	100000	< 48	< 42	< 40	< 41
Diethylphthalate	10000	< 220	< 190	< 180	< 190
Dimethylphthalate	700	< 220	< 190	< 180	< 190
Di-n-butylphthalate	50000	< 220	< 190	< 180	< 190
Di-n-octylphthalate	1000000	< 220	< 190	< 180	< 190
Fluoranthene	1000000	36.2	< 19	< 18	< 19

Table 1
Soil Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCS1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53666-01**	**SC53666-02**	**SC53666-03**	**SC53666-04**
Matrix:		**Soil**	**Soil**	**Soil**	**Soil**
Sampled:		**22-Feb-19**	**22-Feb-19**	**22-Feb-19**	**22-Feb-19**
Fluorene	1000000	< 22	< 19	< 18	< 19
Hexachlorobenzene	700	< 22	< 19	< 18	< 19
Hexachlorobutadiene	30000	< 100	< 88	< 84	< 85
Hexachlorocyclopentadiene	50000	< 660	< 570	< 550	< 560
Hexachloroethane	700	< 220	< 190	< 180	< 190
Indeno(1,2,3-cd)pyrene	7000	< 22	< 19	< 18	< 19
Isophorone	100000	< 48	< 42	< 40	< 41
Naphthalene	4000	< 22	< 19	< 18	< 19
Nitrobenzene	500000	< 88	< 76	< 73	< 74
N-Nitrosodimethylamine	50000	< 220	< 190	< 180	< 190
N-Nitroso-di-n-propylamine	50000	< 66	< 57	< 55	< 56
N-Nitrosodiphenylamine	100000	< 48	< 42	< 40	< 41
Pentachloronitrobenzene	100000	< 220	< 190	< 180	< 190
Pentachlorophenol	3000	< 220	< 190	< 180	< 190
Phenanthrene	10000	25.4	< 19	< 18	< 19
Phenol	1000	< 48	< 42	< 40	< 41
Pyrene	1000000	31.8	< 19	< 18	< 19
Pyridine	500000	< 220	< 190	< 180	< 190

A Value with a < in front of = Not Detected above detection limit of value listed.
RCS-1 = Massachusetts Contingency Plan RCS-1 Reportable Concentrations

Table 2
Groundwater Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCGW-1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53767-01**	**SC53767-02**	**SC53767-03**	**SC53767-04**
Matrix:		**Ground Water**	**Ground Water**	**Ground Water**	**Ground Water**
Sampled:		**1-Mar-19**	**1-Mar-19**	**1-Mar-19**	**1-Mar-19**
Depth to Groundwater (feet):		15.9	14.4	16.2	16.41
MADEP EPH (ug/l)					
C11 to C22 Aromatics	200	< 400	< 400	< 400	< 400
C19 to C36 Aliphatics	14000	< 500	< 500	< 500	< 500
C9 to C18 Aliphatics	700	< 300	< 300	< 300	< 300
Unadjusted C11 - C22 Aromatics	NA	< 400	< 400	< 400	< 400
MADEP VPH (ug/l)					
Benzene	5	< 5.00	< 5.00	< 5.00	< 5.00
C5-C8 Aliphatic Hydrocarbons	300	< 100	< 100	< 100	< 100
C9-C10 Aromatic Hydrocarbons	200	< 100	< 100	< 100	< 100
C9-C12 Aliphatic Hydrocarbons	700	< 100	< 100	< 100	< 100
Ethylbenzene	700	< 5.00	< 5.00	< 5.00	< 5.00
m,p-Xylenes	5000	< 10.0	< 10.0	< 10.0	< 10.0
Methyl t-butyl ether	70	< 5.00	< 5.00	< 5.00	< 5.00
Naphthalene	140	< 5.00	< 5.00	< 5.00	< 5.00
o-Xylene	6000	< 5.00	< 5.00	< 5.00	< 5.00
Toluene	1000	< 5.00	< 5.00	< 5.00	< 5.00
Unadjusted C5-C8 Aliphatics	NA	< 100	< 100	< 100	< 100
Unadjusted C9-C12 Aliphatics	NA	< 100	< 100	< 100	< 100
SW-846 6020A (mg/l)					
Antimony	0.006	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Arsenic	0.01	**0.323**	**0.402**	**0.398**	**0.562**
Beryllium	0.004	**0.0796**	**0.0239**	**0.0288**	**0.0797**
Cadmium	0.004	**0.0129**	<0.0100	**0.0102**	**0.009**
Chromium	0.1	**0.273**	**0.359**	**0.278**	**1.07**
Copper	10	**0.559**	0.844	**0.659**	**1.01**
Lead	0.01	**0.335**	**0.498**	**0.363**	**0.898**
Nickel	0.1	**0.389**	**0.539**	**0.506**	**0.847**
Selenium	0.05	**0.0055**	**0.003**	**0.0053**	**0.0101**
Silver	0.007	< 0.00050	<0.0050	< 0.00050	**0.00085**
Thallium	0.002	**0.002**	**0.0016**	**0.0013**	**0.0048**
Zinc	0.9	**4.13**	**2.78**	**2.94**	**6.67**
SW-846 7470A (mg/l)					
Mercury	0.002	< 0.00020	< 0.00020	< 0.00020	0.0014
SW-846 8260C (ug/l)					
1,1,1,2-Tetrachloroethane	5	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	200	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	2	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	5	< 1	< 1	< 1	< 1
1,1-Dichloroethane	70	< 1	< 1	< 1	< 1
1,1-Dichloroethene	7	< 1	< 1	< 1	< 1
1,1-Dichloropropene	NA	< 5	< 5	< 5	< 5
1,2,3-Trichlorobenzene	NA	< 5	< 5	< 5	< 5
1,2,3-Trichloropropane	1000	< 5	< 5	< 5	< 5
1,2,4-Trichlorobenzene	70	< 5	< 5	< 5	< 5
1,2,4-Trimethylbenzene	10000	< 5	< 5	< 5	< 5
1,2-Dibromo-3-chloropropane	100	< 5	< 5	< 5	< 5
1,2-Dibromoethane	0.02	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	600	< 5	< 5	< 5	< 5
1,2-Dichloroethane	5	< 1	< 1	< 1	< 1
1,2-Dichloropropane	3	< 1	< 1	< 1	< 1
1,3,5-Trichlorobenzene	NA	< 5	< 5	< 5	< 5
1,3,5-Trimethylbenzene	100	< 5	< 5	< 5	< 5
1,3-Dichlorobenzene	100	< 5	< 5	< 5	< 5

Table 2
Groundwater Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCGW-1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53767-01**	**SC53767-02**	**SC53767-03**	**SC53767-04**
Matrix:		**Ground Water**	**Ground Water**	**Ground Water**	**Ground Water**
Sampled:		**1-Mar-19**	**1-Mar-19**	**1-Mar-19**	**1-Mar-19**
1,3-Dichloropropane	5000	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	5	< 5	< 5	< 5	< 5
1,4-Dioxane	0.3	< 250	< 250	< 250	< 250
2,2-Dichloropropane	NA	< 1	< 1	< 1	< 1
2-Butanone	4000	< 10	< 10	< 10	< 10
2-Chlorotoluene	1000	< 5	< 5	< 5	< 5
2-Hexanone	1000	< 10	< 10	< 10	< 10
4-Chlorotoluene	NA	< 5	< 5	< 5	< 5
4-Methyl-2-pentanone	350	< 10	< 10	< 10	< 10
Acetone	6300	< 20	< 20	< 20	< 20
Acrylonitrile	1000	< 20	< 20	< 20	< 20
Benzene	5	< 1	< 1	< 1	< 1
Bromobenzene	1000	< 5	< 5	< 5	< 5
Bromochloromethane	NA	< 5	< 5	< 5	< 5
Bromodichloromethane	3	< 1	< 1	< 1	< 1
Bromoform	4	< 4	< 4	< 4	< 4
Bromomethane	7	< 1	< 1	< 1	< 1
Carbon Disulfide	1000	< 5	< 5	< 5	< 5
Carbon Tetrachloride	2	< 1	< 1	< 1	< 1
Chlorobenzene	100	< 1	< 1	< 1	< 1
Chloroethane	1000	< 1	< 1	< 1	< 1
Chloroform	50	< 1	< 1	< 1	< 1
Chloromethane	1000	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	70	< 1	< 1	< 1	< 1
cis-1,3-Dichloropropene	0.5	< 1	< 1	< 1	< 1
Dibromochloromethane	2	< 1	< 1	< 1	< 1
Dibromomethane	5000	< 1	< 1	< 1	< 1
Dichlorodifluoromethane	10000	< 1	< 1	< 1	< 1
di-Isopropyl ether	1000	< 1	< 1	< 1	< 1
Ethanol	1000	< 750	< 750	< 750	< 750
Ethyl ether	1000	< 5	< 5	< 5	< 5
Ethyl t-butyl ether	NA	< 1	< 1	< 1	< 1
Ethylbenzene	700	< 1	< 1	< 1	< 1
Freon 113	NA	< 10	< 10	< 10	< 10
Hexachlorobutadiene	0.6	< 5	< 5	< 5	< 5
Isopropylbenzene	10000	< 5	< 5	< 5	< 5
m+p-Xylene	5000	< 5	< 5	< 5	< 5
Methyl Tertiary Butyl Ether	70	< 1	< 1	< 1	< 1
Methylene Chloride	5	< 1	< 1	< 1	< 1
Naphthalene	140	< 5	< 5	< 5	< 5
n-Butylbenzene	NA	< 5	< 5	< 5	< 5
n-Propylbenzene	1000	< 5	< 5	< 5	< 5
o-Xylene	6000	< 1	< 1	< 1	< 1
p-Isopropyltoluene	1000	< 5	< 5	< 5	< 5
sec-Butylbenzene	NA	< 5	< 5	< 5	< 5
Styrene	100	< 5	< 5	< 5	< 5
t-Amyl methyl ether	NA	< 5	< 5	< 5	< 5
t-Butyl alcohol	1000	< 30	< 30	< 30	< 30
tert-Butylbenzene	1000	< 5	< 5	< 5	< 5
Tetrachloroethene	5	< 1	< 1	< 1	< 1
Tetrahydrofuran	5000	< 10	< 10	< 10	< 10
Toluene	1000	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	80	< 1	< 1	< 1	< 1
trans-1,3-Dichloropropene	0.5	< 1	< 1	< 1	< 1
trans-1,4-Dichloro-2-butene	100	< 50	< 50	< 50	< 50
Trichloroethene	5	< 1	< 1	< 1	< 1
Trichlorofluoromethane	10000	< 1	< 1	< 1	< 1
Vinyl Chloride	2	< 1	< 1	< 1	< 1

Table 2
Groundwater Analytical Results
Manchester Memorial Elementary School

Client ID:	MA RCGW-1	CDW-MW-1	CDW-MW-2	CDW-MW-3	CDW-MW-4
Lab ID:		**SC53767-01**	**SC53767-02**	**SC53767-03**	**SC53767-04**
Matrix:		**Ground Water**	**Ground Water**	**Ground Water**	**Ground Water**
Sampled:		**1-Mar-19**	**1-Mar-19**	**1-Mar-19**	**1-Mar-19**
SW-846 8270D SIM (ug/l)					
2-Methylnaphthalene	10	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthene	20	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	30	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	30	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	1	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.2	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b)fluoranthene	1	< 0.5	< 0.5	< 0.5	0.7
Benzo(g,h,i)perylene	20	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	1	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	2	< 0.5	< 0.5	< 0.5	0.5
Dibenz(a,h)anthracene	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	90	< 0.5	< 0.5	< 0.5	0.8
Fluorene	30	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	140	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	40	< 0.5	< 0.5	< 0.5	0.6
Pyrene	20	< 0.5	< 0.5	< 0.5	0.8

A Value with a < in front of = Not Detected above detection limit of value listed.
GW-1 = Massachusetts Contingency Plan GW-1 Reportable Concentrations
Bold = Analyte exceeds GW-1 Reportable Concentrations

APPENDIX A

TEST BORING LOG

CDW Consultants, Inc.

Project No.:	1838.0	Client:	JCJ Architects	BORING ID:	**MW-1**
Total Depth:	20	Location:	Manchester Memorial	Logged By:	SA
Date Started:	2/22/2019	Completed:	2/22/2019	Contractor:	
Casing ID:		Ground El.		Sheet #:	
Remarks:					

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0							
-1		9/5/19/16	0-2'	18''	0.0	Medium dense dark brown fine SAND to lose pink and light grey GRAVEL and fine sand	
-2							
-3							
-4							
-5							
-6		5/4/6/8	5-7'	18''	0.2	Medium brown sandy SILT. Wet (perched aquifer)	
-7							
-8							
-9							
-10		5/15/20/16	10-12'	12''	0.1	Dense brown silty coarse SAND and coarse white/grey/pink GRAVEL	
-11							
-12							
-13							
-14							
-15							
-16		9/9/13/12	15-17'	4''	0.1	Little recovery, loose tan silty SAND and course gravel. Water table at 14 feet.	
-17							
-18							
-19							
-20							

Groundwater Measurements

Date	Time	Depth to Groundwater	Measuring Point
2/22/2019	900	14ft	

Summary

Overburden:

Rock:

Well Depth: 20'

Boring:

TEST BORING LOG

CDW Consultants, Inc.

Project No.:	1838.0	Client:	JCJ Architects	BORING ID:	**MW-2**
Total Depth:	20	Location:	Manchester Memorial	Logged By:	SA
Date Started:	2/22/2019	Completed:	2/22/2019	Contractor:	
Casing ID:		Ground El.		Sheet #:	
Remarks:					

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0							
-1		10/4/5/6	0-2'	9"	0.0	Asphalt, brown/red loose SAND and fine GRAVEL	
-2							
-3							
-4							
-5							
-6		3/3/3/16	5-7'	12"	0.0	Soft brown coarse SAND and fine gravel to stiff grey/brown SILT and coarse gravel	
-7							
-8							
-9							
-10		10/12/15/29	10-12'	1"	0	Almost no recovered soil, rock stuck in spoon. Dense dark brown medium SAND and fine gravel	
-11							
-12							
-13							
-14							
-15							
-16			15-17'	12''	0.10	Loose red and brown course silty SAND with some fine gravel Water Table at 14ft	
-17							
-18							
-19							
-20							

Groundwater Measurements				Summary
Date	Time	Depth to Groundwater	Measuring Point	Overburden:
2/22/2019	1000	14ft		Rock:
				Well Depth: 20'
				Boring:

TEST BORING LOG

CDW Consultants, Inc.

Project No.:	1838.0	Client:	JCJ Architects	BORING ID:	**MW-3**
Total Depth:	20	Location:	Manchester Memorial	Logged By:	SA
Date Started:	2/22/2019	Completed:	2/22/2019	Contractor:	
Casing ID:		Ground El.		Sheet #:	
Remarks:					

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0							
-1		11/10/8/5	0-2'	6"	0.1	Asphalt, loose dark brown/red silty SAND and coarse pink/grey/white GRAVEL	
-2							
-3							
-4							
-5							
-6		3/5/5/7	5-7'	24"	0.0	Medium grey/brown SILT and medium GRAVEL with some coarse sand and red mud	
-7							
-8							
-9							
-10		13/15/13	10-12'	22"	0		
						Medium dense, red, yellow, white and brown coarse to medium grained dry SAND with some coarse gravel	
-11							
-12							
-13							
-14							
-15							
-16		5/6/17/17	15-17'	12''	0.10	Medium dense, very coarse SAND and small to large gravel, all covered in red/brown SILT. Water table at 14 feet	
-17							
-18							
-19							
-20							

Groundwater Measurements				Summary
Date	Time	Depth to Groundwater	Measuring Point	Overburden:
2/22/2019	1130	14ft		Rock:
				Well Depth: 20'
				Boring:

TEST BORING LOG

CDW Consultants, Inc.

Project No.:	1838.0	Client:	JCJ Architects	BORING ID:	**MW-4**
Total Depth:	20	Location:	Manchester Memorial	Logged By:	SA
Date Started:	2/22/2019	Completed:	2/22/2019	Contractor:	
Casing ID:		Ground El.		Sheet #:	
Remarks:					

Depth (Feet)	Sample				PID Hdspace (ppmv)	Sample Description	Well Diagram
	Type & Num.	Blows per 6 Inches	Depth Range	Recovery			
0							
-1		6/9/16/24	0-2'	5"	0.1	Medium dense, white fine SAND to brown silty sand	
-2							
-3							
-4							
-5							
-6		5/7/12/15	5-7'	13"	0.0	Loose dark brown medium SAND, to red-brown silty sand with medium to coarse gravel	
-7							
-8							
-9							
-10		3/3/3/3	10-12'	20"	0.1	Loose, coarse and medium brown SAND to soft brown and gray sandy SILT	
-11							
-12							
-13							
-14							
-15							
-16		5/6/6/6	15-17'	1"	0.00	No recovery, groundwater at 14ft	
-17							
-18							
-19							
-20							

Groundwater Measurements				Summary
Date	Time	Depth to Groundwater	Measuring Point	Overburden:
2/22/2019	1330	14ft		Rock:
				Well Depth: 20'
				Boring:

APPENDIX B

☑ Final Report
☐ Revised Report

Report Date:
13-Mar-19 11:54

Laboratory Report
SC53666

CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760
Attn: Susan Cahalan-Roach

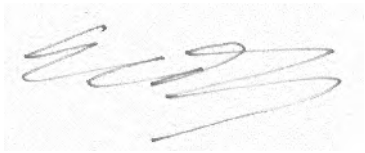
Project: Manchester Memorial School - MA
Project #: [none]

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393

Authorized by:

Erica Troy
Quality Services Manager



Eurofins Spectrum Analytical holds primary certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 56 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. is currently accredited for the specific method or analyte indicated. Please refer to our 'Quality' web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Eurofins Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC53666

Project: Manchester Memorial School - MA

Project Number: [none]

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC53666-01	CDW-MW-1	Soil	22-Feb-19 09:00	26-Feb-19 15:59
SC53666-02	CDW-MW-2	Soil	22-Feb-19 10:00	26-Feb-19 15:59
SC53666-03	CDW-MW-3	Soil	22-Feb-19 11:30	26-Feb-19 15:59
SC53666-04	CDW-MW-4	Soil	22-Feb-19 13:30	26-Feb-19 15:59
SC53666-05	Trip Blank	Trip Blank	25-Feb-19 00:00	26-Feb-19 15:59

The following outlines the condition of all VPH samples contained within this report upon laboratory receipt.

Matrices	Soil		
Containers	✓ Satisfactory		
Sample Preservative	**Aqueous** (acid preserved)	✓ N/A pH≤2 pH>2	
	Soil or Sediment	N/A Samples not received in Methanol	ml Methanol/g soil 1:1 +/-25% Other
		Samples received in Methanol: covering soil/sediment not covering soil/sediment	
		Samples received in air-tight container	
Temperature	Received on ice ✓ Received at 4 ± 2 ºC		

Were all QA/QC procedures followed as required by the VPH method? *Yes*
Were any significant modifications made to the VPH method as specified in section 11.3? *No*
Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

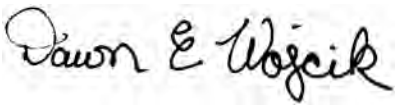
The following outlines the condition of all EPH samples contained within this report upon laboratory receipt.

Matrices	Soil
Containers	✓ Satisfactory
Aqueous Preservative	✓ N/A pH≤2 pH>2 pH adjusted to <2 in lab
Temperature	Received on ice ✓ Received at 4 ± 2 ºC

Were all QA/QC procedures followed as required by the EPH method? *Yes*
Were any significant modifications made to the EPH method as specified in Section 11.3? *No*
Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Authorized by:



Dawn E. Wojcik
Laboratory Director

MassDEP Analytical Protocol Certification Form

Laboratory Name: Eurofins Spectrum Analytical, Inc.	**Project #:** [none]
Project Location: Manchester Memorial School - MA	**RTN:**
This form provides certifications for the following data set:	SC53666-01 through SC53666-05
Matrices: Soil Trip Blank	

CAM Protocol

✓ 8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	✓ MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	✓ MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9012 Total Cyanide/PAC CAM VI A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	✓ Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes ✓ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	✓ Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	✓ Yes No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	✓ Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?	✓ Yes No

Responses to questions G, H and I below are required for "Presumptive Certainty" status

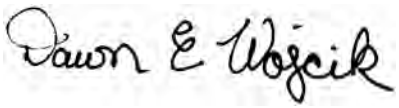
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	Yes ✓ No

***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes ✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes ✓ No

All negative responses are addressed in a case narrative on the cover page of this report.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.



Dawn E. Wojcik
Laboratory Director
Date: 3/13/2019

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 2.6 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

All VOC soils samples submitted and analyzed in methanol will have a minimum dilution factor of 50. This is the minimum amount of solvent allowed on the instrumentation without causing interference. Soils are run on a manual load instrument. 100ug of sample (MEOH) is spiked into 5ml DI water along with the surrogate and added directly onto the instrument. Additional dilution factors may be required to keep analyte concentration within instrument calibration range.

General Comments:
See the Laboratory Sample Analysis Record section of the Analysis Report for the method references .
All QC met criteria unless otherwise noted in an Analysis Specific Comment below .
Refer to the QC Summary for specific values and acceptance criteria.
Project specific QC samples are not included in this data set.
Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.
Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below .
The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.
Analysis Specific Comments:
SW-846 8260C, GC/MS Volatiles
Sample #s: 9993886, 9993887, 9993888, 9993889
The MA MCP required reporting limit could not be
attained using the laboratory LOQ.
Batch #: Q190641AA (Sample number(s): 9993886-9993889)
The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Acetone
SW-846 8270D, GC/MS Semivolatiles
Sample #s: 9993886, 9993887, 9993888, 9993889
The project QA/QC requirements were not met. The percent recovery
for 4-Chloroaniline was outside of the acceptance limits in the
LCS/LCSD associated with this sample as noted on the QC summary.
The failure is within the 20% failure rate allowed by CT RCP,
therefore the data is reported.
Batch #: 19063SLC026 (Sample number(s): 9993886-9993889)
The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window:
4-Chloroaniline
MA EPH 5/04, GC Petroleum Hydrocarbons
Sample #s: 9993886, 9993887, 9993888, 9993889
Target analytes were detected in the method blank associated with the
samples as noted on the QC Summary.
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is
outside the QC acceptance limits as noted on the QC Summary. The following
action was taken:
The sample was re-extracted and the LCSD is again outside of the
acceptance limits. The data is reported from both trials.
Batch #: 190590017A (Sample number(s): 9993886-9993889)
The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: C19 to C36 Aliphatics
The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window:
Naphthalene
Batch #: 190640020A (Sample number(s): 9993886-9993889 UNSPK: 9993887)
The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window:
Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene,
Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene,
Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, 2-Methylnaphthalene, C9 to C18
Aliphatics, C19 to C36 Aliphatics, Unadjusted C11 - C22 Aromatics
The relative percent difference(s) for the following analyte(s) in the LCS/LCSD were outside acceptance windows: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene,
Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene,
Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene,
2-Methylnaphthalene, C9 to C18 Aliphatics, C19 to C36 Aliphatics, Unadjusted C11 - C22 Aromatics
The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window:
Naphthalene
The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) LCSD
SW-846 6010C, Metals
Sample #s: 9993886, 9993887, 9993888, 9993889
The MA MCP analyte list requirement was not met for metals .

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

MADEP EPH

Laboratory Control Samples:

190590017A BS

MADEP EPH

Laboratory Control Samples:

190590017A BS

C19 to C36 Aliphatics percent recovery 277 (40-140) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

CDW-MW-1
CDW-MW-2
CDW-MW-3
CDW-MW-4

LCS17059Q

Outside of specification

C19 to C36 Aliphatics

Spikes:

P993887M321822A *Source: SC53666-02*

Outside of specification

Naphthalene

P90597AY

Outside of specification

C19 to C36 Aliphatics
Naphthalene

P90640AY

Outside of specification

1-Chloro-octadecane
2-Methylnaphthalene
Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
C19 to C36 Aliphatics
C9 to C18 Aliphatics
Chrysene
Dibenzo(a,h)anthracene
Fluoranthene
Fluorene
Indeno(1,2,3-cd)pyrene
Naphthalene
Orthoterphenyl
Phenanthrene
Pyrene
Unadjusted C11 - C22 Aromatics

SW-846 8260C

Laboratory Control Samples:

LCSQ25Q

SW-846 8260C

Laboratory Control Samples:

LCSQ25Q

Outside of specification

Acetone

Q190641AA BS

Acetone percent recovery 136 (70-130) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

CDW-MW-1
CDW-MW-2
CDW-MW-3
CDW-MW-4

SW-846 8270D

Laboratory Control Samples:

063LCLCSQ

Outside of specification

4-Chloroaniline

19063SLC026 BS

4-Chloroaniline percent recovery 32 (40-140) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

CDW-MW-1
CDW-MW-2
CDW-MW-3
CDW-MW-4

Sample Acceptance Check Form

Client:	CDW Consultants, Inc.
Project:	Manchester Memorial School - MA / [none]
Work Order:	SC53666
Sample(s) received on:	2/26/2019

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Summary of Hits

Lab ID: SC53666-01 **Client ID:** CDW-MW-1

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Moisture	24.1		0.50	%	SM 2540 G %Moisture Calc
Arsenic	9.96		5.19	mg/kg	SW-846 6010C
Beryllium	1.38		0.519	mg/kg	SW-846 6010C
Chromium	33.9		1.56	mg/kg	SW-846 6010C
Copper	20.9		2.07	mg/kg	SW-846 6010C
Lead	12.5		1.56	mg/kg	SW-846 6010C
Nickel	21.0		1.04	mg/kg	SW-846 6010C
Zinc	110		2.07	mg/kg	SW-846 6010C
Benzo(b)fluoranthene	27.3		22	ug/kg	SW-846 8270D
Fluoranthene	36.2		22	ug/kg	SW-846 8270D
Phenanthrene	25.4		22	ug/kg	SW-846 8270D
Pyrene	31.8		22	ug/kg	SW-846 8270D

Lab ID: SC53666-02 **Client ID:** CDW-MW-2

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Moisture	12.7		0.50	%	SM 2540 G %Moisture Calc
Antimony	4.11		3.90	mg/kg	SW-846 6010C
Arsenic	9.56		3.90	mg/kg	SW-846 6010C
Beryllium	0.811		0.390	mg/kg	SW-846 6010C
Chromium	17.0		1.17	mg/kg	SW-846 6010C
Lead	7.74		1.17	mg/kg	SW-846 6010C
Nickel	16.1		0.779	mg/kg	SW-846 6010C
Zinc	80.6		1.56	mg/kg	SW-846 6010C
bis(2-Ethylhexyl)phthalate	1130		190	ug/kg	SW-846 8270D

Lab ID: SC53666-03 **Client ID:** CDW-MW-3

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Moisture	10.4		0.50	%	SM 2540 G %Moisture Calc
Arsenic	9.99		4.69	mg/kg	SW-846 6010C
Beryllium	0.594		0.469	mg/kg	SW-846 6010C
Chromium	19.9		1.41	mg/kg	SW-846 6010C
Lead	7.46		1.41	mg/kg	SW-846 6010C
Nickel	14.7		0.938	mg/kg	SW-846 6010C
Zinc	64.0		1.88	mg/kg	SW-846 6010C
bis(2-Ethylhexyl)phthalate	260		180	ug/kg	SW-846 8270D

Lab ID: SC53666-04 **Client ID:** CDW-MW-4

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
C19 to C36 Aliphatics	22		13	mg/kg	MADEP EPH
Moisture	10.3		0.50	%	SM 2540 G %Moisture Calc
Arsenic	8.65		3.90	mg/kg	SW-846 6010C
Beryllium	1.05		0.390	mg/kg	SW-846 6010C
Chromium	21.6		1.17	mg/kg	SW-846 6010C
Copper	15.2		1.56	mg/kg	SW-846 6010C
Lead	12.8		1.17	mg/kg	SW-846 6010C
Nickel	15.2		0.780	mg/kg	SW-846 6010C
Zinc	78.3		1.56	mg/kg	SW-846 6010C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.63		mg/kg	0.63	0.13	1	MADEP EPH	28-Feb-19 20:25	02-Mar-19 06:34	M-PA009	0590017	
83-32-9	Acenaphthene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 15		mg/kg	15	15	1	"	"	"	"	"	
	C19 to C36 Aliphatics	< 15		mg/kg	15	15	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 7.6		mg/kg	7.6	7.6	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.63		mg/kg	0.63	0.13	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.5		mg/kg	2.5	0.76	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 15		mg/kg	15	15	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*55*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*84*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*70*			*40-140 %*			"	"	"	"	"	
Re-analysis of Subcontracted Analyses Prepared by method SW-846 3546													
91-57-6	2-Methylnaphthalene	< 0.64		mg/kg	0.64	0.13	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 13:02	M-PA009	0640020	
83-32-9	Acenaphthene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 15		mg/kg	15	15	1	"	"	"	"	"	
	C19 to C36 Aliphatics	< 15		mg/kg	15	15	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 7.7		mg/kg	7.7	7.7	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1	[none]	Soil	22-Feb-19 09:00	26-Feb-19
SC53666-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
Re-analysis of Subcontracted Analyses													
86-73-7	Fluorene	< 0.64		mg/kg	0.64	0.13	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 13:02	M-PA009	0640020	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.64		mg/kg	0.64	0.13	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.6		mg/kg	2.6	0.77	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 15		mg/kg	15	15	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*62*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*84*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*64*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 0.3		mg/kg	0.3	0.1	98.36	MADEP VPH	22-Feb-19 09:00	06-Mar-19 19:31	M-PA009	9065A54/	
	C5-C8 Aliphatic Hydrocarbons	< 13.0		mg/kg	13.0	6.48	98.36	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 13.0		mg/kg	13.0	6.48	98.36	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 13.0		mg/kg	13.0	6.48	98.36	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.3		mg/kg	0.3	0.1	98.36	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 0.3		mg/kg	0.3	0.1	98.36	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 0.3		mg/kg	0.3	0.1	98.36	"	"	"	"	"	
91-20-3	Naphthalene	< 0.8		mg/kg	0.8	0.4	98.36	"	"	"	"	"	
95-47-6	o-Xylene	< 0.3		mg/kg	0.3	0.1	98.36	"	"	"	"	"	
108-88-3	Toluene	< 0.3		mg/kg	0.3	0.1	98.36	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 13.0		mg/kg	13.0	6.48	98.36	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 13.0		mg/kg	13.0	6.48	98.36	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*97*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*98*			*70-130 %*			"	"	"	"	"	
Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
	Moisture	**24.1**		%	0.50	0.50	1	SM 2540 G %Moisture Calc	01-Mar-19 09:39	01-Mar-19 09:39	M-PA009	6082000	
Subcontracted Analyses Prepared by method SW-846 3050B													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-36-0	Antimony	< 5.19		mg/kg	5.19	1.76	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:23	M-PA009	5814049	
7440-38-2	Arsenic	**9.96**		mg/kg	5.19	1.24	1	"	"	"	"	"	
7440-41-7	Beryllium	**1.38**		mg/kg	0.519	0.104	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.519		mg/kg	0.519	0.104	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1 SC53666-01	[none]	Soil	22-Feb-19 09:00	26-Feb-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-47-3	Chromium	**33.9**		mg/kg	1.56	0.218	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:23	M-PA009	05814049	
7440-50-8	Copper	**20.9**		mg/kg	2.07	0.519	1	"	"	"	"	"	
7439-92-1	Lead	**12.5**		mg/kg	1.56	0.622	1	"	"	"	"	"	
7440-02-0	Nickel	**21.0**		mg/kg	1.04	0.218	1	"	"	"	"	"	
7782-49-2	Selenium	< 5.19		mg/kg	5.19	1.56	1	"	"	"	"	"	
7440-22-4	Silver	< 1.04		mg/kg	1.04	0.415	1	"	"	"	"	"	
7440-28-0	Thallium	< 15.6		mg/kg	15.6	4.67	5	"	"	"	"	"	
7440-66-6	Zinc	**110**		mg/kg	2.07	0.415	1	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	< 0.167		mg/kg	0.167	0.0391	1	SW-846 7471B	28-Feb-19 09:10	01-Mar-19 06:39	M-PA009	05910638	
Subcontracted Analyses													
Prepared by method SW-846 5035A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 660		ug/kg	660	66	100	SW-846 8260C	22-Feb-19 09:00	05-Mar-19 12:56	M-PA009	190641A	
71-55-6	1,1,1-Trichloroethane	< 660		ug/kg	660	79	100	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 660		ug/kg	660	53	100	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 660		ug/kg	660	66	100	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 660		ug/kg	660	66	100	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 660		ug/kg	660	66	100	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 660		ug/kg	660	66	100	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 1300		ug/kg	1300	660	100	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 660		ug/kg	660	79	100	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 1300		ug/kg	1300	660	100	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 660		ug/kg	660	66	100	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 660		ug/kg	660	53	100	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 660		ug/kg	660	53	100	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 660		ug/kg	660	66	100	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 660		ug/kg	660	79	100	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 660		ug/kg	660	66	100	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 1100		ug/kg	1100	530	100	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 660		ug/kg	660	66	100	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 660		ug/kg	660	66	100	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 660		ug/kg	660	53	100	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 660		ug/kg	660	53	100	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 33000		ug/kg	33000	4900	100	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 660		ug/kg	660	66	100	"	"	"	"	"	
78-93-3	2-Butanone	< 1300		ug/kg	1300	130	100	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 660		ug/kg	660	53	100	"	"	"	"	"	
591-78-6	2-Hexanone	< 1300		ug/kg	1300	130	100	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 660		ug/kg	660	53	100	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 1300		ug/kg	1300	130	100	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1	[none]	Soil	22-Feb-19 09:00	26-Feb-19
SC53666-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
67-64-1	Acetone	< 2600		ug/kg	2600	790	100	SW-846 8260C	22-Feb-19 09:00	05-Mar-19 12:56	M-PA009	190641A	
107-13-1	Acrylonitrile	< 2600		ug/kg	2600	110	100	"	"	"	"	"	
71-43-2	Benzene	< 660		ug/kg	660	66	100	"	"	"	"	"	
108-86-1	Bromobenzene	< 660		ug/kg	660	53	100	"	"	"	"	"	
74-97-5	Bromochloromethane	< 660		ug/kg	660	79	100	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 660		ug/kg	660	53	100	"	"	"	"	"	
75-25-2	Bromoform	< 1300		ug/kg	1300	660	100	"	"	"	"	"	
74-83-9	Bromomethane	< 660		ug/kg	660	92	100	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 660		ug/kg	660	79	100	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 660		ug/kg	660	66	100	"	"	"	"	"	
108-90-7	Chlorobenzene	< 660		ug/kg	660	66	100	"	"	"	"	"	
75-00-3	Chloroethane	< 660		ug/kg	660	130	100	"	"	"	"	"	
67-66-3	Chloroform	< 660		ug/kg	660	79	100	"	"	"	"	"	
74-87-3	Chloromethane	< 660		ug/kg	660	79	100	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 660		ug/kg	660	66	100	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 660		ug/kg	660	53	100	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 660		ug/kg	660	53	100	"	"	"	"	"	
74-95-3	Dibromomethane	< 660		ug/kg	660	66	100	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 660		ug/kg	660	79	100	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 660		ug/kg	660	66	100	"	"	"	"	"	
64-17-5	Ethanol	< 99000		ug/kg	99000	37000	100	"	"	"	"	"	
60-29-7	Ethyl Ether	< 660		ug/kg	660	130	100	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 660		ug/kg	660	66	100	"	"	"	"	"	
100-41-4	Ethylbenzene	< 660		ug/kg	660	53	100	"	"	"	"	"	
76-13-1	Freon 113	< 1300		ug/kg	1300	79	100	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 1300		ug/kg	1300	660	100	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 660		ug/kg	660	53	100	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 660		ug/kg	660	130	100	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 660		ug/kg	660	66	100	"	"	"	"	"	
75-09-2	Methylene Chloride	< 660		ug/kg	660	260	100	"	"	"	"	"	
91-20-3	Naphthalene	< 660		ug/kg	660	260	100	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 1100		ug/kg	1100	400	100	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 660		ug/kg	660	53	100	"	"	"	"	"	
95-47-6	o-Xylene	< 660		ug/kg	660	53	100	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 660		ug/kg	660	260	100	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 660		ug/kg	660	260	100	"	"	"	"	"	
100-42-5	Styrene	< 660		ug/kg	660	40	100	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 660		ug/kg	660	110	100	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 13000		ug/kg	13000	2000	100	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 660		ug/kg	660	110	100	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 660		ug/kg	660	66	100	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 1100		ug/kg	1100	130	100	"	"	"	"	"	
108-88-3	Toluene	< 660		ug/kg	660	79	100	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 660		ug/kg	660	66	100	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1	[none]	Soil	22-Feb-19 09:00	26-Feb-19
SC53666-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
10061-02-6	trans-1,3-Dichloropropene	< 660		ug/kg	660	40	100	SW-846 8260C	22-Feb-19 09:00	05-Mar-19 12:56	M-PA009	190641A	
110-57-6	trans-1,4-Dichloro-2-butene	< 6600		ug/kg	6600	920	100	"	"	"	"	"	
79-01-6	Trichloroethene	< 660		ug/kg	660	66	100	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 660		ug/kg	660	92	100	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 660		ug/kg	660	79	100	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*97*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*89*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*91*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*90*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
92-52-4	1,1'-Biphenyl	< 48		ug/kg	48	22	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:10	M-PA009	063SLC0	
95-94-3	1,2,4,5-Tetrachlorobenzene	< 48		ug/kg	48	22	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 66		ug/kg	66	31	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 66		ug/kg	66	22	1	"	"	"	"	"	
122-66-7	1,2-Diphenylhydrazine	< 57		ug/kg	57	26	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 48		ug/kg	48	22	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 48		ug/kg	48	22	1	"	"	"	"	"	
90-12-0	1-Methylnaphthalene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
58-90-2	2,3,4,6-Tetrachlorophenol	< 220		ug/kg	220	88	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 88		ug/kg	88	40	1	"	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	< 75		ug/kg	75	35	1	"	"	"	"	"	
120-83-2	2,4-Dichlorophenol	< 57		ug/kg	57	26	1	"	"	"	"	"	
105-67-9	2,4-Dimethylphenol	< 88		ug/kg	88	40	1	"	"	"	"	"	
51-28-5	2,4-Dinitrophenol	< 1300		ug/kg	1300	440	1	"	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	< 220		ug/kg	220	88	1	"	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	< 66		ug/kg	66	31	1	"	"	"	"	"	
91-58-7	2-Chloronaphthalene	< 44		ug/kg	44	8.8	1	"	"	"	"	"	
95-57-8	2-Chlorophenol	< 48		ug/kg	48	22	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 44		ug/kg	44	4.4	1	"	"	"	"	"	
95-48-7	2-Methylphenol	< 88		ug/kg	88	22	1	"	"	"	"	"	
88-74-4	2-Nitroaniline	< 66		ug/kg	66	22	1	"	"	"	"	"	
88-75-5	2-Nitrophenol	< 75		ug/kg	75	35	1	"	"	"	"	"	
91-94-1	3,3'-Dichlorobenzidine	< 440		ug/kg	440	130	1	"	"	"	"	"	
99-09-2	3-Nitroaniline	< 220		ug/kg	220	88	1	"	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	< 660		ug/kg	660	310	1	"	"	"	"	"	
101-55-3	4-Bromophenyl-phenylether	< 66		ug/kg	66	31	1	"	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	< 66		ug/kg	66	31	1	"	"	"	"	"	
106-47-8	4-Chloroaniline	< 220		ug/kg	220	44	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1	[none]	Soil	22-Feb-19 09:00	26-Feb-19
SC53666-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7005-72-3	4-Chlorophenyl-phenylether	< 57		ug/kg	57	26	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:10	M-PA009	063SLC0	
106-44-5	4-Methylphenol	< 44		ug/kg	44	22	1	"	"	"	"	"	
100-01-6	4-Nitroaniline	< 220		ug/kg	220	88	1	"	"	"	"	"	
100-02-7	4-Nitrophenol	< 660		ug/kg	660	220	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
98-86-2	Acetophenone	< 66		ug/kg	66	22	1	"	"	"	"	"	
62-53-3	Aniline	< 660		ug/kg	660	220	1	"	"	"	"	"	
120-12-7	Anthracene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
1912-24-9	Atrazine	< 570		ug/kg	570	260	1	"	"	"	"	"	
100-52-7	Benzaldehyde	< 220		ug/kg	220	88	1	"	"	"	"	"	
92-87-5	Benzidine	< 1300		ug/kg	1300	440	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 22		ug/kg	22	8.8	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	**27.3**		ug/kg	22	4.4	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
65-85-0	Benzoic acid	< 660		ug/kg	660	220	1	"	"	"	"	"	
100-51-6	Benzyl alcohol	< 660		ug/kg	660	220	1	"	"	"	"	"	
111-91-1	bis(2-Chloroethoxy)methane	< 48		ug/kg	48	22	1	"	"	"	"	"	
111-44-4	bis(2-Chloroethyl)ether	< 66		ug/kg	66	31	1	"	"	"	"	"	
39638-32-9	bis(2-Chloroisopropyl)ether	< 57		ug/kg	57	26	1	"	"	"	"	"	
117-81-7	bis(2-Ethylhexyl)phthalate	< 220		ug/kg	220	88	1	"	"	"	"	"	
85-68-7	Butylbenzylphthalate	< 220		ug/kg	220	88	1	"	"	"	"	"	
105-60-2	Caprolactam	< 220		ug/kg	220	44	1	"	"	"	"	"	
86-74-8	Carbazole	< 48		ug/kg	48	22	1	"	"	"	"	"	
218-01-9	Chrysene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 22		ug/kg	22	8.8	1	"	"	"	"	"	
132-64-9	Dibenzofuran	< 48		ug/kg	48	22	1	"	"	"	"	"	
84-66-2	Diethylphthalate	< 220		ug/kg	220	88	1	"	"	"	"	"	
131-11-3	Dimethylphthalate	< 220		ug/kg	220	88	1	"	"	"	"	"	
84-74-2	Di-n-butylphthalate	< 220		ug/kg	220	88	1	"	"	"	"	"	
117-84-0	Di-n-octylphthalate	< 220		ug/kg	220	88	1	"	"	"	"	"	
206-44-0	Fluoranthene	**36.2**		ug/kg	22	4.4	1	"	"	"	"	"	
86-73-7	Fluorene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
118-74-1	Hexachlorobenzene	< 22		ug/kg	22	8.8	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 100		ug/kg	100	48	1	"	"	"	"	"	
77-47-4	Hexachlorocyclopentadiene	< 660		ug/kg	660	260	1	"	"	"	"	"	
67-72-1	Hexachloroethane	< 220		ug/kg	220	44	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 22		ug/kg	22	4.4	1	"	"	"	"	"	
78-59-1	Isophorone	< 48		ug/kg	48	22	1	"	"	"	"	"	
91-20-3	Naphthalene	< 22		ug/kg	22	8.8	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1 SC53666-01	[none]	Soil	22-Feb-19 09:00	26-Feb-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
98-95-3	Nitrobenzene	< 88		ug/kg	88	35	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:10	M-PA009	063SLC0	
62-75-9	N-Nitrosodimethylamine	< 220		ug/kg	220	88	1	"	"	"	"	"	
621-64-7	N-Nitroso-di-n-propylamine	< 66		ug/kg	66	31	1	"	"	"	"	"	
86-30-6	N-Nitrosodiphenylamine	< 48		ug/kg	48	22	1	"	"	"	"	"	
82-68-8	Pentachloronitrobenzene	< 220		ug/kg	220	88	1	"	"	"	"	"	
87-86-5	Pentachlorophenol	< 220		ug/kg	220	88	1	"	"	"	"	"	
85-01-8	Phenanthrene	**25.4**		ug/kg	22	4.4	1	"	"	"	"	"	
108-95-2	Phenol	< 48		ug/kg	48	22	1	"	"	"	"	"	
129-00-0	Pyrene	**31.8**		ug/kg	22	4.4	1	"	"	"	"	"	
110-86-1	Pyridine	< 220		ug/kg	220	88	1	"	"	"	"	"	
Surrogate recoveries:													
118-79-6	*2,4,6-Tribromophenol*	*71*			*30-130 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*81*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*82*			*30-130 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*80*			*30-130 %*			"	"	"	"	"	
13127-88-3	*Phenol-d6*	*83*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-d14*	*93*			*30-130 %*			"	"	"	"	"	

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.55		mg/kg	0.55	0.11	1	MADEP EPH	28-Feb-19 20:25	02-Mar-19 07:55	M-PA009	90590017	
83-32-9	Acenaphthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C19 to C36 Aliphatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 6.7		mg/kg	6.7	6.7	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.2		mg/kg	2.2	0.67	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*54*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*89*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*73*			*40-140 %*			"	"	"	"	"	
Re-analysis of Subcontracted Analyses Prepared by method SW-846 3546													
91-57-6	2-Methylnaphthalene	< 0.56		mg/kg	0.56	0.11	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 15:42	M-PA009	90640020	
83-32-9	Acenaphthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C19 to C36 Aliphatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 6.7		mg/kg	6.7	6.7	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2	[none]	Soil	22-Feb-19 10:00	26-Feb-19
SC53666-02				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
Re-analysis of Subcontracted Analyses													
86-73-7	Fluorene	< 0.56		mg/kg	0.56	0.11	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 15:42	M-PA009	0640020	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.2		mg/kg	2.2	0.67	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*53*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*85*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*63*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 0.1		mg/kg	0.1	0.06	63.68	MADEP VPH	22-Feb-19 10:00	06-Mar-19 20:11	M-PA009	9065A54/	
	C5-C8 Aliphatic Hydrocarbons	< 7.29		mg/kg	7.29	3.65	63.68	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 7.29		mg/kg	7.29	3.65	63.68	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 7.29		mg/kg	7.29	3.65	63.68	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.1		mg/kg	0.1	0.07	63.68	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 0.1		mg/kg	0.1	0.07	63.68	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 0.1		mg/kg	0.1	0.07	63.68	"	"	"	"	"	
91-20-3	Naphthalene	< 0.4		mg/kg	0.4	0.2	63.68	"	"	"	"	"	
95-47-6	o-Xylene	< 0.1		mg/kg	0.1	0.07	63.68	"	"	"	"	"	
108-88-3	Toluene	< 0.1		mg/kg	0.1	0.07	63.68	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 7.29		mg/kg	7.29	3.65	63.68	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 7.29		mg/kg	7.29	3.65	63.68	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*99*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*100*			*70-130 %*			"	"	"	"	"	
Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
	Moisture	**12.7**		%	0.50	0.50	1	SM 2540 G %Moisture Calc	01-Mar-19 09:39	01-Mar-19 09:39	M-PA009	6082000	
Subcontracted Analyses Prepared by method SW-846 3050B													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-36-0	Antimony	**4.11**		mg/kg	3.90	1.32	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:26	M-PA009	5814049	
7440-38-2	Arsenic	**9.56**		mg/kg	3.90	0.935	1	"	"	"	"	"	
7440-41-7	Beryllium	**0.811**		mg/kg	0.390	0.0779	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.390		mg/kg	0.390	0.0779	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2 SC53666-02	[none]	Soil	22-Feb-19 10:00	26-Feb-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-47-3	Chromium	**17.0**		mg/kg	1.17	0.164	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:26	M-PA009	05814049	
7440-50-8	Copper	< 1.56		mg/kg	1.56	0.390	1	"	"	"	"	"	
7439-92-1	Lead	**7.74**		mg/kg	1.17	0.468	1	"	"	"	"	"	
7440-02-0	Nickel	**16.1**		mg/kg	0.779	0.164	1	"	"	"	"	"	
7782-49-2	Selenium	< 3.90		mg/kg	3.90	1.17	1	"	"	"	"	"	
7440-22-4	Silver	< 0.779		mg/kg	0.779	0.312	1	"	"	"	"	"	
7440-28-0	Thallium	< 11.7		mg/kg	11.7	3.51	5	"	"	"	"	"	
7440-66-6	Zinc	**80.6**		mg/kg	1.56	0.312	1	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	< 0.153		mg/kg	0.153	0.0357	1	SW-846 7471B	28-Feb-19 09:10	01-Mar-19 06:41	M-PA009	05910638	
Subcontracted Analyses													
Prepared by method SW-846 5035A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 570		ug/kg	570	57	98.94	SW-846 8260C	22-Feb-19 10:00	05-Mar-19 11:47	M-PA009	190641A	
71-55-6	1,1,1-Trichloroethane	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 1100		ug/kg	1100	570	98.94	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 1100		ug/kg	1100	570	98.94	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 910		ug/kg	910	450	98.94	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 28000		ug/kg	28000	4200	98.94	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
78-93-3	2-Butanone	< 1100		ug/kg	1100	110	98.94	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
591-78-6	2-Hexanone	< 1100		ug/kg	1100	110	98.94	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 1100		ug/kg	1100	110	98.94	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2	[none]	Soil	22-Feb-19 10:00	26-Feb-19
SC53666-02				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
67-64-1	Acetone	< 2300		ug/kg	2300	680	98.94	SW-846 8260C	22-Feb-19 10:00	05-Mar-19 11:47	M-PA009	190641A	
107-13-1	Acrylonitrile	< 2300		ug/kg	2300	91	98.94	"	"	"	"	"	
71-43-2	Benzene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
108-86-1	Bromobenzene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
74-97-5	Bromochloromethane	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
75-25-2	Bromoform	< 1100		ug/kg	1100	570	98.94	"	"	"	"	"	
74-83-9	Bromomethane	< 570		ug/kg	570	79	98.94	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
108-90-7	Chlorobenzene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
75-00-3	Chloroethane	< 570		ug/kg	570	110	98.94	"	"	"	"	"	
67-66-3	Chloroform	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
74-87-3	Chloromethane	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
74-95-3	Dibromomethane	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
64-17-5	Ethanol	< 85000		ug/kg	85000	32000	98.94	"	"	"	"	"	
60-29-7	Ethyl Ether	< 570		ug/kg	570	110	98.94	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
100-41-4	Ethylbenzene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
76-13-1	Freon 113	< 1100		ug/kg	1100	68	98.94	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 1100		ug/kg	1100	570	98.94	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 570		ug/kg	570	110	98.94	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
75-09-2	Methylene Chloride	< 570		ug/kg	570	230	98.94	"	"	"	"	"	
91-20-3	Naphthalene	< 570		ug/kg	570	230	98.94	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 910		ug/kg	910	340	98.94	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
95-47-6	o-Xylene	< 570		ug/kg	570	45	98.94	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 570		ug/kg	570	230	98.94	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 570		ug/kg	570	230	98.94	"	"	"	"	"	
100-42-5	Styrene	< 570		ug/kg	570	34	98.94	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 570		ug/kg	570	91	98.94	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 11000		ug/kg	11000	1700	98.94	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 570		ug/kg	570	91	98.94	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 910		ug/kg	910	110	98.94	"	"	"	"	"	
108-88-3	Toluene	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
10061-02-6	trans-1,3-Dichloropropene	< 570		ug/kg	570	34	98.94	SW-846 8260C	22-Feb-19 10:00	05-Mar-19 11:47	M-PA009	190641A	
110-57-6	trans-1,4-Dichloro-2-butene	< 5700		ug/kg	5700	790	98.94	"	"	"	"	"	
79-01-6	Trichloroethene	< 570		ug/kg	570	57	98.94	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 570		ug/kg	570	79	98.94	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 570		ug/kg	570	68	98.94	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*95*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*86*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*91*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*86*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
92-52-4	1,1'-Biphenyl	< 42		ug/kg	42	19	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:34	M-PA009	063SLC0	
95-94-3	1,2,4,5-Tetrachlorobenzene	< 42		ug/kg	42	19	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 57		ug/kg	57	27	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 57		ug/kg	57	19	1	"	"	"	"	"	
122-66-7	1,2-Diphenylhydrazine	< 49		ug/kg	49	23	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 42		ug/kg	42	19	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 42		ug/kg	42	19	1	"	"	"	"	"	
90-12-0	1-Methylnaphthalene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
58-90-2	2,3,4,6-Tetrachlorophenol	< 190		ug/kg	190	76	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 76		ug/kg	76	34	1	"	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	< 65		ug/kg	65	30	1	"	"	"	"	"	
120-83-2	2,4-Dichlorophenol	< 49		ug/kg	49	23	1	"	"	"	"	"	
105-67-9	2,4-Dimethylphenol	< 76		ug/kg	76	34	1	"	"	"	"	"	
51-28-5	2,4-Dinitrophenol	< 1100		ug/kg	1100	380	1	"	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	< 190		ug/kg	190	76	1	"	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	< 57		ug/kg	57	27	1	"	"	"	"	"	
91-58-7	2-Chloronaphthalene	< 38		ug/kg	38	7.6	1	"	"	"	"	"	
95-57-8	2-Chlorophenol	< 42		ug/kg	42	19	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 38		ug/kg	38	3.8	1	"	"	"	"	"	
95-48-7	2-Methylphenol	< 76		ug/kg	76	19	1	"	"	"	"	"	
88-74-4	2-Nitroaniline	< 57		ug/kg	57	19	1	"	"	"	"	"	
88-75-5	2-Nitrophenol	< 65		ug/kg	65	30	1	"	"	"	"	"	
91-94-1	3,3'-Dichlorobenzidine	< 380		ug/kg	380	110	1	"	"	"	"	"	
99-09-2	3-Nitroaniline	< 190		ug/kg	190	76	1	"	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	< 570		ug/kg	570	270	1	"	"	"	"	"	
101-55-3	4-Bromophenyl-phenylether	< 57		ug/kg	57	27	1	"	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	< 57		ug/kg	57	27	1	"	"	"	"	"	
106-47-8	4-Chloroaniline	< 190		ug/kg	190	38	1	"	"	"	"	"	

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7005-72-3	4-Chlorophenyl-phenyleth er	< 49		ug/kg	49	23	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:34	M-PA009	063SLC0	
106-44-5	4-Methylphenol	< 38		ug/kg	38	19	1	"	"	"	"	"	
100-01-6	4-Nitroaniline	< 190		ug/kg	190	76	1	"	"	"	"	"	
100-02-7	4-Nitrophenol	< 570		ug/kg	570	190	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
98-86-2	Acetophenone	< 57		ug/kg	57	19	1	"	"	"	"	"	
62-53-3	Aniline	< 570		ug/kg	570	190	1	"	"	"	"	"	
120-12-7	Anthracene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
1912-24-9	Atrazine	< 490		ug/kg	490	230	1	"	"	"	"	"	
100-52-7	Benzaldehyde	< 190		ug/kg	190	76	1	"	"	"	"	"	
92-87-5	Benzidine	< 1100		ug/kg	1100	380	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 19		ug/kg	19	7.6	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
65-85-0	Benzoic acid	< 570		ug/kg	570	190	1	"	"	"	"	"	
100-51-6	Benzyl alcohol	< 570		ug/kg	570	190	1	"	"	"	"	"	
111-91-1	bis(2-Chloroethoxy)metha ne	< 42		ug/kg	42	19	1	"	"	"	"	"	
111-44-4	bis(2-Chloroethyl)ether	< 57		ug/kg	57	27	1	"	"	"	"	"	
39638-32-9	bis(2-Chloroisopropyl)ethe r	< 49		ug/kg	49	23	1	"	"	"	"	"	
117-81-7	bis(2-Ethylhexyl)phthalate	**1,130**		ug/kg	190	76	1	"	"	"	"	"	
85-68-7	Butylbenzylphthalate	< 190		ug/kg	190	76	1	"	"	"	"	"	
105-60-2	Caprolactam	< 190		ug/kg	190	38	1	"	"	"	"	"	
86-74-8	Carbazole	< 42		ug/kg	42	19	1	"	"	"	"	"	
218-01-9	Chrysene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 19		ug/kg	19	7.6	1	"	"	"	"	"	
132-64-9	Dibenzofuran	< 42		ug/kg	42	19	1	"	"	"	"	"	
84-66-2	Diethylphthalate	< 190		ug/kg	190	76	1	"	"	"	"	"	
131-11-3	Dimethylphthalate	< 190		ug/kg	190	76	1	"	"	"	"	"	
84-74-2	Di-n-butylphthalate	< 190		ug/kg	190	76	1	"	"	"	"	"	
117-84-0	Di-n-octylphthalate	< 190		ug/kg	190	76	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
86-73-7	Fluorene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
118-74-1	Hexachlorobenzene	< 19		ug/kg	19	7.6	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 88		ug/kg	88	42	1	"	"	"	"	"	
77-47-4	Hexachlorocyclopentadien e	< 570		ug/kg	570	230	1	"	"	"	"	"	
67-72-1	Hexachloroethane	< 190		ug/kg	190	38	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
78-59-1	Isophorone	< 42		ug/kg	42	19	1	"	"	"	"	"	
91-20-3	Naphthalene	< 19		ug/kg	19	7.6	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2	[none]	Soil	22-Feb-19 10:00	26-Feb-19
SC53666-02				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
98-95-3	Nitrobenzene	< 76		ug/kg	76	30	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:34	M-PA009	063SLC0	
62-75-9	N-Nitrosodimethylamine	< 190		ug/kg	190	76	1	"	"	"	"	"	
621-64-7	N-Nitroso-di-n-propylamine	< 57		ug/kg	57	27	1	"	"	"	"	"	
86-30-6	N-Nitrosodiphenylamine	< 42		ug/kg	42	19	1	"	"	"	"	"	
82-68-8	Pentachloronitrobenzene	< 190		ug/kg	190	76	1	"	"	"	"	"	
87-86-5	Pentachlorophenol	< 190		ug/kg	190	76	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
108-95-2	Phenol	< 42		ug/kg	42	19	1	"	"	"	"	"	
129-00-0	Pyrene	< 19		ug/kg	19	3.8	1	"	"	"	"	"	
110-86-1	Pyridine	< 190		ug/kg	190	76	1	"	"	"	"	"	
Surrogate recoveries:													
118-79-6	*2,4,6-Tribromophenol*	*71*			*30-130 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*79*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*77*			*30-130 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*77*			*30-130 %*			"	"	"	"	"	
13127-88-3	*Phenol-d6*	*78*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-d14*	*92*			*30-130 %*			"	"	"	"	"	

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.54		mg/kg	0.54	0.11	1	MADEP EPH	28-Feb-19 20:25	02-Mar-19 10:37	M-PA009	0590017	
83-32-9	Acenaphthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C19 to C36 Aliphatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 6.5		mg/kg	6.5	6.5	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.2		mg/kg	2.2	0.65	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*57*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*90*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*78*			*40-140 %*			"	"	"	"	"	
Re-analysis of Subcontracted Analyses Prepared by method SW-846 3546													
91-57-6	2-Methylnaphthalene	< 0.54		mg/kg	0.54	0.11	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 19:43	M-PA009	0640020	
83-32-9	Acenaphthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C19 to C36 Aliphatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 6.5		mg/kg	6.5	6.5	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3	[none]	Soil	22-Feb-19 11:30	26-Feb-19
SC53666-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
Re-analysis of Subcontracted Analyses													
86-73-7	Fluorene	< 0.54		mg/kg	0.54	0.11	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 19:43	M-PA009	0640020	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.54		mg/kg	0.54	0.11	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.2		mg/kg	2.2	0.65	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*56*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*90*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*72*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 0.1		mg/kg	0.1	0.05	55.58	MADEP VPH	22-Feb-19 11:30	06-Mar-19 20:52	M-PA009	9065A54/	
	C5-C8 Aliphatic Hydrocarbons	< 6.20		mg/kg	6.20	3.10	55.58	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 6.20		mg/kg	6.20	3.10	55.58	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 6.20		mg/kg	6.20	3.10	55.58	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.1		mg/kg	0.1	0.06	55.58	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 0.1		mg/kg	0.1	0.06	55.58	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 0.1		mg/kg	0.1	0.06	55.58	"	"	"	"	"	
91-20-3	Naphthalene	< 0.4		mg/kg	0.4	0.2	55.58	"	"	"	"	"	
95-47-6	o-Xylene	< 0.1		mg/kg	0.1	0.06	55.58	"	"	"	"	"	
108-88-3	Toluene	< 0.1		mg/kg	0.1	0.06	55.58	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 6.20		mg/kg	6.20	3.10	55.58	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 6.20		mg/kg	6.20	3.10	55.58	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*97*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*98*			*70-130 %*			"	"	"	"	"	
Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
	Moisture	**10.4**		%	0.50	0.50	1	SM 2540 G %Moisture Calc	01-Mar-19 09:39	01-Mar-19 09:39	M-PA009	6082000	
Subcontracted Analyses Prepared by method SW-846 3050B													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-36-0	Antimony	< 4.69		mg/kg	4.69	1.59	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:36	M-PA009	5814049	
7440-38-2	Arsenic	**9.99**		mg/kg	4.69	1.13	1	"	"	"	"	"	
7440-41-7	Beryllium	**0.594**		mg/kg	0.469	0.0938	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.469		mg/kg	0.469	0.0938	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3 SC53666-03	[none]	Soil	22-Feb-19 11:30	26-Feb-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-47-3	Chromium	**19.9**		mg/kg	1.41	0.197	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:36	M-PA009	05814049	
7440-50-8	Copper	< 1.88		mg/kg	1.88	0.469	1	"	"	"	"	"	
7439-92-1	Lead	**7.46**		mg/kg	1.41	0.563	1	"	"	"	"	"	
7440-02-0	Nickel	**14.7**		mg/kg	0.938	0.197	1	"	"	"	"	"	
7782-49-2	Selenium	< 4.69		mg/kg	4.69	1.41	1	"	"	"	"	"	
7440-22-4	Silver	< 0.938		mg/kg	0.938	0.375	1	"	"	"	"	"	
7440-28-0	Thallium	< 14.1		mg/kg	14.1	4.22	5	"	"	"	"	"	
7440-66-6	Zinc	**64.0**		mg/kg	1.88	0.375	1	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	< 0.137		mg/kg	0.137	0.0321	1	SW-846 7471B	28-Feb-19 09:10	01-Mar-19 06:43	M-PA009	05910638	
Subcontracted Analyses													
Prepared by method SW-846 5035A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 370		ug/kg	370	37	65.67	SW-846 8260C	22-Feb-19 11:30	05-Mar-19 12:10	M-PA009	190641A	
71-55-6	1,1,1-Trichloroethane	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 730		ug/kg	730	370	65.67	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 730		ug/kg	730	370	65.67	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 590		ug/kg	590	290	65.67	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 18000		ug/kg	18000	2700	65.67	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
78-93-3	2-Butanone	< 730		ug/kg	730	73	65.67	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
591-78-6	2-Hexanone	< 730		ug/kg	730	73	65.67	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 730		ug/kg	730	73	65.67	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3	[none]	Soil	22-Feb-19 11:30	26-Feb-19
SC53666-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
67-64-1	Acetone	< 1500		ug/kg	1500	440	65.67	SW-846 8260C	22-Feb-19 11:30	05-Mar-19 12:10	M-PA009	190641A	
107-13-1	Acrylonitrile	< 1500		ug/kg	1500	59	65.67	"	"	"	"	"	
71-43-2	Benzene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
108-86-1	Bromobenzene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
74-97-5	Bromochloromethane	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
75-25-2	Bromoform	< 730		ug/kg	730	370	65.67	"	"	"	"	"	
74-83-9	Bromomethane	< 370		ug/kg	370	51	65.67	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
108-90-7	Chlorobenzene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
75-00-3	Chloroethane	< 370		ug/kg	370	73	65.67	"	"	"	"	"	
67-66-3	Chloroform	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
74-87-3	Chloromethane	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
74-95-3	Dibromomethane	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
64-17-5	Ethanol	< 55000		ug/kg	55000	21000	65.67	"	"	"	"	"	
60-29-7	Ethyl Ether	< 370		ug/kg	370	73	65.67	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
100-41-4	Ethylbenzene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
76-13-1	Freon 113	< 730		ug/kg	730	44	65.67	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 730		ug/kg	730	370	65.67	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 370		ug/kg	370	73	65.67	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
75-09-2	Methylene Chloride	< 370		ug/kg	370	150	65.67	"	"	"	"	"	
91-20-3	Naphthalene	< 370		ug/kg	370	150	65.67	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 590		ug/kg	590	220	65.67	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
95-47-6	o-Xylene	< 370		ug/kg	370	29	65.67	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 370		ug/kg	370	150	65.67	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 370		ug/kg	370	150	65.67	"	"	"	"	"	
100-42-5	Styrene	< 370		ug/kg	370	22	65.67	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 370		ug/kg	370	59	65.67	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 7300		ug/kg	7300	1100	65.67	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 370		ug/kg	370	59	65.67	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 590		ug/kg	590	73	65.67	"	"	"	"	"	
108-88-3	Toluene	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
10061-02-6	trans-1,3-Dichloropropene	< 370		ug/kg	370	22	65.67	SW-846 8260C	22-Feb-19 11:30	05-Mar-19 12:10	M-PA009	190641A	
110-57-6	trans-1,4-Dichloro-2-butene	< 3700		ug/kg	3700	510	65.67	"	"	"	"	"	
79-01-6	Trichloroethene	< 370		ug/kg	370	37	65.67	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 370		ug/kg	370	51	65.67	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 370		ug/kg	370	44	65.67	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*113*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*103*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*106*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*104*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
92-52-4	1,1'-Biphenyl	< 40		ug/kg	40	18	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:58	M-PA009	063SLC0	
95-94-3	1,2,4,5-Tetrachlorobenzene	< 40		ug/kg	40	18	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 55		ug/kg	55	26	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 55		ug/kg	55	18	1	"	"	"	"	"	
122-66-7	1,2-Diphenylhydrazine	< 48		ug/kg	48	22	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 40		ug/kg	40	18	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 40		ug/kg	40	18	1	"	"	"	"	"	
90-12-0	1-Methylnaphthalene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
58-90-2	2,3,4,6-Tetrachlorophenol	< 180		ug/kg	180	73	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 73		ug/kg	73	33	1	"	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	< 62		ug/kg	62	29	1	"	"	"	"	"	
120-83-2	2,4-Dichlorophenol	< 48		ug/kg	48	22	1	"	"	"	"	"	
105-67-9	2,4-Dimethylphenol	< 73		ug/kg	73	33	1	"	"	"	"	"	
51-28-5	2,4-Dinitrophenol	< 1100		ug/kg	1100	370	1	"	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	< 180		ug/kg	180	73	1	"	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	< 55		ug/kg	55	26	1	"	"	"	"	"	
91-58-7	2-Chloronaphthalene	< 37		ug/kg	37	7.3	1	"	"	"	"	"	
95-57-8	2-Chlorophenol	< 40		ug/kg	40	18	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 37		ug/kg	37	3.7	1	"	"	"	"	"	
95-48-7	2-Methylphenol	< 73		ug/kg	73	18	1	"	"	"	"	"	
88-74-4	2-Nitroaniline	< 55		ug/kg	55	18	1	"	"	"	"	"	
88-75-5	2-Nitrophenol	< 62		ug/kg	62	29	1	"	"	"	"	"	
91-94-1	3,3'-Dichlorobenzidine	< 370		ug/kg	370	110	1	"	"	"	"	"	
99-09-2	3-Nitroaniline	< 180		ug/kg	180	73	1	"	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	< 550		ug/kg	550	260	1	"	"	"	"	"	
101-55-3	4-Bromophenyl-phenylether	< 55		ug/kg	55	26	1	"	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	< 55		ug/kg	55	26	1	"	"	"	"	"	
106-47-8	4-Chloroaniline	< 180		ug/kg	180	37	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3	[none]	Soil	22-Feb-19 11:30	26-Feb-19
SC53666-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7005-72-3	4-Chlorophenyl-phenylether	< 48		ug/kg	48	22	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:58	M-PA009	063SLC0	
106-44-5	4-Methylphenol	< 37		ug/kg	37	18	1	"	"	"	"	"	
100-01-6	4-Nitroaniline	< 180		ug/kg	180	73	1	"	"	"	"	"	
100-02-7	4-Nitrophenol	< 550		ug/kg	550	180	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
98-86-2	Acetophenone	< 55		ug/kg	55	18	1	"	"	"	"	"	
62-53-3	Aniline	< 550		ug/kg	550	180	1	"	"	"	"	"	
120-12-7	Anthracene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
1912-24-9	Atrazine	< 480		ug/kg	480	220	1	"	"	"	"	"	
100-52-7	Benzaldehyde	< 180		ug/kg	180	73	1	"	"	"	"	"	
92-87-5	Benzidine	< 1100		ug/kg	1100	370	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 18		ug/kg	18	7.3	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
65-85-0	Benzoic acid	< 550		ug/kg	550	180	1	"	"	"	"	"	
100-51-6	Benzyl alcohol	< 550		ug/kg	550	180	1	"	"	"	"	"	
111-91-1	bis(2-Chloroethoxy)methane	< 40		ug/kg	40	18	1	"	"	"	"	"	
111-44-4	bis(2-Chloroethyl)ether	< 55		ug/kg	55	26	1	"	"	"	"	"	
39638-32-9	bis(2-Chloroisopropyl)ether	< 48		ug/kg	48	22	1	"	"	"	"	"	
117-81-7	bis(2-Ethylhexyl)phthalate	**260**		ug/kg	180	73	1	"	"	"	"	"	
85-68-7	Butylbenzylphthalate	< 180		ug/kg	180	73	1	"	"	"	"	"	
105-60-2	Caprolactam	< 180		ug/kg	180	37	1	"	"	"	"	"	
86-74-8	Carbazole	< 40		ug/kg	40	18	1	"	"	"	"	"	
218-01-9	Chrysene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 18		ug/kg	18	7.3	1	"	"	"	"	"	
132-64-9	Dibenzofuran	< 40		ug/kg	40	18	1	"	"	"	"	"	
84-66-2	Diethylphthalate	< 180		ug/kg	180	73	1	"	"	"	"	"	
131-11-3	Dimethylphthalate	< 180		ug/kg	180	73	1	"	"	"	"	"	
84-74-2	Di-n-butylphthalate	< 180		ug/kg	180	73	1	"	"	"	"	"	
117-84-0	Di-n-octylphthalate	< 180		ug/kg	180	73	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
86-73-7	Fluorene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
118-74-1	Hexachlorobenzene	< 18		ug/kg	18	7.3	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 84		ug/kg	84	40	1	"	"	"	"	"	
77-47-4	Hexachlorocyclopentadiene	< 550		ug/kg	550	220	1	"	"	"	"	"	
67-72-1	Hexachloroethane	< 180		ug/kg	180	37	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
78-59-1	Isophorone	< 40		ug/kg	40	18	1	"	"	"	"	"	
91-20-3	Naphthalene	< 18		ug/kg	18	7.3	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3	[none]	Soil	22-Feb-19 11:30	26-Feb-19
SC53666-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
98-95-3	Nitrobenzene	< 73		ug/kg	73	29	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 13:58	M-PA009	063SLC0	
62-75-9	N-Nitrosodimethylamine	< 180		ug/kg	180	73	1	"	"	"	"	"	
621-64-7	N-Nitroso-di-n-propylamine	< 55		ug/kg	55	26	1	"	"	"	"	"	
86-30-6	N-Nitrosodiphenylamine	< 40		ug/kg	40	18	1	"	"	"	"	"	
82-68-8	Pentachloronitrobenzene	< 180		ug/kg	180	73	1	"	"	"	"	"	
87-86-5	Pentachlorophenol	< 180		ug/kg	180	73	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
108-95-2	Phenol	< 40		ug/kg	40	18	1	"	"	"	"	"	
129-00-0	Pyrene	< 18		ug/kg	18	3.7	1	"	"	"	"	"	
110-86-1	Pyridine	< 180		ug/kg	180	73	1	"	"	"	"	"	
Surrogate recoveries:													
118-79-6	*2,4,6-Tribromophenol*	*73*			*30-130 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*82*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*77*			*30-130 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*78*			*30-130 %*			"	"	"	"	"	
13127-88-3	*Phenol-d6*	*80*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-d14*	*95*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Soil	22-Feb-19 13:30	26-Feb-19
SC53666-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.55		mg/kg	0.55	0.11	1	MADEP EPH	28-Feb-19 20:25	02-Mar-19 11:58	M-PA009	90590017	
83-32-9	Acenaphthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C19 to C36 Aliphatics	22		mg/kg	13	13	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 6.6		mg/kg	6.6	6.6	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.55		mg/kg	0.55	0.11	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.2		mg/kg	2.2	0.66	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*53*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*87*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*69*			*40-140 %*			"	"	"	"	"	
Re-analysis of Subcontracted Analyses Prepared by method SW-846 3546													
91-57-6	2-Methylnaphthalene	< 0.56		mg/kg	0.56	0.11	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 21:03	M-PA009	90640020	
83-32-9	Acenaphthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
	C11 to C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C19 to C36 Aliphatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 6.7		mg/kg	6.7	6.7	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
53-70-3	Dibenzo(a,h)anthracene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Soil	22-Feb-19 13:30	26-Feb-19
SC53666-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
Re-analysis of Subcontracted Analyses													
86-73-7	Fluorene	< 0.56		mg/kg	0.56	0.11	1	MADEP EPH	05-Mar-19 21:45	09-Mar-19 21:03	M-PA009	0640020	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.56		mg/kg	0.56	0.11	1	"	"	"	"	"	
129-00-0	Pyrene	< 2.2		mg/kg	2.2	0.67	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 13		mg/kg	13	13	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*55*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*94*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*73*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 0.09		mg/kg	0.09	0.03	38.55	MADEP VPH	22-Feb-19 13:30	06-Mar-19 21:32	M-PA009	9065A54/	
	C5-C8 Aliphatic Hydrocarbons	< 4.30		mg/kg	4.30	2.15	38.55	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 4.30		mg/kg	4.30	2.15	38.55	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 4.30		mg/kg	4.30	2.15	38.55	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.09		mg/kg	0.09	0.04	38.55	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 0.09		mg/kg	0.09	0.04	38.55	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 0.09		mg/kg	0.09	0.04	38.55	"	"	"	"	"	
91-20-3	Naphthalene	< 0.3		mg/kg	0.3	0.1	38.55	"	"	"	"	"	
95-47-6	o-Xylene	< 0.09		mg/kg	0.09	0.04	38.55	"	"	"	"	"	
108-88-3	Toluene	< 0.09		mg/kg	0.09	0.04	38.55	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 4.30		mg/kg	4.30	2.15	38.55	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 4.30		mg/kg	4.30	2.15	38.55	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*106*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*106*			*70-130 %*			"	"	"	"	"	
Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
	Moisture	**10.3**		%	0.50	0.50	1	SM 2540 G %Moisture Calc	01-Mar-19 09:39	01-Mar-19 09:39	M-PA009	6082000	
Subcontracted Analyses Prepared by method SW-846 3050B													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-36-0	Antimony	< 3.90		mg/kg	3.90	1.33	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:40	M-PA009	5814049	
7440-38-2	Arsenic	**8.65**		mg/kg	3.90	0.936	1	"	"	"	"	"	
7440-41-7	Beryllium	**1.05**		mg/kg	0.390	0.0780	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.390		mg/kg	0.390	0.0780	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4 SC53666-04	[none]	Soil	22-Feb-19 13:30	26-Feb-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-47-3	Chromium	**21.6**		mg/kg	1.17	0.164	1	SW-846 6010C	27-Feb-19 16:35	28-Feb-19 22:40	M-PA009	05814049	
7440-50-8	Copper	**15.2**		mg/kg	1.56	0.390	1	"	"	"	"	"	
7439-92-1	Lead	**12.8**		mg/kg	1.17	0.468	1	"	"	"	"	"	
7440-02-0	Nickel	**15.2**		mg/kg	0.780	0.164	1	"	"	"	"	"	
7782-49-2	Selenium	< 3.90		mg/kg	3.90	1.17	1	"	"	"	"	"	
7440-22-4	Silver	< 0.780		mg/kg	0.780	0.312	1	"	"	"	"	"	
7440-28-0	Thallium	< 11.7		mg/kg	11.7	3.51	5	"	"	"	"	"	
7440-66-6	Zinc	**78.3**		mg/kg	1.56	0.312	1	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	< 0.139		mg/kg	0.139	0.0326	1	SW-846 7471B	28-Feb-19 09:10	01-Mar-19 06:49	M-PA009	05910638	
Subcontracted Analyses													
Prepared by method SW-846 5035A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 170		ug/kg	170	17	29.88	SW-846 8260C	22-Feb-19 13:30	05-Mar-19 12:33	M-PA009	190641A	
71-55-6	1,1,1-Trichloroethane	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 330		ug/kg	330	170	29.88	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 330		ug/kg	330	170	29.88	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 270		ug/kg	270	130	29.88	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 8300		ug/kg	8300	1200	29.88	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
78-93-3	2-Butanone	< 330		ug/kg	330	33	29.88	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
591-78-6	2-Hexanone	< 330		ug/kg	330	33	29.88	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 330		ug/kg	330	33	29.88	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Soil	22-Feb-19 13:30	26-Feb-19
SC53666-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
67-64-1	Acetone	< 670		ug/kg	670	200	29.88	SW-846 8260C	22-Feb-19 13:30	05-Mar-19 12:33	M-PA009	190641A	
107-13-1	Acrylonitrile	< 670		ug/kg	670	27	29.88	"	"	"	"	"	
71-43-2	Benzene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
108-86-1	Bromobenzene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
74-97-5	Bromochloromethane	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
75-25-2	Bromoform	< 330		ug/kg	330	170	29.88	"	"	"	"	"	
74-83-9	Bromomethane	< 170		ug/kg	170	23	29.88	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
108-90-7	Chlorobenzene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
75-00-3	Chloroethane	< 170		ug/kg	170	33	29.88	"	"	"	"	"	
67-66-3	Chloroform	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
74-87-3	Chloromethane	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
74-95-3	Dibromomethane	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
64-17-5	Ethanol	< 25000		ug/kg	25000	9300	29.88	"	"	"	"	"	
60-29-7	Ethyl Ether	< 170		ug/kg	170	33	29.88	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
100-41-4	Ethylbenzene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
76-13-1	Freon 113	< 330		ug/kg	330	20	29.88	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 330		ug/kg	330	170	29.88	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 170		ug/kg	170	33	29.88	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
75-09-2	Methylene Chloride	< 170		ug/kg	170	67	29.88	"	"	"	"	"	
91-20-3	Naphthalene	< 170		ug/kg	170	67	29.88	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 270		ug/kg	270	100	29.88	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
95-47-6	o-Xylene	< 170		ug/kg	170	13	29.88	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 170		ug/kg	170	67	29.88	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 170		ug/kg	170	67	29.88	"	"	"	"	"	
100-42-5	Styrene	< 170		ug/kg	170	10	29.88	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 170		ug/kg	170	27	29.88	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 3300		ug/kg	3300	500	29.88	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 170		ug/kg	170	27	29.88	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 270		ug/kg	270	33	29.88	"	"	"	"	"	
108-88-3	Toluene	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Soil	22-Feb-19 13:30	26-Feb-19
SC53666-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
10061-02-6	trans-1,3-Dichloropropene	< 170		ug/kg	170	10	29.88	SW-846 8260C	22-Feb-19 13:30	05-Mar-19 12:33	M-PA009	190641A	
110-57-6	trans-1,4-Dichloro-2-butene	< 1700		ug/kg	1700	230	29.88	"	"	"	"	"	
79-01-6	Trichloroethene	< 170		ug/kg	170	17	29.88	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 170		ug/kg	170	23	29.88	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 170		ug/kg	170	20	29.88	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*95*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*88*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*90*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*90*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3546													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
92-52-4	1,1'-Biphenyl	< 41		ug/kg	41	19	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 14:23	M-PA009	063SLC0	
95-94-3	1,2,4,5-Tetrachlorobenzene	< 41		ug/kg	41	19	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 56		ug/kg	56	26	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 56		ug/kg	56	19	1	"	"	"	"	"	
122-66-7	1,2-Diphenylhydrazine	< 48		ug/kg	48	22	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 41		ug/kg	41	19	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 41		ug/kg	41	19	1	"	"	"	"	"	
90-12-0	1-Methylnaphthalene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
58-90-2	2,3,4,6-Tetrachlorophenol	< 190		ug/kg	190	74	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 74		ug/kg	74	33	1	"	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	< 63		ug/kg	63	30	1	"	"	"	"	"	
120-83-2	2,4-Dichlorophenol	< 48		ug/kg	48	22	1	"	"	"	"	"	
105-67-9	2,4-Dimethylphenol	< 74		ug/kg	74	33	1	"	"	"	"	"	
51-28-5	2,4-Dinitrophenol	< 1100		ug/kg	1100	370	1	"	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	< 190		ug/kg	190	74	1	"	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	< 56		ug/kg	56	26	1	"	"	"	"	"	
91-58-7	2-Chloronaphthalene	< 37		ug/kg	37	7.4	1	"	"	"	"	"	
95-57-8	2-Chlorophenol	< 41		ug/kg	41	19	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 37		ug/kg	37	3.7	1	"	"	"	"	"	
95-48-7	2-Methylphenol	< 74		ug/kg	74	19	1	"	"	"	"	"	
88-74-4	2-Nitroaniline	< 56		ug/kg	56	19	1	"	"	"	"	"	
88-75-5	2-Nitrophenol	< 63		ug/kg	63	30	1	"	"	"	"	"	
91-94-1	3,3'-Dichlorobenzidine	< 370		ug/kg	370	110	1	"	"	"	"	"	
99-09-2	3-Nitroaniline	< 190		ug/kg	190	74	1	"	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	< 560		ug/kg	560	260	1	"	"	"	"	"	
101-55-3	4-Bromophenyl-phenylether	< 56		ug/kg	56	26	1	"	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	< 56		ug/kg	56	26	1	"	"	"	"	"	
106-47-8	4-Chloroaniline	< 190		ug/kg	190	37	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Soil	22-Feb-19 13:30	26-Feb-19
SC53666-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7005-72-3	4-Chlorophenyl-phenylether	< 48		ug/kg	48	22	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 14:23	M-PA009	063SLC0	
106-44-5	4-Methylphenol	< 37		ug/kg	37	19	1	"	"	"	"	"	
100-01-6	4-Nitroaniline	< 190		ug/kg	190	74	1	"	"	"	"	"	
100-02-7	4-Nitrophenol	< 560		ug/kg	560	190	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
98-86-2	Acetophenone	< 56		ug/kg	56	19	1	"	"	"	"	"	
62-53-3	Aniline	< 560		ug/kg	560	190	1	"	"	"	"	"	
120-12-7	Anthracene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
1912-24-9	Atrazine	< 480		ug/kg	480	220	1	"	"	"	"	"	
100-52-7	Benzaldehyde	< 190		ug/kg	190	74	1	"	"	"	"	"	
92-87-5	Benzidine	< 1100		ug/kg	1100	370	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 19		ug/kg	19	7.4	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
65-85-0	Benzoic acid	< 560		ug/kg	560	190	1	"	"	"	"	"	
100-51-6	Benzyl alcohol	< 560		ug/kg	560	190	1	"	"	"	"	"	
111-91-1	bis(2-Chloroethoxy)methane	< 41		ug/kg	41	19	1	"	"	"	"	"	
111-44-4	bis(2-Chloroethyl)ether	< 56		ug/kg	56	26	1	"	"	"	"	"	
39638-32-9	bis(2-Chloroisopropyl)ether	< 48		ug/kg	48	22	1	"	"	"	"	"	
117-81-7	bis(2-Ethylhexyl)phthalate	< 190		ug/kg	190	74	1	"	"	"	"	"	
85-68-7	Butylbenzylphthalate	< 190		ug/kg	190	74	1	"	"	"	"	"	
105-60-2	Caprolactam	< 190		ug/kg	190	37	1	"	"	"	"	"	
86-74-8	Carbazole	< 41		ug/kg	41	19	1	"	"	"	"	"	
218-01-9	Chrysene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 19		ug/kg	19	7.4	1	"	"	"	"	"	
132-64-9	Dibenzofuran	< 41		ug/kg	41	19	1	"	"	"	"	"	
84-66-2	Diethylphthalate	< 190		ug/kg	190	74	1	"	"	"	"	"	
131-11-3	Dimethylphthalate	< 190		ug/kg	190	74	1	"	"	"	"	"	
84-74-2	Di-n-butylphthalate	< 190		ug/kg	190	74	1	"	"	"	"	"	
117-84-0	Di-n-octylphthalate	< 190		ug/kg	190	74	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
86-73-7	Fluorene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
118-74-1	Hexachlorobenzene	< 19		ug/kg	19	7.4	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 85		ug/kg	85	41	1	"	"	"	"	"	
77-47-4	Hexachlorocyclopentadiene	< 560		ug/kg	560	220	1	"	"	"	"	"	
67-72-1	Hexachloroethane	< 190		ug/kg	190	37	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
78-59-1	Isophorone	< 41		ug/kg	41	19	1	"	"	"	"	"	
91-20-3	Naphthalene	< 19		ug/kg	19	7.4	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Soil	22-Feb-19 13:30	26-Feb-19
SC53666-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
98-95-3	Nitrobenzene	< 74		ug/kg	74	30	1	SW-846 8270D	05-Mar-19 09:00	06-Mar-19 14:23	M-PA009	063SLC0	
62-75-9	N-Nitrosodimethylamine	< 190		ug/kg	190	74	1	"	"	"	"	"	
621-64-7	N-Nitroso-di-n-propylamine	< 56		ug/kg	56	26	1	"	"	"	"	"	
86-30-6	N-Nitrosodiphenylamine	< 41		ug/kg	41	19	1	"	"	"	"	"	
82-68-8	Pentachloronitrobenzene	< 190		ug/kg	190	74	1	"	"	"	"	"	
87-86-5	Pentachlorophenol	< 190		ug/kg	190	74	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
108-95-2	Phenol	< 41		ug/kg	41	19	1	"	"	"	"	"	
129-00-0	Pyrene	< 19		ug/kg	19	3.7	1	"	"	"	"	"	
110-86-1	Pyridine	< 190		ug/kg	190	74	1	"	"	"	"	"	
Surrogate recoveries:													
118-79-6	*2,4,6-Tribromophenol*	*70*			*30-130 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*76*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*67*			*30-130 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*66*			*30-130 %*			"	"	"	"	"	
13127-88-3	*Phenol-d6*	*73*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-d14*	*92*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip Blank SC53666-05	[none]	Trip Blank	25-Feb-19 00:00	26-Feb-19

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 0.1		mg/kg	0.1	0.04	50	MADEP VPH	22-Feb-19	06-Mar-19 22:13	M-PA009	9065A54/	
	C5-C8 Aliphatic Hydrocarbons	< 5.00		mg/kg	5.00	2.50	50	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 5.00		mg/kg	5.00	2.50	50	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 5.00		mg/kg	5.00	2.50	50	"	"	"	"	"	
100-41-4	Ethylbenzene	< 0.1		mg/kg	0.1	0.05	50	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 0.1		mg/kg	0.1	0.05	50	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 0.1		mg/kg	0.1	0.05	50	"	"	"	"	"	
91-20-3	Naphthalene	< 0.3		mg/kg	0.3	0.2	50	"	"	"	"	"	
95-47-6	o-Xylene	< 0.1		mg/kg	0.1	0.05	50	"	"	"	"	"	
108-88-3	Toluene	< 0.1		mg/kg	0.1	0.05	50	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 5.00		mg/kg	5.00	2.50	50	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 5.00		mg/kg	5.00	2.50	50	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*99*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*101*			*70-130 %*			"	"	"	"	"	

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH										
Batch 190590017A - SW-846 3546										
LCS (LCS17059Q)					Prepared: 28-Feb-19 Analyzed: 02-Mar-19					
Dibenzo(a,h)anthracene	**3.3**		mg/kg	0.50	4.0		82	40-140		
Anthracene	**3.0**		mg/kg	0.50	4.0		75	40-140		
Benzo(a)anthracene	**3.0**		mg/kg	0.50	4.0		74	40-140		
Benzo(a)pyrene	**3.2**		mg/kg	0.50	4.0		81	40-140		
Benzo(b)fluoranthene	**3.4**		mg/kg	0.50	4.0		85	40-140		
Benzo(g,h,i)perylene	**3.3**		mg/kg	0.50	4.0		81	40-140		
Benzo(k)fluoranthene	**2.9**		mg/kg	0.50	4.0		72	40-140		
C19 to C36 Aliphatics	**89**	*	mg/kg	12	32		277	40-140		
Acenaphthene	**2.7**		mg/kg	0.50	4.0		66	40-140		
Chrysene	**2.8**		mg/kg	0.50	4.0		71	40-140		
2-Methylnaphthalene	**2.3**		mg/kg	0.50	4.0		58	40-140		
Fluoranthene	**3.1**		mg/kg	0.50	4.0		77	40-140		
Fluorene	**2.9**		mg/kg	0.50	4.0		71	40-140		
Indeno(1,2,3-cd)pyrene	**3.5**		mg/kg	0.50	4.0		86	40-140		
Naphthalene	**2.1**		mg/kg	0.50	4.0		52	40-140		
Phenanthrene	**3.4**		mg/kg	0.50	4.0		85	40-140		
Pyrene	**3.1**		mg/kg	2.0	4.0		77	40-140		
Unadjusted C11 - C22 Aromatics	**56**		mg/kg	12	68		82	40-140		
C9 to C18 Aliphatics	**11**		mg/kg	6.0	24		46	40-140		
Acenaphthylene	**2.6**		mg/kg	0.50	4.0		66	40-140		
Surrogate: Orthoterphenyl	*1.5*		mg/kg		*2.0*		*73*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.8*		mg/kg		*2.0*		*91*	*40-140*		
Surrogate: 1-Chloro-octadecane	*1.0*		mg/kg		*2.0*		*51*	*40-140*		
LCSD (P90597AY)					Prepared: 28-Feb-19 Analyzed: 02-Mar-19					
C19 to C36 Aliphatics	**63**	*	mg/kg	12	32		197	40-140	33	50
2-Methylnaphthalene	**1.6**		mg/kg	0.50	4.0		40	40-140	36	50
Acenaphthene	**1.8**		mg/kg	0.50	4.0		46	40-140	37	50
Acenaphthylene	**1.8**		mg/kg	0.50	4.0		45	40-140	37	50
Anthracene	**2.4**		mg/kg	0.50	4.0		59	40-140	25	50
Benzo(a)anthracene	**2.3**		mg/kg	0.50	4.0		56	40-140	27	50
Benzo(a)pyrene	**2.4**		mg/kg	0.50	4.0		61	40-140	28	50
Benzo(b)fluoranthene	**2.5**		mg/kg	0.50	4.0		62	40-140	31	50
Benzo(k)fluoranthene	**2.3**		mg/kg	0.50	4.0		56	40-140	25	50
C9 to C18 Aliphatics	**10**		mg/kg	6.0	24		42	40-140	9	50
Chrysene	**2.2**		mg/kg	0.50	4.0		54	40-140	26	50
Dibenzo(a,h)anthracene	**2.5**		mg/kg	0.50	4.0		63	40-140	26	50
Fluoranthene	**2.3**		mg/kg	0.50	4.0		58	40-140	28	50
Fluorene	**2.0**		mg/kg	0.50	4.0		50	40-140	35	50
Indeno(1,2,3-cd)pyrene	**2.6**		mg/kg	0.50	4.0		64	40-140	30	50
Naphthalene	**1.5**	*	mg/kg	0.50	4.0		37	40-140	33	50
Phenanthrene	**2.3**		mg/kg	0.50	4.0		57	40-140	40	50
Pyrene	**2.4**		mg/kg	2.0	4.0		61	40-140	23	50
Unadjusted C11 - C22 Aromatics	**39**		mg/kg	12	68		57	40-140	36	50
Benzo(g,h,i)perylene	**2.5**		mg/kg	0.50	4.0		61	40-140	28	50
Surrogate: Orthoterphenyl	*1.0*		mg/kg		*2.0*		*51*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.4*		mg/kg		*2.0*		*69*	*40-140*		
Surrogate: 1-Chloro-octadecane	*0.91*		mg/kg		*2.0*		*45*	*40-140*		
Blank (PBLK17059B)					Prepared: 28-Feb-19 Analyzed: 02-Mar-19					
Phenanthrene	< 0.50		mg/kg	0.50				-		
C11 to C22 Aromatics	< 12		mg/kg	12				-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH										
Batch 190590017A - SW-846 3546										
Blank (PBLK17059B)						Prepared: 28-Feb-19 Analyzed: 02-Mar-19				
2-Methylnaphthalene	< 0.50		mg/kg	0.50				-		
Acenaphthene	< 0.50		mg/kg	0.50				-		
Acenaphthylene	< 0.50		mg/kg	0.50				-		
Anthracene	< 0.50		mg/kg	0.50				-		
Benzo(a)anthracene	< 0.50		mg/kg	0.50				-		
Benzo(a)pyrene	< 0.50		mg/kg	0.50				-		
Benzo(b)fluoranthene	< 0.50		mg/kg	0.50				-		
Benzo(k)fluoranthene	< 0.50		mg/kg	0.50				-		
Unadjusted C11 - C22 Aromatics	< 12		mg/kg	12				-		
C19 to C36 Aliphatics	**120**		mg/kg	12				-		
C9 to C18 Aliphatics	< 6.0		mg/kg	6.0				-		
Chrysene	< 0.50		mg/kg	0.50				-		
Dibenzo(a,h)anthracene	< 0.50		mg/kg	0.50				-		
Fluoranthene	< 0.50		mg/kg	0.50				-		
Fluorene	< 0.50		mg/kg	0.50				-		
Indeno(1,2,3-cd)pyrene	< 0.50		mg/kg	0.50				-		
Naphthalene	< 0.50		mg/kg	0.50				-		
Pyrene	< 2.0		mg/kg	2.0				-		
Benzo(g,h,i)perylene	< 0.50		mg/kg	0.50				-		
Surrogate: Orthoterphenyl	*1.3*		mg/kg		*2.0*		*66*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.7*		mg/kg		*2.0*		*86*	*40-140*		
Surrogate: 1-Chloro-octadecane	*0.91*		mg/kg		*2.0*		*45*	*40-140*		
Batch 190640020A - SW-846 3546										
LCS (LCS20064Q)						Prepared: 05-Mar-19 Analyzed: 09-Mar-19				
Phenanthrene	**2.8**		mg/kg	0.50	4.0		70	40-140		
2-Methylnaphthalene	**2.2**		mg/kg	0.50	4.0		55	40-140		
Unadjusted C11 - C22 Aromatics	**52**		mg/kg	12	68		76	40-140		
Acenaphthene	**2.5**		mg/kg	0.50	4.0		62	40-140		
Acenaphthylene	**2.5**		mg/kg	0.50	4.0		63	40-140		
Anthracene	**3.5**		mg/kg	0.50	4.0		88	40-140		
Benzo(a)anthracene	**2.9**		mg/kg	0.50	4.0		73	40-140		
Benzo(a)pyrene	**3.5**		mg/kg	0.50	4.0		88	40-140		
Benzo(b)fluoranthene	**3.1**		mg/kg	0.50	4.0		77	40-140		
Benzo(g,h,i)perylene	**3.1**		mg/kg	0.50	4.0		78	40-140		
Benzo(k)fluoranthene	**3.5**		mg/kg	0.50	4.0		87	40-140		
C19 to C36 Aliphatics	**22**		mg/kg	12	32		69	40-140		
Chrysene	**3.7**		mg/kg	0.50	4.0		91	40-140		
Dibenzo(a,h)anthracene	**3.2**		mg/kg	0.50	4.0		80	40-140		
Fluoranthene	**3.2**		mg/kg	0.50	4.0		80	40-140		
Fluorene	**2.7**		mg/kg	0.50	4.0		67	40-140		
Indeno(1,2,3-cd)pyrene	**3.0**		mg/kg	0.50	4.0		75	40-140		
Naphthalene	**2.1**		mg/kg	0.50	4.0		52	40-140		
Pyrene	**3.7**		mg/kg	2.0	4.0		93	40-140		
C9 to C18 Aliphatics	**12**		mg/kg	6.0	24		52	40-140		
Surrogate: 1-Chloro-octadecane	*1.1*		mg/kg		*2.0*		*54*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.8*		mg/kg		*2.0*		*90*	*40-140*		
Surrogate: Orthoterphenyl	*1.5*		mg/kg		*2.0*		*73*	*40-140*		
LCSD (P90640AY)						Prepared: 05-Mar-19 Analyzed: 09-Mar-19				
Benzo(k)fluoranthene	**1.3**	*	mg/kg	0.50	4.0		32	40-140	93	50

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH										
Batch 190640020A - SW-846 3546										
LCSD (P90640AY)					Prepared: 05-Mar-19 Analyzed: 09-Mar-19					
C19 to C36 Aliphatics	**7.8**	*	mg/kg	12	32		24	40-140	97	50
C9 to C18 Aliphatics	**4.2**	*	mg/kg	6.0	24		17	40-140	100	50
Chrysene	**1.3**	*	mg/kg	0.50	4.0		33	40-140	95	50
Dibenzo(a,h)anthracene	**1.2**	*	mg/kg	0.50	4.0		29	40-140	94	50
Benzo(g,h,i)perylene	**1.1**	*	mg/kg	0.50	4.0		29	40-140	93	50
Fluorene	**0.88**	*	mg/kg	0.50	4.0		22	40-140	102	50
2-Methylnaphthalene	**0.73**	*	mg/kg	0.50	4.0		18	40-140	101	50
Indeno(1,2,3-cd)pyrene	**1.0**	*	mg/kg	0.50	4.0		26	40-140	98	50
Fluoranthene	**1.1**	*	mg/kg	0.50	4.0		27	40-140	99	50
Benzo(b)fluoranthene	**1.0**	*	mg/kg	0.50	4.0		26	40-140	100	50
Benzo(a)pyrene	**1.2**	*	mg/kg	0.50	4.0		30	40-140	97	50
Benzo(a)anthracene	**1.0**	*	mg/kg	0.50	4.0		26	40-140	97	50
Anthracene	**1.2**	*	mg/kg	0.50	4.0		30	40-140	99	50
Acenaphthene	**0.80**	*	mg/kg	0.50	4.0		20	40-140	102	50
Phenanthrene	**0.92**	*	mg/kg	0.50	4.0		23	40-140	102	50
Naphthalene	**0.68**	*	mg/kg	0.50	4.0		17	40-140	102	50
Unadjusted C11 - C22 Aromatics	**18**	*	mg/kg	12	68		26	40-140	98	50
Pyrene	**1.3**	*	mg/kg	2.0	4.0		31	40-140	99	50
Acenaphthylene	**0.82**	*	mg/kg	0.50	4.0		20	40-140	102	50
Surrogate: Orthoterphenyl	*0.53*	*	mg/kg		*2.0*		*26*	*40-140*		
Surrogate: 1-Chloro-octadecane	*0.41*	*	mg/kg		*2.0*		*21*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.7*		mg/kg		*2.0*		*84*	*40-140*		
Matrix Spike Dup (P993887M321822A)			**Source: SC53666-02**		Prepared: 05-Mar-19 Analyzed: 09-Mar-19					
Fluorene	**2.1**		mg/kg	0.50	4.0	BRL	52	40-140	41	50
Benzo(a)pyrene	**2.7**		mg/kg	0.50	4.0	BRL	69	40-140	38	50
Acenaphthylene	**1.9**		mg/kg	0.50	4.0	BRL	48	40-140	43	50
Acenaphthene	**1.9**		mg/kg	0.50	4.0	BRL	48	40-140	42	50
2-Methylnaphthalene	**1.6**		mg/kg	0.50	4.0	BRL	41	40-140	47	50
Naphthalene	**1.5**	*	mg/kg	0.50	4.0	BRL	38	40-140	50	50
Benzo(a)anthracene	**2.3**		mg/kg	0.50	4.0	BRL	57	40-140	38	50
Benzo(b)fluoranthene	**2.5**		mg/kg	0.50	4.0	BRL	62	40-140	42	50
Benzo(g,h,i)perylene	**2.6**		mg/kg	0.50	4.0	BRL	65	40-140	40	50
Benzo(k)fluoranthene	**2.7**		mg/kg	0.50	4.0	BRL	67	40-140	35	50
Chrysene	**2.6**		mg/kg	0.50	4.0	BRL	66	40-140	40	50
Unadjusted C11 - C22 Aromatics	**41**		mg/kg	12	68	BRL	60	40-140	40	50
Fluoranthene	**2.7**		mg/kg	0.50	4.0	BRL	66	40-140	36	50
Anthracene	**2.7**		mg/kg	0.50	4.0	BRL	67	40-140	42	50
Indeno(1,2,3-cd)pyrene	**2.5**		mg/kg	0.50	4.0	BRL	62	40-140	38	50
Phenanthrene	**2.2**		mg/kg	0.50	4.0	BRL	55	40-140	43	50
Pyrene	**3.0**		mg/kg	2.0	4.0	BRL	76	40-140	32	50
Dibenzo(a,h)anthracene	**2.5**		mg/kg	0.50	4.0	BRL	62	40-140	40	50
Surrogate: Orthoterphenyl	*1.2*		mg/kg		*2.0*	*1.2*	*58*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.7*		mg/kg		*2.0*	*1.7*	*84*	*40-140*		
Matrix Spike Dup (P993887M321902A)			**Source: SC53666-02**		Prepared: 05-Mar-19 Analyzed: 09-Mar-19					
C19 to C36 Aliphatics	**20**		mg/kg	12	32	BRL	61	40-140	34	50
C9 to C18 Aliphatics	**10**		mg/kg	6.0	24	BRL	42	40-140	42	50
Surrogate: 1-Chloro-octadecane	*1.1*		mg/kg		*2.0*	*1.1*	*55*	*40-140*		
Matrix Spike (P993887R321702A)			**Source: SC53666-02**		Prepared: 05-Mar-19 Analyzed: 09-Mar-19					
Benzo(a)pyrene	**4.0**		mg/kg	0.50	4.0	BRL	101	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH										
Batch 190640020A - SW-846 3546										
Matrix Spike (P993887R321702A)			**Source: SC53666-02**			Prepared: 05-Mar-19 Analyzed: 09-Mar-19				
Chrysene	**3.9**		mg/kg	0.50	4.0	BRL	98	40-140		
Unadjusted C11 - C22 Aromatics	**61**		mg/kg	12	68	BRL	90	40-140		
Pyrene	**4.2**		mg/kg	2.0	4.0	BRL	105	40-140		
Phenanthrene	**3.4**		mg/kg	0.50	4.0	BRL	85	40-140		
Naphthalene	**2.5**		mg/kg	0.50	4.0	BRL	63	40-140		
Indeno(1,2,3-cd)pyrene	**3.7**		mg/kg	0.50	4.0	BRL	91	40-140		
Fluorene	**3.2**		mg/kg	0.50	4.0	BRL	79	40-140		
Fluoranthene	**3.8**		mg/kg	0.50	4.0	BRL	95	40-140		
Dibenzo(a,h)anthracene	**3.7**		mg/kg	0.50	4.0	BRL	92	40-140		
Benzo(k)fluoranthene	**3.8**		mg/kg	0.50	4.0	BRL	95	40-140		
Benzo(b)fluoranthene	**3.8**		mg/kg	0.50	4.0	BRL	95	40-140		
Benzo(g,h,i)perylene	**3.9**		mg/kg	0.50	4.0	BRL	98	40-140		
Benzo(a)anthracene	**3.4**		mg/kg	0.50	4.0	BRL	84	40-140		
Anthracene	**4.1**		mg/kg	0.50	4.0	BRL	102	40-140		
Acenaphthylene	**3.0**		mg/kg	0.50	4.0	BRL	74	40-140		
Acenaphthene	**2.9**		mg/kg	0.50	4.0	BRL	73	40-140		
2-Methylnaphthalene	**2.6**		mg/kg	0.50	4.0	BRL	66	40-140		
Surrogate: Orthoterphenyl	*1.7*		mg/kg		*2.0*	*1.7*	*86*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.7*		mg/kg		*2.0*	*1.7*	*84*	*40-140*		
Matrix Spike (P993887R321742A)			**Source: SC53666-02**			Prepared: 05-Mar-19 Analyzed: 09-Mar-19				
C19 to C36 Aliphatics	**28**		mg/kg	12	32	BRL	87	40-140		
C9 to C18 Aliphatics	**15**		mg/kg	6.0	24	BRL	64	40-140		
Surrogate: 1-Chloro-octadecane	*1.6*		mg/kg		*2.0*	*1.6*	*80*	*40-140*		
Blank (PBLK20064B)						Prepared: 05-Mar-19 Analyzed: 09-Mar-19				
Acenaphthene	< 0.50		mg/kg	0.50				-		
C19 to C36 Aliphatics	< 12		mg/kg	12				-		
2-Methylnaphthalene	< 0.50		mg/kg	0.50				-		
Acenaphthylene	< 0.50		mg/kg	0.50				-		
Anthracene	< 0.50		mg/kg	0.50				-		
Benzo(a)anthracene	< 0.50		mg/kg	0.50				-		
Benzo(a)pyrene	< 0.50		mg/kg	0.50				-		
Benzo(b)fluoranthene	< 0.50		mg/kg	0.50				-		
Benzo(g,h,i)perylene	< 0.50		mg/kg	0.50				-		
Benzo(k)fluoranthene	< 0.50		mg/kg	0.50				-		
C11 to C22 Aromatics	< 12		mg/kg	12				-		
Phenanthrene	< 0.50		mg/kg	0.50				-		
C9 to C18 Aliphatics	< 6.0		mg/kg	6.0				-		
Pyrene	< 2.0		mg/kg	2.0				-		
Unadjusted C11 - C22 Aromatics	< 12		mg/kg	12				-		
Naphthalene	< 0.50		mg/kg	0.50				-		
Indeno(1,2,3-cd)pyrene	< 0.50		mg/kg	0.50				-		
Fluorene	< 0.50		mg/kg	0.50				-		
Fluoranthene	< 0.50		mg/kg	0.50				-		
Dibenzo(a,h)anthracene	< 0.50		mg/kg	0.50				-		
Chrysene	< 0.50		mg/kg	0.50				-		
Surrogate: Orthoterphenyl	*1.4*		mg/kg		*2.0*		*70*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*1.7*		mg/kg		*2.0*		*87*	*40-140*		
Surrogate: 1-Chloro-octadecane	*1.3*		mg/kg		*2.0*		*63*	*40-140*		
MADEP VPH										

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP VPH										
Batch 19065A54A - METHOD										
Blank (BLKIXB)						Prepared: 22-Feb-19 Analyzed: 06-Mar-19				
m,p-Xylenes	< 0.1		mg/kg	0.1				-		
Unadjusted C5-C8 Aliphatics	< 5.00		mg/kg	5.00				-		
o-Xylene	< 0.1		mg/kg	0.1				-		
Naphthalene	< 0.3		mg/kg	0.3				-		
Methyl t-butyl ether	< 0.1		mg/kg	0.1				-		
Ethylbenzene	< 0.1		mg/kg	0.1				-		
C9-C12 Aliphatic Hydrocarbons	< 5.00		mg/kg	5.00				-		
C9-C10 Aromatic Hydrocarbons	< 5.00		mg/kg	5.00				-		
C5-C8 Aliphatic Hydrocarbons	< 5.00		mg/kg	5.00				-		
Unadjusted C9-C12 Aliphatics	< 5.00		mg/kg	5.00				-		
Toluene	< 0.1		mg/kg	0.1				-		
Benzene	< 0.1		mg/kg	0.1				-		
Surrogate: Trifluorotoluene-P	*1.56*		mg/kg		*1.50*		*104*	*70-130*		
Surrogate: Trifluorotoluene-F	*1.56*		mg/kg		*1.50*		*104*	*70-130*		
LCS (LCS62Q)						Prepared: 22-Feb-19 Analyzed: 06-Mar-19				
Naphthalene	**2.53**		mg/kg	0.3	2.51		101	70-130		
Unadjusted C9-C12 Aliphatics	**19.4**		mg/kg	5.00	20.1		97	70-130		
Unadjusted C5-C8 Aliphatics	**15.0**		mg/kg	5.00	15.1		99	70-130		
o-Xylene	**2.44**		mg/kg	0.1	2.50		98	70-130		
Methyl t-butyl ether	**2.57**		mg/kg	0.1	2.50		103	70-130		
m,p-Xylenes	**5.05**		mg/kg	0.1	5.02		101	70-130		
Ethylbenzene	**2.48**		mg/kg	0.1	2.51		99	70-130		
C9-C12 Aliphatic Hydrocarbons	**6.84**		mg/kg	5.00	7.53		91	70-130		
C9-C10 Aromatic Hydrocarbons	**2.54**		mg/kg	5.00	2.50		102	70-130		
C5-C8 Aliphatic Hydrocarbons	**7.31**		mg/kg	5.00	7.54		97	70-130		
Benzene	**2.55**		mg/kg	0.1	2.51		102	70-130		
Toluene	**2.52**		mg/kg	0.1	2.51		100	70-130		
Surrogate: Trifluorotoluene-F	*1.52*		mg/kg		*1.50*		*101*	*70-130*		
Surrogate: Trifluorotoluene-P	*1.55*		mg/kg		*1.50*		*103*	*70-130*		
LCSD (P90654AY)						Prepared: 22-Feb-19 Analyzed: 06-Mar-19				
Methyl t-butyl ether	**2.63**		mg/kg	0.1	2.50		105	70-130	2	25
Unadjusted C5-C8 Aliphatics	**15.5**		mg/kg	5.00	15.1		103	70-130	4	25
Unadjusted C9-C12 Aliphatics	**20.4**		mg/kg	5.00	20.1		101	70-130	5	25
o-Xylene	**2.54**		mg/kg	0.1	2.50		102	70-130	4	25
Naphthalene	**2.82**		mg/kg	0.3	2.51		112	70-130	11	25
Benzene	**2.62**		mg/kg	0.1	2.51		105	70-130	3	25
m,p-Xylenes	**5.23**		mg/kg	0.1	5.02		104	70-130	3	25
Toluene	**2.59**		mg/kg	0.1	2.51		103	70-130	3	25
C5-C8 Aliphatic Hydrocarbons	**7.67**		mg/kg	5.00	7.54		102	70-130	5	25
C9-C10 Aromatic Hydrocarbons	**2.64**		mg/kg	5.00	2.50		105	70-130	4	25
C9-C12 Aliphatic Hydrocarbons	**7.39**		mg/kg	5.00	7.53		98	70-130	8	25
Ethylbenzene	**2.56**		mg/kg	0.1	2.51		102	70-130	3	25
Surrogate: Trifluorotoluene-F	*1.54*		mg/kg		*1.50*		*103*	*70-130*		
Surrogate: Trifluorotoluene-P	*1.59*		mg/kg		*1.50*		*106*	*70-130*		
SM 2540 G %Moisture Calc										
Batch 19060820002B - General Preparation										
LCS (L06012Q)						Prepared & Analyzed: 01-Mar-19				
Moisture	**89.4**		%	0.50	89.5		100	99-101		
SW-846 6010C										

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 6010C										
Batch 190581404906 - SW-846 3050B										
Blank (P05804FBB)						Prepared: 27-Feb-19 Analyzed: 28-Feb-19				
Cadmium	< 0.500		mg/kg	0.500				-		
Nickel	< 1.00		mg/kg	1.00				-		
Zinc	< 2.00		mg/kg	2.00				-		
Thallium	< 3.00		mg/kg	3.00				-		
Silver	< 1.00		mg/kg	1.00				-		
Selenium	< 5.00		mg/kg	5.00				-		
Lead	< 1.50		mg/kg	1.50				-		
Chromium	< 1.50		mg/kg	1.50				-		
Beryllium	< 0.500		mg/kg	0.500				-		
Arsenic	< 5.00		mg/kg	5.00				-		
Antimony	< 5.00		mg/kg	5.00				-		
Copper	< 2.00		mg/kg	2.00				-		
LCS (P05804FQQ)						Prepared: 27-Feb-19 Analyzed: 28-Feb-19				
Lead	**16.3**		mg/kg	1.50	15.0		109	90-115		
Copper	**25.9**		mg/kg	2.00	25.0		104	80-120		
Zinc	**54.5**		mg/kg	2.00	50.0		109	90-115		
Thallium	**16.8**		mg/kg	3.00	15.0		112	85-115		
Silver	**5.27**		mg/kg	1.00	5.00		105	80-120		
Selenium	**14.9**		mg/kg	5.00	15.0		100	80-120		
Antimony	**55.7**		mg/kg	5.00	50.0		111	90-116		
Chromium	**21.5**		mg/kg	1.50	20.0		108	90-110		
Cadmium	**5.51**		mg/kg	0.500	5.00		110	90-115		
Beryllium	**5.26**		mg/kg	0.500	5.00		105	85-110		
Arsenic	**15.8**		mg/kg	5.00	15.0		105	80-120		
Nickel	**56.0**		mg/kg	1.00	50.0		112	90-115		
SW-846 7471B										
Batch 190591063801 - METHOD										
Blank (P05963ABB)						Prepared: 28-Feb-19 Analyzed: 01-Mar-19				
Mercury	< 0.133		mg/kg	0.133				-		
LCS (P05963AQQ)						Prepared: 28-Feb-19 Analyzed: 01-Mar-19				
Mercury	**0.0996**		mg/kg	0.0800	0.100		100	80-115		
SW-846 8260C										
Batch Q190641AA - SW-846 5035A										
LCS (LCSQ25Q)						Prepared: 22-Feb-19 Analyzed: 05-Mar-19				
Acetone	**10000**	*	ug/kg	1000	7500		136	70-130		
4-Methyl-2-pentanone	**4900**		ug/kg	500	5000		98	70-130		
4-Chlorotoluene	**960**		ug/kg	250	1000		96	70-130		
2-Hexanone	**5000**		ug/kg	500	5000		100	70-130		
2-Chlorotoluene	**980**		ug/kg	250	1000		98	70-130		
Acrylonitrile	**4600**		ug/kg	1000	5000		92	70-130		
2,2-Dichloropropane	**1100**		ug/kg	250	1000		110	70-130		
Bromoform	**950**		ug/kg	500	1000		95	70-130		
1,4-Dioxane	**25000**		ug/kg	13000	25000		99	70-130		
2-Butanone	**7500**		ug/kg	500	7500		100	70-130		
Benzene	**1100**		ug/kg	250	1000		105	70-130		
Bromobenzene	**970**		ug/kg	250	1000		97	70-130		
Bromodichloromethane	**1100**		ug/kg	250	1000		107	70-130		
1,1,1,2-Tetrachloroethane	**1000**		ug/kg	250	1000		101	70-130		
Bromomethane	**970**		ug/kg	250	1000		97	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch Q190641AA - SW-846 5035A										
LCS (LCSQ25Q)							Prepared: 22-Feb-19 Analyzed: 05-Mar-19			
Chlorobenzene	**1000**		ug/kg	250	1000		100	70-130		
Carbon Disulfide	**940**		ug/kg	250	1000		94	70-130		
Carbon Tetrachloride	**1100**		ug/kg	250	1000		113	70-130		
1,4-Dichlorobenzene	**960**		ug/kg	250	1000		96	70-130		
Bromochloromethane	**960**		ug/kg	250	1000		96	70-130		
1,2,4-Trimethylbenzene	**970**		ug/kg	250	1000		97	70-130		
1,1,1-Trichloroethane	**1100**		ug/kg	250	1000		109	70-130		
Chloroethane	**990**		ug/kg	250	1000		99	70-130		
1,1,2,2-Tetrachloroethane	**910**		ug/kg	250	1000		91	70-130		
1,1-Dichloroethane	**1000**		ug/kg	250	1000		103	70-130		
1,1-Dichloroethene	**1100**		ug/kg	250	1000		113	70-130		
1,1-Dichloropropene	**1100**		ug/kg	250	1000		108	70-130		
1,2,3-Trichlorobenzene	**960**		ug/kg	500	1000		96	70-130		
1,1,2-Trichloroethane	**1000**		ug/kg	250	1000		100	70-130		
1,2,4-Trichlorobenzene	**980**		ug/kg	500	1000		98	70-130		
1,3-Dichloropropane	**970**		ug/kg	250	1000		97	70-130		
1,2-Dibromo-3-chloropropane	**880**		ug/kg	250	1000		88	70-130		
1,2-Dibromoethane	**980**		ug/kg	250	1000		98	70-130		
1,2-Dichlorobenzene	**990**		ug/kg	250	1000		99	70-130		
1,2-Dichloroethane	**1100**		ug/kg	250	1000		114	70-130		
1,2-Dichloropropane	**1000**		ug/kg	250	1000		105	70-130		
1,3,5-Trichlorobenzene	**1000**		ug/kg	400	1000		100	70-130		
1,3,5-Trimethylbenzene	**980**		ug/kg	250	1000		98	70-130		
1,3-Dichlorobenzene	**950**		ug/kg	250	1000		95	70-130		
1,2,3-Trichloropropane	**980**		ug/kg	250	1000		98	70-130		
Tetrachloroethene	**1000**		ug/kg	250	1000		101	70-130		
n-Butylbenzene	**1000**		ug/kg	400	1000		102	70-130		
n-Propylbenzene	**950**		ug/kg	250	1000		95	70-130		
o-Xylene	**980**		ug/kg	250	1000		98	70-130		
p-Isopropyltoluene	**980**		ug/kg	250	1000		98	70-130		
sec-Butylbenzene	**970**		ug/kg	250	1000		97	70-130		
Styrene	**980**		ug/kg	250	1000		98	70-130		
t-Amyl methyl ether	**1000**		ug/kg	250	1000		103	70-130		
Naphthalene	**870**		ug/kg	250	1000		87	70-130		
tert-Butylbenzene	**950**		ug/kg	250	1000		95	70-130		
Trichloroethene	**1100**		ug/kg	250	1000		108	70-130		
Tetrahydrofuran	**4300**		ug/kg	400	5000		85	70-130		
Toluene	**980**		ug/kg	250	1000		98	70-130		
trans-1,2-Dichloroethene	**1100**		ug/kg	250	1000		107	70-130		
trans-1,3-Dichloropropene	**990**		ug/kg	250	1000		99	70-130		
trans-1,4-Dichloro-2-butene	**4700**		ug/kg	2500	5000		95	70-130		
Trichlorofluoromethane	**940**		ug/kg	250	1000		94	70-130		
Chloroform	**1100**		ug/kg	250	1000		106	70-130		
t-Butyl alcohol	**9700**		ug/kg	5000	10000		97	70-130		
Ethylbenzene	**980**		ug/kg	250	1000		98	70-130		
Methylene Chloride	**1000**		ug/kg	250	1000		105	70-130		
cis-1,3-Dichloropropene	**1100**		ug/kg	250	1000		109	70-130		
cis-1,2-Dichloroethene	**1100**		ug/kg	250	1000		109	70-130		
Dichlorodifluoromethane	**790**		ug/kg	250	1000		79	70-130		
di-Isopropyl ether	**990**		ug/kg	250	1000		99	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch Q190641AA - SW-846 5035A										
LCS (LCSQ25Q)					Prepared: 22-Feb-19 Analyzed: 05-Mar-19					
Ethanol	**58000**		ug/kg	38000	50000		116	70-130		
Dibromochloromethane	**980**		ug/kg	250	1000		98	70-130		
Chloromethane	**810**		ug/kg	250	1000		81	70-130		
Dibromomethane	**1100**		ug/kg	250	1000		109	70-130		
Freon 113	**1200**		ug/kg	500	1000		121	70-130		
Hexachlorobutadiene	**1100**		ug/kg	500	1000		107	70-130		
Isopropylbenzene	**990**		ug/kg	250	1000		99	70-130		
Vinyl Chloride	**880**		ug/kg	250	1000		88	70-130		
m+p-Xylene	**2000**		ug/kg	250	2000		101	70-130		
Methyl Tertiary Butyl Ether	**1000**		ug/kg	250	1000		102	70-130		
Ethyl t-butyl ether	**1000**		ug/kg	250	1000		100	70-130		
Surrogate: Toluene-d8	*46*		ug/kg		*50*		*92*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52*		ug/kg		*50*		*104*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*46*		ug/kg		*50*		*92*	*70-130*		
Surrogate: Dibromofluoromethane	*50*		ug/kg		*50*		*101*	*70-130*		
LCSD (LCSQ25Y)					Prepared: 22-Feb-19 Analyzed: 05-Mar-19					
1,4-Dioxane	**31000**		ug/kg	13000	25000		125	70-130	23	30
2,2-Dichloropropane	**1100**		ug/kg	250	1000		111	70-130	1	30
2-Butanone	**7200**		ug/kg	500	7500		96	70-130	5	30
2-Chlorotoluene	**980**		ug/kg	250	1000		98	70-130	0	30
2-Hexanone	**4900**		ug/kg	500	5000		98	70-130	2	30
4-Chlorotoluene	**980**		ug/kg	250	1000		98	70-130	2	30
4-Methyl-2-pentanone	**4800**		ug/kg	500	5000		97	70-130	1	30
Acetone	**9100**		ug/kg	1000	7500		121	70-130	12	30
Acrylonitrile	**4500**		ug/kg	1000	5000		90	70-130	1	30
Benzene	**1100**		ug/kg	250	1000		106	70-130	1	30
Bromobenzene	**990**		ug/kg	250	1000		99	70-130	2	30
Bromochloromethane	**970**		ug/kg	250	1000		97	70-130	0	30
Bromodichloromethane	**1100**		ug/kg	250	1000		109	70-130	2	30
Bromoform	**930**		ug/kg	500	1000		93	70-130	3	30
1,4-Dichlorobenzene	**960**		ug/kg	250	1000		96	70-130	1	30
Carbon Disulfide	**930**		ug/kg	250	1000		93	70-130	0	30
1,2,4-Trichlorobenzene	**1000**		ug/kg	500	1000		101	70-130	3	30
Bromomethane	**940**		ug/kg	250	1000		94	70-130	4	30
1,2,4-Trimethylbenzene	**970**		ug/kg	250	1000		97	70-130	0	30
n-Propylbenzene	**960**		ug/kg	250	1000		96	70-130	1	30
Carbon Tetrachloride	**1100**		ug/kg	250	1000		112	70-130	0	30
1,1,2-Trichloroethane	**1000**		ug/kg	250	1000		101	70-130	1	30
1,1-Dichloroethane	**1000**		ug/kg	250	1000		103	70-130	0	30
1,1-Dichloroethene	**1100**		ug/kg	250	1000		110	70-130	3	30
1,1-Dichloropropene	**1100**		ug/kg	250	1000		109	70-130	1	30
1,2-Dibromo-3-chloropropane	**890**		ug/kg	250	1000		89	70-130	1	30
1,2,3-Trichloropropane	**980**		ug/kg	250	1000		98	70-130	0	30
1,3-Dichloropropane	**980**		ug/kg	250	1000		98	70-130	1	30
1,2-Dibromoethane	**980**		ug/kg	250	1000		98	70-130	0	30
1,2-Dichlorobenzene	**990**		ug/kg	250	1000		99	70-130	1	30
1,2-Dichloroethane	**1200**		ug/kg	250	1000		116	70-130	1	30
1,2-Dichloropropane	**1100**		ug/kg	250	1000		107	70-130	2	30
1,3,5-Trichlorobenzene	**1000**		ug/kg	400	1000		105	70-130	4	30
1,3,5-Trimethylbenzene	**990**		ug/kg	250	1000		99	70-130	1	30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch Q190641AA - SW-846 5035A										
LCSD (LCSQ25Y)						Prepared: 22-Feb-19 Analyzed: 05-Mar-19				
1,3-Dichlorobenzene	**980**		ug/kg	250	1000		98	70-130	3	30
1,2,3-Trichlorobenzene	**1000**		ug/kg	500	1000		101	70-130	5	30
Tetrahydrofuran	**4500**		ug/kg	400	5000		89	70-130	5	30
n-Butylbenzene	**1000**		ug/kg	400	1000		104	70-130	2	30
Styrene	**980**		ug/kg	250	1000		98	70-130	0	30
o-Xylene	**980**		ug/kg	250	1000		98	70-130	0	30
p-Isopropyltoluene	**1000**		ug/kg	250	1000		101	70-130	3	30
sec-Butylbenzene	**990**		ug/kg	250	1000		99	70-130	2	30
t-Amyl methyl ether	**1100**		ug/kg	250	1000		106	70-130	2	30
Naphthalene	**890**		ug/kg	250	1000		89	70-130	2	30
Tetrachloroethene	**1000**		ug/kg	250	1000		102	70-130	1	30
Methyl Tertiary Butyl Ether	**1000**		ug/kg	250	1000		102	70-130	0	30
Toluene	**990**		ug/kg	250	1000		99	70-130	1	30
trans-1,2-Dichloroethene	**1100**		ug/kg	250	1000		108	70-130	1	30
trans-1,3-Dichloropropene	**990**		ug/kg	250	1000		99	70-130	0	30
trans-1,4-Dichloro-2-butene	**4900**		ug/kg	2500	5000		98	70-130	3	30
Trichloroethene	**1100**		ug/kg	250	1000		108	70-130	0	30
Trichlorofluoromethane	**910**		ug/kg	250	1000		91	70-130	3	30
Vinyl Chloride	**850**		ug/kg	250	1000		85	70-130	3	30
tert-Butylbenzene	**950**		ug/kg	250	1000		95	70-130	1	30
Ethanol	**63000**		ug/kg	38000	50000		127	70-130	9	30
Chloroethane	**980**		ug/kg	250	1000		98	70-130	1	30
Chloroform	**1100**		ug/kg	250	1000		107	70-130	2	30
Chloromethane	**800**		ug/kg	250	1000		80	70-130	1	30
cis-1,2-Dichloroethene	**1100**		ug/kg	250	1000		108	70-130	1	30
cis-1,3-Dichloropropene	**1100**		ug/kg	250	1000		107	70-130	2	30
Dibromochloromethane	**1000**		ug/kg	250	1000		101	70-130	3	30
Dibromomethane	**1100**		ug/kg	250	1000		108	70-130	1	30
1,1,2,2-Tetrachloroethane	**950**		ug/kg	250	1000		95	70-130	5	30
di-Isopropyl ether	**1000**		ug/kg	250	1000		100	70-130	1	30
Methylene Chloride	**1000**		ug/kg	250	1000		104	70-130	0	30
Ethyl t-butyl ether	**1000**		ug/kg	250	1000		101	70-130	1	30
Ethylbenzene	**980**		ug/kg	250	1000		98	70-130	0	30
Freon 113	**1200**		ug/kg	500	1000		116	70-130	4	30
Hexachlorobutadiene	**1100**		ug/kg	500	1000		109	70-130	2	30
Isopropylbenzene	**990**		ug/kg	250	1000		99	70-130	0	30
m+p-Xylene	**2000**		ug/kg	250	2000		99	70-130	2	30
Chlorobenzene	**1000**		ug/kg	250	1000		101	70-130	0	30
Dichlorodifluoromethane	**760**		ug/kg	250	1000		76	70-130	4	30
t-Butyl alcohol	**9800**		ug/kg	5000	10000		98	70-130	0	30
1,1,1,2-Tetrachloroethane	**1000**		ug/kg	250	1000		100	70-130	1	30
1,1,1-Trichloroethane	**1100**		ug/kg	250	1000		109	70-130	0	30
Surrogate: Toluene-d8	*46*		ug/kg		*50*		*93*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51*		ug/kg		*50*		*103*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*46*		ug/kg		*50*		*91*	*70-130*		
Surrogate: Dibromofluoromethane	*50*		ug/kg		*50*		*100*	*70-130*		
LCS (LCSQ26Q)						Prepared: 22-Feb-19 Analyzed: 05-Mar-19				
Ethyl Ether	**1100**		ug/kg	250	1000		109	70-130		
LCSD (LCSQ26Y)						Prepared: 22-Feb-19 Analyzed: 05-Mar-19				
Ethyl Ether	**1100**		ug/kg	250	1000		106	70-130	2	30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch Q190641AA - SW-846 5035A										
Blank (VBLKQ25B)					Prepared: 22-Feb-19 Analyzed: 05-Mar-19					
Ethylbenzene	< 250		ug/kg	250				-		
Freon 113	< 500		ug/kg	500				-		
Hexachlorobutadiene	< 500		ug/kg	500				-		
Isopropylbenzene	< 250		ug/kg	250				-		
Methyl Tertiary Butyl Ether	< 250		ug/kg	250				-		
Methylene Chloride	< 250		ug/kg	250				-		
m+p-Xylene	< 250		ug/kg	250				-		
Ethyl t-butyl ether	< 250		ug/kg	250				-		
Ethanol	< 38000		ug/kg	38000				-		
p-Isopropyltoluene	< 250		ug/kg	250				-		
di-Isopropyl ether	< 250		ug/kg	250				-		
Dichlorodifluoromethane	< 250		ug/kg	250				-		
Dibromomethane	< 250		ug/kg	250				-		
Dibromochloromethane	< 250		ug/kg	250				-		
cis-1,3-Dichloropropene	< 250		ug/kg	250				-		
cis-1,2-Dichloroethene	< 250		ug/kg	250				-		
Ethyl Ether	< 250		ug/kg	250				-		
Tetrachloroethene	< 250		ug/kg	250				-		
1,2,4-Trimethylbenzene	< 250		ug/kg	250				-		
Trichlorofluoromethane	< 250		ug/kg	250				-		
Trichloroethene	< 250		ug/kg	250				-		
trans-1,4-Dichloro-2-butene	< 2500		ug/kg	2500				-		
trans-1,3-Dichloropropene	< 250		ug/kg	250				-		
trans-1,2-Dichloroethene	< 250		ug/kg	250				-		
Vinyl Chloride	< 250		ug/kg	250				-		
n-Butylbenzene	< 400		ug/kg	400				-		
Tetrahydrofuran	< 400		ug/kg	400				-		
Chloromethane	< 250		ug/kg	250				-		
tert-Butylbenzene	< 250		ug/kg	250				-		
t-Butyl alcohol	< 5000		ug/kg	5000				-		
t-Amyl methyl ether	< 250		ug/kg	250				-		
Styrene	< 250		ug/kg	250				-		
sec-Butylbenzene	< 250		ug/kg	250				-		
Naphthalene	< 250		ug/kg	250				-		
o-Xylene	< 250		ug/kg	250				-		
Toluene	< 250		ug/kg	250				-		
1,1,1-Trichloroethane	< 250		ug/kg	250				-		
1,3-Dichloropropane	< 250		ug/kg	250				-		
1,3-Dichlorobenzene	< 250		ug/kg	250				-		
1,3,5-Trimethylbenzene	< 250		ug/kg	250				-		
1,3,5-Trichlorobenzene	< 400		ug/kg	400				-		
1,2-Dichloropropane	< 250		ug/kg	250				-		
1,2-Dichloroethane	< 250		ug/kg	250				-		
1,2-Dichlorobenzene	< 250		ug/kg	250				-		
1,2-Dibromoethane	< 250		ug/kg	250				-		
1,4-Dichlorobenzene	< 250		ug/kg	250				-		
1,1,1,2-Tetrachloroethane	< 250		ug/kg	250				-		
1,1-Dichloropropene	< 250		ug/kg	250				-		
1,1,2,2-Tetrachloroethane	< 250		ug/kg	250				-		
1,1,2-Trichloroethane	< 250		ug/kg	250				-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch Q190641AA - SW-846 5035A										
Blank (VBLKQ25B)						Prepared: 22-Feb-19 Analyzed: 05-Mar-19				
1,1-Dichloroethane	< 250		ug/kg	250				-		
1,1-Dichloroethene	< 250		ug/kg	250				-		
Chloroform	< 250		ug/kg	250				-		
1,2,3-Trichlorobenzene	< 500		ug/kg	500				-		
n-Propylbenzene	< 250		ug/kg	250				-		
1,2,3-Trichloropropane	< 250		ug/kg	250				-		
1,2,4-Trichlorobenzene	< 500		ug/kg	500				-		
1,2-Dibromo-3-chloropropane	< 250		ug/kg	250				-		
4-Methyl-2-pentanone	< 500		ug/kg	500				-		
Bromomethane	< 250		ug/kg	250				-		
Bromoform	< 500		ug/kg	500				-		
Bromodichloromethane	< 250		ug/kg	250				-		
Bromochloromethane	< 250		ug/kg	250				-		
Bromobenzene	< 250		ug/kg	250				-		
Benzene	< 250		ug/kg	250				-		
Acrylonitrile	< 1000		ug/kg	1000				-		
Carbon Disulfide	< 250		ug/kg	250				-		
Acetone	< 1000		ug/kg	1000				-		
Carbon Tetrachloride	< 250		ug/kg	250				-		
4-Chlorotoluene	< 250		ug/kg	250				-		
Chlorobenzene	< 250		ug/kg	250				-		
1,4-Dioxane	< 13000		ug/kg	13000				-		
2-Hexanone	< 500		ug/kg	500				-		
2-Chlorotoluene	< 250		ug/kg	250				-		
2-Butanone	< 500		ug/kg	500				-		
2,2-Dichloropropane	< 250		ug/kg	250				-		
Chloroethane	< 250		ug/kg	250				-		
Surrogate: Dibromofluoromethane	*47*		ug/kg		*50*		*94*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*45*		ug/kg		*50*		*91*	*70-130*		
Surrogate: Toluene-d8	*44*		ug/kg		*50*		*89*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*50*		ug/kg		*50*		*100*	*70-130*		
SW-846 8270D										
Batch 19063SLC026 - SW-846 3546										
LCS (063LCLCS2Q)						Prepared: 05-Mar-19 Analyzed: 06-Mar-19				
Pentachloronitrobenzene	**1500**		ug/kg	170	1670		90	40-140		
LCS (063LCLCSQ)						Prepared: 05-Mar-19 Analyzed: 06-Mar-19				
4-Chlorophenyl-phenylether	**1160**		ug/kg	43	1670		69	40-140		
4-Methylphenol	**1280**		ug/kg	33	1670		77	30-130		
4-Nitroaniline	**1140**		ug/kg	170	1670		68	40-140		
4-Nitrophenol	**1470**		ug/kg	500	1670		88	30-130		
Acenaphthene	**1280**		ug/kg	17	1670		77	40-140		
Acenaphthylene	**1360**		ug/kg	17	1670		82	40-140		
Acetophenone	**1240**		ug/kg	50	1670		74	40-140		
Aniline	**841**		ug/kg	500	1670		50	40-140		
Benzo(g,h,i)perylene	**1650**		ug/kg	17	1670		99	40-140		
Atrazine	**1490**		ug/kg	430	1670		90	40-140		
2,4-Dinitrotoluene	**1340**		ug/kg	170	1670		81	40-140		
Benzaldehyde	**1160**		ug/kg	170	1670		70	40-140		
Benzidine	**4020**		ug/kg	1000	8330		48	40-140		
Benzo(a)anthracene	**1490**		ug/kg	17	1670		90	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8270D										
Batch 19063SLC026 - SW-846 3546										
LCS (063LCLCSQ)							Prepared: 05-Mar-19 Analyzed: 06-Mar-19			
Benzo(a)pyrene	**1590**		ug/kg	17	1670		95	40-140		
Benzo(b)fluoranthene	**1480**		ug/kg	17	1670		89	40-140		
4-Chloroaniline	**533**	*	ug/kg	170	1670		32	40-140		
Anthracene	**1530**		ug/kg	17	1670		92	40-140		
2-Chlorophenol	**1300**		ug/kg	37	1670		78	30-130		
Benzo(k)fluoranthene	**1600**		ug/kg	17	1670		96	40-140		
1-Methylnaphthalene	**1220**		ug/kg	17	1670		73	40-140		
2,3,4,6-Tetrachlorophenol	**1210**		ug/kg	170	1670		73	30-130		
2,4,5-Trichlorophenol	**1300**		ug/kg	67	1670		78	30-130		
2,4,6-Trichlorophenol	**1260**		ug/kg	57	1670		76	30-130		
2,4-Dichlorophenol	**1260**		ug/kg	43	1670		76	30-130		
2,4-Dimethylphenol	**1090**		ug/kg	67	1670		65	30-130		
2,4-Dinitrophenol	**2270**		ug/kg	1000	3330		68	30-130		
2-Chloronaphthalene	**1560**		ug/kg	33	1670		94	40-140		
1,4-Dichlorobenzene	**1110**		ug/kg	37	1670		67	40-140		
4-Chloro-3-methylphenol	**1390**		ug/kg	50	1670		84	30-130		
2-Methylnaphthalene	**1190**		ug/kg	33	1670		72	40-140		
2-Methylphenol	**1200**		ug/kg	67	1670		72	30-130		
2-Nitroaniline	**1440**		ug/kg	50	1670		87	40-140		
2-Nitrophenol	**1260**		ug/kg	57	1670		76	30-130		
3,3'-Dichlorobenzidine	**826**		ug/kg	330	1670		50	40-140		
3-Nitroaniline	**1200**		ug/kg	170	1670		72	40-140		
4,6-Dinitro-2-methylphenol	**1430**		ug/kg	500	1670		86	30-130		
4-Bromophenyl-phenylether	**1290**		ug/kg	50	1670		77	40-140		
2,6-Dinitrotoluene	**1350**		ug/kg	50	1670		81	40-140		
Phenanthrene	**1520**		ug/kg	17	1670		91	40-140		
Hexachloroethane	**1100**		ug/kg	170	1670		66	40-140		
Benzoic acid	**2820**		ug/kg	500	3330		85	30-130		
Isophorone	**1280**		ug/kg	37	1670		77	40-140		
1,2,4-Trichlorobenzene	**1090**		ug/kg	50	1670		65	40-140		
Nitrobenzene	**1250**		ug/kg	67	1670		75	40-140		
N-Nitrosodimethylamine	**1200**		ug/kg	170	1670		72	40-140		
N-Nitroso-di-n-propylamine	**1270**		ug/kg	50	1670		76	40-140		
Hexachlorocyclopentadiene	**1600**		ug/kg	500	3330		48	40-140		
Pentachlorophenol	**1240**		ug/kg	170	1670		74	30-130		
Indeno(1,2,3-cd)pyrene	**1640**		ug/kg	17	1670		98	40-140		
Phenol	**1260**		ug/kg	37	1670		76	30-130		
Pyrene	**1450**		ug/kg	17	1670		87	40-140		
Pyridine	**667**		ug/kg	170	1670		40	40-140		
1,1'-Biphenyl	**1350**		ug/kg	37	1670		81	40-140		
1,2-Diphenylhydrazine	**1750**		ug/kg	43	1670		105	40-140		
1,2,4,5-Tetrachlorobenzene	**1060**		ug/kg	37	1670		63	40-140		
1,3-Dichlorobenzene	**1070**		ug/kg	37	1670		64	40-140		
1,2-Dichlorobenzene	**1120**		ug/kg	50	1670		67	40-140		
N-Nitrosodiphenylamine	**1570**		ug/kg	37	1670		94	40-140		
Dibenz(a,h)anthracene	**1720**		ug/kg	17	1670		103	40-140		
Benzyl alcohol	**1500**		ug/kg	500	1670		90	30-130		
bis(2-Chloroethoxy)methane	**1280**		ug/kg	37	1670		77	40-140		
bis(2-Chloroethyl)ether	**1220**		ug/kg	50	1670		73	40-140		
bis(2-Chloroisopropyl)ether	**1210**		ug/kg	43	1670		73	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8270D										
Batch 19063SLC026 - SW-846 3546										
LCS (063LCLCSQ)						Prepared: 05-Mar-19 Analyzed: 06-Mar-19				
bis(2-Ethylhexyl)phthalate	**1740**		ug/kg	170	1670		105	40-140		
Butylbenzylphthalate	**1720**		ug/kg	170	1670		103	40-140		
Caprolactam	**1360**		ug/kg	170	1670		82	40-140		
Naphthalene	**1160**		ug/kg	17	1670		70	40-140		
Chrysene	**1480**		ug/kg	17	1670		89	40-140		
Hexachlorobutadiene	**966**		ug/kg	77	1670		58	40-140		
Dibenzofuran	**1250**		ug/kg	37	1670		75	40-140		
Diethylphthalate	**1360**		ug/kg	170	1670		82	40-140		
Dimethylphthalate	**1320**		ug/kg	170	1670		79	40-140		
Di-n-butylphthalate	**1700**		ug/kg	170	1670		102	40-140		
Di-n-octylphthalate	**1830**		ug/kg	170	1670		110	40-140		
Fluoranthene	**1440**		ug/kg	17	1670		87	40-140		
Fluorene	**1310**		ug/kg	17	1670		78	40-140		
Hexachlorobenzene	**1310**		ug/kg	17	1670		79	40-140		
Carbazole	**1620**		ug/kg	37	1670		97	40-140		
Surrogate: 2-Fluorobiphenyl	*2480*		ug/kg		*3330*		*74*	*30-130*		
Surrogate: 2-Fluorophenol	*4990*		ug/kg		*6670*		*75*	*30-130*		
Surrogate: Phenol-d6	*5080*		ug/kg		*6670*		*76*	*30-130*		
Surrogate: Nitrobenzene-d5	*2460*		ug/kg		*3330*		*74*	*30-130*		
Surrogate: Terphenyl-d14	*2890*		ug/kg		*3330*		*87*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*4530*		ug/kg		*6670*		*68*	*30-130*		
LCSD (P3LCLCSY)						Prepared: 05-Mar-19 Analyzed: 06-Mar-19				
Pentachloronitrobenzene	**1420**		ug/kg	170	1670		85	40-140	5	30
Surrogate: 2-Fluorobiphenyl	*2360*		ug/kg		*3330*		*71*	*30-130*		
Surrogate: Terphenyl-d14	*3240*		ug/kg		*3330*		*97*	*30-130*		
Surrogate: Nitrobenzene-d5	*2210*		ug/kg		*3330*		*66*	*30-130*		
Blank (SBLKLC063B)						Prepared: 05-Mar-19 Analyzed: 06-Mar-19				
Benzidine	< 1000		ug/kg	1000				-		
4-Methylphenol	< 33		ug/kg	33				-		
Benzaldehyde	< 170		ug/kg	170				-		
2-Nitrophenol	< 57		ug/kg	57				-		
3,3'-Dichlorobenzidine	< 330		ug/kg	330				-		
3-Nitroaniline	< 170		ug/kg	170				-		
4,6-Dinitro-2-methylphenol	< 500		ug/kg	500				-		
4-Bromophenyl-phenylether	< 50		ug/kg	50				-		
4-Chloro-3-methylphenol	< 50		ug/kg	50				-		
2-Methylphenol	< 67		ug/kg	67				-		
4-Chlorophenyl-phenylether	< 43		ug/kg	43				-		
2-Methylnaphthalene	< 33		ug/kg	33				-		
4-Nitroaniline	< 170		ug/kg	170				-		
4-Nitrophenol	< 500		ug/kg	500				-		
Acenaphthene	< 17		ug/kg	17				-		
Acenaphthylene	< 17		ug/kg	17				-		
Acetophenone	< 50		ug/kg	50				-		
Aniline	< 500		ug/kg	500				-		
Anthracene	< 17		ug/kg	17				-		
Benzo(a)pyrene	< 17		ug/kg	17				-		
4-Chloroaniline	< 170		ug/kg	170				-		
2,4,5-Trichlorophenol	< 67		ug/kg	67				-		
1,1'-Biphenyl	< 37		ug/kg	37				-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8270D										
Batch 19063SLC026 - SW-846 3546										
Blank (SBLKLC063B)						Prepared: 05-Mar-19 Analyzed: 06-Mar-19				
1,2,4,5-Tetrachlorobenzene	< 37		ug/kg	37				-		
1,2,4-Trichlorobenzene	< 50		ug/kg	50				-		
1,2-Dichlorobenzene	< 50		ug/kg	50				-		
1,2-Diphenylhydrazine	< 43		ug/kg	43				-		
1,3-Dichlorobenzene	< 37		ug/kg	37				-		
1,4-Dichlorobenzene	< 37		ug/kg	37				-		
2-Nitroaniline	< 50		ug/kg	50				-		
2,3,4,6-Tetrachlorophenol	< 170		ug/kg	170				-		
Benzo(a)anthracene	< 17		ug/kg	17				-		
2,4,6-Trichlorophenol	< 57		ug/kg	57				-		
2,4-Dichlorophenol	< 43		ug/kg	43				-		
2,4-Dimethylphenol	< 67		ug/kg	67				-		
2,4-Dinitrophenol	< 1000		ug/kg	1000				-		
2,4-Dinitrotoluene	< 170		ug/kg	170				-		
2,6-Dinitrotoluene	< 50		ug/kg	50				-		
2-Chloronaphthalene	< 33		ug/kg	33				-		
2-Chlorophenol	< 37		ug/kg	37				-		
1-Methylnaphthalene	< 17		ug/kg	17				-		
N-Nitrosodimethylamine	< 170		ug/kg	170				-		
Hexachlorobenzene	< 17		ug/kg	17				-		
Atrazine	< 430		ug/kg	430				-		
Hexachlorobutadiene	< 77		ug/kg	77				-		
Hexachlorocyclopentadiene	< 500		ug/kg	500				-		
Hexachloroethane	< 170		ug/kg	170				-		
Indeno(1,2,3-cd)pyrene	< 17		ug/kg	17				-		
Isophorone	< 37		ug/kg	37				-		
Benzo(b)fluoranthene	< 17		ug/kg	17				-		
Nitrobenzene	< 67		ug/kg	67				-		
Fluorene	< 17		ug/kg	17				-		
N-Nitroso-di-n-propylamine	< 50		ug/kg	50				-		
N-Nitrosodiphenylamine	< 37		ug/kg	37				-		
Pentachloronitrobenzene	< 170		ug/kg	170				-		
Pentachlorophenol	< 170		ug/kg	170				-		
Phenanthrene	< 17		ug/kg	17				-		
Phenol	< 37		ug/kg	37				-		
Pyrene	< 17		ug/kg	17				-		
Pyridine	< 170		ug/kg	170				-		
Naphthalene	< 17		ug/kg	17				-		
Carbazole	< 37		ug/kg	37				-		
Benzoic acid	< 500		ug/kg	500				-		
Benzyl alcohol	< 500		ug/kg	500				-		
bis(2-Chloroethoxy)methane	< 37		ug/kg	37				-		
bis(2-Chloroethyl)ether	< 50		ug/kg	50				-		
bis(2-Chloroisopropyl)ether	< 43		ug/kg	43				-		
bis(2-Ethylhexyl)phthalate	< 170		ug/kg	170				-		
Benzo(g,h,i)perylene	< 17		ug/kg	17				-		
Benzo(k)fluoranthene	< 17		ug/kg	17				-		
Caprolactam	< 170		ug/kg	170				-		
Butylbenzylphthalate	< 170		ug/kg	170				-		
Chrysene	< 17		ug/kg	17				-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8270D										
Batch 19063SLC026 - SW-846 3546										
Blank (SBLKLC063B)						Prepared: 05-Mar-19 Analyzed: 06-Mar-19				
Dibenz(a,h)anthracene	< 17		ug/kg	17				-		
Dibenzofuran	< 37		ug/kg	37				-		
Diethylphthalate	< 170		ug/kg	170				-		
Dimethylphthalate	< 170		ug/kg	170				-		
Di-n-butylphthalate	< 170		ug/kg	170				-		
Di-n-octylphthalate	< 170		ug/kg	170				-		
Fluoranthene	< 17		ug/kg	17				-		
Surrogate: Phenol-d6	*4220*		ug/kg		*6670*		*63*	*30-130*		
Surrogate: Terphenyl-d14	*2810*		ug/kg		*3330*		*84*	*30-130*		
Surrogate: 2-Fluorophenol	*4400*		ug/kg		*6670*		*66*	*30-130*		
Surrogate: Nitrobenzene-d5	*2160*		ug/kg		*3330*		*65*	*30-130*		
Surrogate: 2-Fluorobiphenyl	*2140*		ug/kg		*3330*		*64*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*3860*		ug/kg		*6670*		*58*	*30-130*		

Notes and Definitions

*	Outside of specification
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

SC 53666 PW

eurofins | Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page: 1 of 1

Special Handling:

X Standard TAT - 7 to 10 business days

Rush TAT - Date Needed: _____

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: samsel@cdwconsultants.com

Telephone #:

Project Mgr: Sue Cabalon

Invoice To: CDW Consultants Inc
6 Huron Drive
Natick MA 01760
508-875-2657

P.O No.: _____ Quote #: _____

Project No: _____

Site Name: Manchester Memorial School

Location: Manchester-by the sea State: MA

Sampler(s): S. Amsel

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=_____ 12=_____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

List Preservative Code below: 7 | 7

QA/QC Reporting Notes:
* additional charges may apply

MA DEP MCP CAM Report? Yes No
CT DPH RCP Report? Yes No
Standard No QC
DQA*
ASP A* ASP B*
NJ Reduced* NJ Full*
Tier II* Tier IV*
Other:
State-specific reporting standards:

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analysis: VPH	EPH	PAH	VOCs	TPP metals (PAH)	Check if chlorinated
SC 53666-01	CDW-MW-1	2/22/19	900	G	So	3	3			X	X	X	X	X	
-02	CDW-MW2	2/22/19	1006	G	So	3	3			X	X	X	X	X	
-03	CDW-MW-3	2/22/19	1130	G	So	3	3			X	X	X	X	X	
-04	CDW-MW-4	2/22/19	1330	G	So	3	3			X	X	X	X	X	

Relinquished by:	Received by:	Date:	Time:	Temp °C
		2-26-19	1005	Observed 2.6
		2/26/19	1554	Correction Factor 0
				Corrected 2.6
				IR ID # 01

EDD format: _____

E-mail to: samsel@cdwconsultants.com

Condition upon receipt: Custody Seals: Present Intact Broken

Ambient Iced X Refrigerated DI VOA Frozen Soil Jar Frozen

S.C 53666 PW VIA

eurofins | Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

X Standard TAT - 7 to 10 business days

Rush TAT - Date Needed: _____

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: samsel@cdwconsultants.com

Telephone #:

Project Mgr: Sue Cahalan

Invoice To: CDW Consultants Inc
6 Huron Drive
Natick MA 01760
508-875-2657

P.O No.: _____ Quote #: _____

Project No: _____

Site Name: Manchester Memorial School

Location: Manchester-by the Sea State: MA

Sampler(s): S. Amsel

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=_____ 12=_____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	List Preservative Code below: 7	Analysis: VPH	EPH	PAH	VOCs	TPP metals (PAHs)					Check if chlorinated
SC 53666-01	CDW-MW-1	2/22/19	900	G	So	3	3			X	X	X	X	X	X					
-02	CDW-MW2	2/22/19	1006	G	So	3	3			X	X	X	X	X	X					
-03	CDW-MW-3	2/22/19	1130	G	So	3	3			X	X	X	X	X	X					
-04	CDW-MW-4	2/22/19	1330	G	So	3	3			X	X	X	X	X	X					

QA/QC Reporting Notes:
* additional charges may apply

MA DEP MCP CAM Report? Yes No
CT DPH RCP Report? Yes No
Standard No QC
DQA*
ASP A* ASP B*
NJ Reduced* NJ Full*
Tier II* Tier IV*
Other: _____
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:
		2-26-19	1005
		2/26/19	1554

Temp °C: Observed 2.6 Correction Factor 0 Corrected 2.6 IR ID # 01

EDD format: _____

E-mail to: samsel@cdwconsultants.com

Condition upon receipt: Custody Seals: Present Intact Broken
Ambient Iced Refrigerated DI VOA Frozen Soil Jar Frozen

S.C 53666 PW: V14

eurofins | Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- [X] Standard TAT - 7 to 10 business days
- [ ] Rush TAT - Date Needed: _____

All TAT's subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: samsel@cdwconsultants.com

Telephone #:

Project Mgr: Sue Cabalon

Invoice To: CDW Consultants Inc
6 Huron Drive
Natick MA 01760
508-875-2657

P.O No.: _____ Quote #: _____

Project No:

Site Name: Manchester Memorial School

Location: Manchester-by the Sea State: MA

Sampler(s): S. Amsel

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=_____ 12=_____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=_____ X2=_____ X3=_____

G= Grab C=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analysis: VPH	EPH	PAH	VOCs	TPP metals (PAH)	List Preservative Code below: 7	7	Check if chlorinated	QA/QC Reporting Notes: * additional charges may appply
SC53666-01	CDW-MW-1	2/22/19	900	G	So	3	3			X	X	X	X	X			☐	
-02	CDW-MW2	2/22/19	1006	G	So	3	3			X	X	X	X	X			☐	
-03	CDW-MW-3	2/22/19	1130	G	So	3	3			X	X	X	X	X			☐	
-04	CDW-MW-4	2/22/19	1330	G	So	3	3			X	X	X	X	X			☐	
-05	Trip Blank	2/22/19			T	1				X							☐	client notified TB was added 2/28/19 e
																	☐	
																	☐	
																	☐	
																	☐	
																	☐	

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC ☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: _____
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp °C
		2-26-19	1005	Observed 2.6
		2/26/19	1559	Correction Factor 0
				Corrected 2.6
				IR ID # 01

EDD format:

E-mail to: samsel@cdwconsultants.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☑ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

PW

Batch Summary

190581404906

Subcontracted Analyses

P05804FBB
P05804FQQ
SC53666-01 (CDW-MW-1)
SC53666-02 (CDW-MW-2)
SC53666-03 (CDW-MW-3)
SC53666-04 (CDW-MW-4)

190590017A

Subcontracted Analyses

LCS17059Q
P90597AY
PBLK17059B
SC53666-01 (CDW-MW-1)
SC53666-02 (CDW-MW-2)
SC53666-03 (CDW-MW-3)
SC53666-04 (CDW-MW-4)

190591063801

Subcontracted Analyses

P05963ABB
P05963AQQ
SC53666-01 (CDW-MW-1)
SC53666-02 (CDW-MW-2)
SC53666-03 (CDW-MW-3)
SC53666-04 (CDW-MW-4)

19060820002B

Subcontracted Analyses

L06012Q
SC53666-01 (CDW-MW-1)
SC53666-02 (CDW-MW-2)
SC53666-03 (CDW-MW-3)
SC53666-04 (CDW-MW-4)

19063SLC026

Subcontracted Analyses

063LCLCS2Q
063LCLCSQ
P3LCLCSY
SBLKLC063B
SC53666-01 (CDW-MW-1)
SC53666-02 (CDW-MW-2)
SC53666-03 (CDW-MW-3)
SC53666-04 (CDW-MW-4)

190640020A

Subcontracted Analyses

LCS20064Q
P90640AY
P993887M321822A
P993887M321902A
P993887R321702A
P993887R321742A
PBLK20064B
SC53666-01RE1 (CDW-MW-1)
SC53666-02RE1 (CDW-MW-2)
SC53666-03RE1 (CDW-MW-3)
SC53666-04RE1 (CDW-MW-4)

19065A54A

Subcontracted Analyses

BLKIXB
LCS62Q
P90654AY
SC53666-01 (CDW-MW-1)
SC53666-02 (CDW-MW-2)
SC53666-03 (CDW-MW-3)
SC53666-04 (CDW-MW-4)
SC53666-05 (Trip Blank)

Q190641AA

Subcontracted Analyses

LCSQ25Q
LCSQ25Y
LCSQ26Q
LCSQ26Y
SC53666-01 (CDW-MW-1)
SC53666-02 (CDW-MW-2)
SC53666-03 (CDW-MW-3)
SC53666-04 (CDW-MW-4)
VBLKQ25B

APPENDIX C

eurofins | Spectrum Analytical

☑ Final Report
☐ Revised Report

Report Date:
18-Mar-19 16:09

Laboratory Report
SC53767

CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760
Attn: Susan Cahalan-Roach

Project: Manchester Memorial School - MA
Project #: [none]

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393

Authorized by:

Andrew Fenton
Quality Services Manager



Eurofins Spectrum Analytical holds primary certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 40 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. is currently accredited for the specific method or analyte indicated. Please refer to our 'Quality' web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Eurofins Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC53767

Project: Manchester Memorial School - MA

Project Number: [none]

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC53767-01	CDW-MW-1	Ground Water	01-Mar-19 14:00	05-Mar-19 15:20
SC53767-02	CDW-MW-2	Ground Water	01-Mar-19 10:00	05-Mar-19 15:20
SC53767-03	CDW-MW-3	Ground Water	01-Mar-19 11:30	05-Mar-19 15:20
SC53767-04	CDW-MW-4	Ground Water	01-Mar-19 13:00	05-Mar-19 15:20
SC53767-05	Trip Blank	Trip Blank	01-Mar-19 00:00	05-Mar-19 15:20

The following outlines the condition of all VPH samples contained within this report upon laboratory receipt.

Matrices	Ground Water		
Containers	✓ Satisfactory		
Sample Preservative	**Aqueous** (acid preserved)	✓ N/A pH≤2 pH>2	
	Soil or Sediment	N/A Samples not received in Methanol	ml Methanol/g soil 1:1 +/-25% Other
		Samples received in Methanol: covering soil/sediment not covering soil/sediment	
		Samples received in air-tight container	
Temperature	Received on ice ✓ Received at 4 ± 2 ºC		

Were all QA/QC procedures followed as required by the VPH method? *Yes*
Were any significant modifications made to the VPH method as specified in section 11.3? *No*
Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

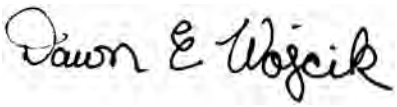
The following outlines the condition of all EPH samples contained within this report upon laboratory receipt.

Matrices	Ground Water
Containers	✓ Satisfactory
Aqueous Preservative	✓ N/A pH≤2 pH>2 pH adjusted to <2 in lab
Temperature	Received on ice ✓ Received at 4 ± 2 ºC

Were all QA/QC procedures followed as required by the EPH method? *Yes*
Were any significant modifications made to the EPH method as specified in Section 11.3? *No*
Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Authorized by:



Dawn E. Wojcik
Laboratory Director

MassDEP Analytical Protocol Certification Form

Laboratory Name: Eurofins Spectrum Analytical, Inc.	**Project #:** [none]
Project Location: Manchester Memorial School - MA	**RTN:**
This form provides certifications for the following data set:	SC53767-01 through SC53767-05
Matrices: Ground Water Trip Blank	

CAM Protocol

✓ 8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	✓ MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	✓ MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
✓ 6010 Metals CAM III A	✓ 6020 Metals CAM III D	8082 PCB CAM V A	9012 Total Cyanide/PAC CAM VI A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B

Affirmative responses to questions A through F are required for Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	✓ Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	✓ Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	✓ Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	✓ Yes No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	✓ Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?	✓ Yes No

Responses to questions G, H and I below are required for Presumptive Certainty status

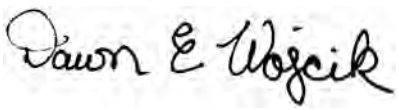
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	✓ Yes No

***Data User Note:* Data that achieve Presumptive Certainty status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes ✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes ✓ No

All negative responses are addressed in a case narrative on the cover page of this report.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.



Dawn E. Wojcik
Laboratory Director
Date: 3/18/2019

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 2.0 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

SW-846 8260C, GC/MS Volatiles
Sample #s: 1001627, 1001628, 1001629, 1001630, 1001631
The percent drift for the following is >20% in the continuing calibration verification standard associated with this sample: 2-Butanone, Tetrahydrofuran, 2-Hexanone and trans-1,2-Dichloro-2-Butene.
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.
The MA MCP required reporting limit could not be attained using the laboratory LOQ.
Batch #: L190704AA (Sample number(s): 1001627-1001631)
The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Ethanol
The relative percent difference(s) for the following analyte(s) in the LCS/LCSD were outside acceptance windows: Ethanol
SW-846 8270D SIM, GC/MS Semivolatiles
Sample #s: 1001627, 1001628, 1001629, 1001630
Reporting limits were raised due to interference from the sample matrix.
The MA MCP analyte list requirement was not met for Method 8270D.
The client specified list is reported.
MA EPH 5/04, GC Petroleum Hydrocarbons
Sample #s: 1001627, 1001628, 1001629, 1001630
The surrogate data is outside the QC limits due to unresolvable matrix problems evident during the sample preparation.
Reporting limits were raised due to interference from the sample matrix.
Batch #: 190660020A (Sample number(s): 1001627-1001630)
The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 1001627, 1001628, 1001629, 1001630
SW-846 6020A, Metals
Sample #s: 1001627, 1001628, 1001629, 1001630
The MA MCP analyte list requirement was not met for Metals.
Batch #: 190661404704A (Sample number(s): 1001627-1001630 UNSPK: 1001628 BKG: 1001628)
The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Thallium, Zinc
The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Antimony, Arsenic
The duplicate RPD for the following analyte(s) exceeded the acceptance window: Arsenic, Beryllium, Chromium, Copper, Lead, Nickel, Thallium, Zinc
Batch #: 190661404704B (Sample number(s): 1001627-1001630 UNSPK: 1001628 BKG: 1001628)
The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Selenium
The duplicate RPD for the following analyte(s) exceeded the acceptance window: Selenium
SW-846 7470A, Metals
Batch #: 190660571304 (Sample number(s): 1001627-1001630 UNSPK: 1001630 BKG: 1001630)
The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Mercury
The duplicate RPD for the following analyte(s) exceeded the acceptance window: Mercury

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW-846 6020A

Spikes:

P001628M220826A *Source: SC53767-02*

Outside of specification

Antimony
Arsenic
Cadmium
Chromium
Copper
Nickel
Zinc

P001628M220927A *Source: SC53767-02*

SW-846 6020A

Spikes:

P001628M220927A *Source: SC53767-02*

Outside of specification

Beryllium

P001628M221833A *Source: SC53767-02*

Outside of specification

Lead
Thallium

P001628R220824A *Source: SC53767-02*

Outside of specification

Antimony
Arsenic
Chromium
Copper
Nickel
Zinc

P001628R220925A *Source: SC53767-02*

Outside of specification

Beryllium

P001628R221830A *Source: SC53767-02*

Outside of specification

Lead
Thallium

Samples:

SC53767-01 *CDW-MW-1*

ICAL Verification & CCAL Verification are above QC limits; Sample result is ND

Silver

SW-846 7470A

Spikes:

P001630M221136 *Source: SC53767-04*

Outside of specification

Mercury

P001630R221134 *Source: SC53767-04*

Outside of specification

Mercury

SW-846 8260C

LCSL86Y

Outside of specification

Ethanol

Sample Acceptance Check Form

Client:	CDW Consultants, Inc.
Project:	Manchester Memorial School - MA / [none]
Work Order:	SC53767
Sample(s) received on:	3/5/2019

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Summary of Hits

Lab ID: SC53767-01 **Client ID:** CDW-MW-1

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	0.323		0.0020	mg/l	SW-846 6020A
Beryllium	0.0796		0.00050	mg/l	SW-846 6020A
Cadmium	0.0129		0.0010	mg/l	SW-846 6020A
Chromium	0.273		0.0040	mg/l	SW-846 6020A
Copper	0.559		0.0400	mg/l	SW-846 6020A
Lead	0.335		0.0030	mg/l	SW-846 6020A
Nickel	0.389		0.0040	mg/l	SW-846 6020A
Selenium	0.0055		0.0020	mg/l	SW-846 6020A
Thallium	0.0020		0.00050	mg/l	SW-846 6020A
Zinc	4.13		0.0150	mg/l	SW-846 6020A

Lab ID: SC53767-02 **Client ID:** CDW-MW-2

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Beryllium	0.0239		0.00050	mg/l	SW-846 6020A
Lead	0.498		0.0030	mg/l	SW-846 6020A
Selenium	0.0030		0.0020	mg/l	SW-846 6020A
Thallium	0.0016		0.00050	mg/l	SW-846 6020A

Lab ID: SC53767-02RE1 **Client ID:** CDW-MW-2

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	0.402		0.0200	mg/l	SW-846 6020A
Chromium	0.359		0.0400	mg/l	SW-846 6020A
Copper	0.844		0.400	mg/l	SW-846 6020A
Nickel	0.539		0.0400	mg/l	SW-846 6020A
Zinc	2.78		0.150	mg/l	SW-846 6020A

Lab ID: SC53767-03 **Client ID:** CDW-MW-3

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	0.398		0.0020	mg/l	SW-846 6020A
Beryllium	0.0288		0.00050	mg/l	SW-846 6020A
Cadmium	0.0102		0.0010	mg/l	SW-846 6020A
Chromium	0.278		0.0040	mg/l	SW-846 6020A
Copper	0.659		0.0400	mg/l	SW-846 6020A
Lead	0.363		0.0030	mg/l	SW-846 6020A
Nickel	0.506		0.0040	mg/l	SW-846 6020A
Selenium	0.0053		0.0020	mg/l	SW-846 6020A
Thallium	0.0013		0.00050	mg/l	SW-846 6020A
Zinc	2.94		0.0150	mg/l	SW-846 6020A

Lab ID: SC53767-04 **Client ID:** CDW-MW-4

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	0.562		0.0020	mg/l	SW-846 6020A
Beryllium	0.0797		0.00050	mg/l	SW-846 6020A
Cadmium	0.0090		0.0010	mg/l	SW-846 6020A
Chromium	1.07		0.0040	mg/l	SW-846 6020A
Copper	1.01		0.0400	mg/l	SW-846 6020A
Lead	0.898		0.0030	mg/l	SW-846 6020A
Nickel	0.847		0.0040	mg/l	SW-846 6020A
Selenium	0.0101		0.0020	mg/l	SW-846 6020A
Silver	0.00085		0.00050	mg/l	SW-846 6020A
Thallium	0.0048		0.00050	mg/l	SW-846 6020A
Zinc	6.67		0.0150	mg/l	SW-846 6020A
Mercury	0.0014		0.00020	mg/l	SW-846 7470A
Benzo(b)fluoranthene	0.7		0.5	ug/l	SW-846 8270D SIM
Chrysene	0.5		0.5	ug/l	SW-846 8270D SIM
Fluoranthene	0.8		0.5	ug/l	SW-846 8270D SIM
Phenanthrene	0.6		0.5	ug/l	SW-846 8270D SIM
Pyrene	0.8		0.5	ug/l	SW-846 8270D SIM

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1	[none]	Ground Water	01-Mar-19 14:00	05-Mar-19
SC53767-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
	C11 to C22 Aromatics	< 400		ug/l	400	400	1	MADEP EPH	08-Mar-19 01:45	13-Mar-19 07:21	M-PA009	0660020	
	C19 to C36 Aliphatics	< 500		ug/l	500	500	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 300		ug/l	300	300	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 400		ug/l	400	400	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*19*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*84*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*73*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 5.00		ug/l	5.00	2.00	1	MADEP VPH	11-Mar-19 21:43	11-Mar-19 21:43	M-PA009	9070A54	
	C5-C8 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 100		ug/l	100	20.0	1	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 10.0		ug/l	10.0	5.00	1	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.00		ug/l	5.00	3.00	1	"	"	"	"	"	
95-47-6	o-Xylene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
108-88-3	Toluene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*100*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*99*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3020A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-36-0	Antimony	< 0.0020		mg/l	0.0020	0.00041	1	SW-846 6020A	08-Mar-19 06:03	14-Mar-19 09:44	M-PA009	6614047	
7440-38-2	Arsenic	**0.323**		mg/l	0.0020	0.00068	1	"	"	"	"	"	
7440-41-7	Beryllium	**0.0796**		mg/l	0.00050	0.000091	1	"	"	"	"	"	
7440-43-9	Cadmium	**0.0129**		mg/l	0.0010	0.00015	1	"	"	"	"	"	
7440-47-3	Chromium	**0.273**		mg/l	0.0040	0.00070	1	"	"	"	"	"	
7440-50-8	Copper	**0.559**		mg/l	0.0400	0.0099	1	"	"	"	"	"	
7439-92-1	Lead	**0.335**		mg/l	0.0030	0.0011	1	"	"	"	"	"	
7440-02-0	Nickel	**0.389**		mg/l	0.0040	0.00060	1	"	"	"	"	"	
7782-49-2	Selenium	**0.0055**		mg/l	0.0020	0.00065	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1 SC53767-01	[none]	Ground Water	01-Mar-19 14:00	05-Mar-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-22-4	Silver	< 0.00050	K3	mg/l	0.00050	0.00017	1	SW-846 6020A	08-Mar-19 06:03	14-Mar-19 09:44	M-PA009	66140470	
7440-28-0	Thallium	**0.0020**		mg/l	0.00050	0.00011	1	"	"	"	"	"	
7440-66-6	Zinc	**4.13**		mg/l	0.0150	0.0062	1	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.000050	1	SW-846 7470A	08-Mar-19 07:00	12-Mar-19 11:43	M-PA009	66057 13	
Subcontracted Analyses Prepared by method SW-846 5030C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:09	12-Mar-19 04:10	M-PA009	190704A/	
71-55-6	1,1,1-Trichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 5		ug/l	5	0.4	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 5		ug/l	5	1	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 5		ug/l	5	0.3	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 250		ug/l	250	29	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-93-3	2-Butanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 10		ug/l	10	0.5	1	"	"	"	"	"	
67-64-1	Acetone	< 20		ug/l	20	0.7	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 20		ug/l	20	0.3	1	"	"	"	"	"	
71-43-2	Benzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 5		ug/l	5	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1	[none]	Ground Water	01-Mar-19 14:00	05-Mar-19
SC53767-01				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
75-27-4	Bromodichloromethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:09	12-Mar-19 04:10	M-PA009	190704A/	
75-25-2	Bromoform	< 4		ug/l	4	0.2	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 5		ug/l	5	0.2	1	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-00-3	Chloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
67-66-3	Chloroform	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
64-17-5	Ethanol	< 750		ug/l	750	280	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5		ug/l	5	0.2	1	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
76-13-1	Freon 113	< 10		ug/l	10	0.2	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 5		ug/l	5	0.7	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 5		ug/l	5	1	1	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-09-2	Methylene Chloride	< 1		ug/l	1	0.3	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5		ug/l	5	1	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
100-42-5	Styrene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 5		ug/l	5	0.8	1	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 30		ug/l	30	12	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 10		ug/l	10	0.7	1	"	"	"	"	"	
108-88-3	Toluene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-buten e	< 50		ug/l	50	6	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-1	[none]	Ground Water	01-Mar-19 14:00	05-Mar-19
SC53767-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
75-01-4	Vinyl Chloride	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:09	12-Mar-19 04:10	M-PA009	190704A/	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*102*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*100*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*105*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3510C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.5		ug/l	0.5	0.1	1	SW-846 8270D SIM	08-Mar-19 01:45	08-Mar-19 11:59	M-PA009	066WAJ0	
83-32-9	Acenaphthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.5		ug/l	0.5	0.3	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.5		ug/l	0.5	0.3	1	"	"	"	"	"	
129-00-0	Pyrene	< 0.5		ug/l	0.5	0.2	1	"	"	"	"	"	
Surrogate recoveries:													
38072-94-5	*1-Methylnaphthalene-d10*	*85*			*30-130 %*			"	"	"	"	"	
63466-71-7	*Benzo(a)pyrene-d12*	*72*			*30-130 %*			"	"	"	"	"	
93951-69-0	*Fluoranthene-d10*	*90*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2 SC53767-02	[none]	Ground Water	01-Mar-19 10:00	05-Mar-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
	C11 to C22 Aromatics	< 400		ug/l	400	400	1	MADEP EPH	08-Mar-19 01:45	13-Mar-19 08:42	M-PA009	9066002	0
	C19 to C36 Aliphatics	< 500		ug/l	500	500	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 300		ug/l	300	300	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 400		ug/l	400	400	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*26*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*79*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*71*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 5.00		ug/l	5.00	2.00	1	MADEP VPH	11-Mar-19 22:24	11-Mar-19 22:24	M-PA009	9070A54	
	C5-C8 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 100		ug/l	100	20.0	1	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 10.0		ug/l	10.0	5.00	1	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.00		ug/l	5.00	3.00	1	"	"	"	"	"	
95-47-6	o-Xylene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
108-88-3	Toluene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*100*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*99*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3020A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-41-7	Beryllium	**0.0239**		mg/l	0.00050	0.000091	1	SW-846 6020A	08-Mar-19 06:03	14-Mar-19 09:19	M-PA009	6614047	
7439-92-1	Lead	**0.498**		mg/l	0.0030	0.0011	1	"	"	"	"	"	
7782-49-2	Selenium	**0.0030**		mg/l	0.0020	0.00065	1	"	"	"	"	"	
7440-28-0	Thallium	**0.0016**		mg/l	0.00050	0.00011	1	"	"	"	"	"	
Re-analysis of Subcontracted Analyses Prepared by method SW-846 3020A													
7440-36-0	Antimony	< 0.0200		mg/l	0.0200	0.0041	10	SW-846 6020A	08-Mar-19 06:03	15-Mar-19 08:18	M-PA009	6614047	
7440-38-2	Arsenic	**0.402**		mg/l	0.0200	0.0068	10	"	"	"	"	"	
7440-43-9	Cadmium	< 0.0100		mg/l	0.0100	0.0015	10	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2	[none]	Ground Water	01-Mar-19 10:00	05-Mar-19
SC53767-02				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
Re-analysis of Subcontracted Analyses													
7440-47-3	Chromium	**0.359**		mg/l	0.0400	0.0070	10	SW-846 6020A	08-Mar-19 06:03	15-Mar-19 08:18	M-PA009	66140470	
7440-50-8	Copper	**0.844**		mg/l	0.400	0.0991	10	"	"	"	"	"	
7440-02-0	Nickel	**0.539**		mg/l	0.0400	0.0060	10	"	"	"	"	"	
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0017	10	"	"	"	"	"	
7440-66-6	Zinc	**2.78**		mg/l	0.150	0.0618	10	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.000050	1	SW-846 7470A	08-Mar-19 07:00	12-Mar-19 11:38	M-PA009	66057133	
Subcontracted Analyses													
Prepared by method SW-846 5030C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:31	12-Mar-19 04:32	M-PA009	190704A/	
71-55-6	1,1,1-Trichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 5		ug/l	5	0.4	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 5		ug/l	5	1	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 5		ug/l	5	0.3	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 250		ug/l	250	29	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-93-3	2-Butanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 10		ug/l	10	0.5	1	"	"	"	"	"	
67-64-1	Acetone	< 20		ug/l	20	0.7	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 20		ug/l	20	0.3	1	"	"	"	"	"	
71-43-2	Benzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2	[none]	Ground Water	01-Mar-19 10:00	05-Mar-19
SC53767-02				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
108-86-1	Bromobenzene	< 5		ug/l	5	0.2	1	SW-846 8260C	12-Mar-19 04:31	12-Mar-19 04:32	M-PA009	190704A/	
74-97-5	Bromochloromethane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-25-2	Bromoform	< 4		ug/l	4	0.2	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 5		ug/l	5	0.2	1	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-00-3	Chloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
67-66-3	Chloroform	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
64-17-5	Ethanol	< 750		ug/l	750	280	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5		ug/l	5	0.2	1	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
76-13-1	Freon 113	< 10		ug/l	10	0.2	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 5		ug/l	5	0.7	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 5		ug/l	5	1	1	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-09-2	Methylene Chloride	< 1		ug/l	1	0.3	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5		ug/l	5	1	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
100-42-5	Styrene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 5		ug/l	5	0.8	1	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 30		ug/l	30	12	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 10		ug/l	10	0.7	1	"	"	"	"	"	
108-88-3	Toluene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-buten e	< 50		ug/l	50	6	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-2	[none]	Ground Water	01-Mar-19 10:00	05-Mar-19
SC53767-02				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
79-01-6	Trichloroethene	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:31	12-Mar-19 04:32	M-PA009	190704A/	
75-69-4	Trichlorofluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*100*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*99*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*103*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3510C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.5		ug/l	0.5	0.1	1	SW-846 8270D SIM	08-Mar-19 01:45	08-Mar-19 12:30	M-PA009	066WAJ0	
83-32-9	Acenaphthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.5		ug/l	0.5	0.3	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.5		ug/l	0.5	0.3	1	"	"	"	"	"	
129-00-0	Pyrene	< 0.5		ug/l	0.5	0.2	1	"	"	"	"	"	
Surrogate recoveries:													
38072-94-5	*1-Methylnaphthalene-d10*	*85*			*30-130 %*			"	"	"	"	"	
63466-71-7	*Benzo(a)pyrene-d12*	*68*			*30-130 %*			"	"	"	"	"	
93951-69-0	*Fluoranthene-d10*	*90*			*30-130 %*			"	"	"	"	"	

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
	C11 to C22 Aromatics	< 400		ug/l	400	400	1	MADEP EPH	08-Mar-19 01:45	13-Mar-19 10:03	M-PA009	0660020	
	C19 to C36 Aliphatics	< 500		ug/l	500	500	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 300		ug/l	300	300	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 400		ug/l	400	400	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*24*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*79*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*73*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
71-43-2	Benzene	< 5.00		ug/l	5.00	2.00	1	MADEP VPH	11-Mar-19 23:04	11-Mar-19 23:04	M-PA009	9070A54	
	C5-C8 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 100		ug/l	100	20.0	1	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 10.0		ug/l	10.0	5.00	1	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.00		ug/l	5.00	3.00	1	"	"	"	"	"	
95-47-6	o-Xylene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
108-88-3	Toluene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*100*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*100*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3020A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-36-0	Antimony	< 0.0020		mg/l	0.0020	0.00041	1	SW-846 6020A	08-Mar-19 06:03	14-Mar-19 09:47	M-PA009	6614047	
7440-38-2	Arsenic	**0.398**		mg/l	0.0020	0.00068	1	"	"	"	"	"	
7440-41-7	Beryllium	**0.0288**		mg/l	0.00050	0.000091	1	"	"	"	"	"	
7440-43-9	Cadmium	**0.0102**		mg/l	0.0010	0.00015	1	"	"	"	"	"	
7440-47-3	Chromium	**0.278**		mg/l	0.0040	0.00070	1	"	"	"	"	"	
7440-50-8	Copper	**0.659**		mg/l	0.0400	0.0099	1	"	"	"	"	"	
7439-92-1	Lead	**0.363**		mg/l	0.0030	0.0011	1	"	"	"	"	"	
7440-02-0	Nickel	**0.506**		mg/l	0.0040	0.00060	1	"	"	"	"	"	
7782-49-2	Selenium	**0.0053**		mg/l	0.0020	0.00065	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3	[none]	Ground Water	01-Mar-19 11:30	05-Mar-19
SC53767-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-22-4	Silver	< 0.00050		mg/l	0.00050	0.00017	1	SW-846 6020A	08-Mar-19 06:03	14-Mar-19 09:47	M-PA009	66140470	
7440-28-0	Thallium	**0.0013**		mg/l	0.00050	0.00011	1	"	"	"	"	"	
7440-66-6	Zinc	**2.94**		mg/l	0.0150	0.0062	1	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.000050	1	SW-846 7470A	08-Mar-19 07:00	12-Mar-19 11:45	M-PA009	66057 13	
Subcontracted Analyses													
Prepared by method SW-846 5030C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:53	12-Mar-19 04:54	M-PA009	190704A/	
71-55-6	1,1,1-Trichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 5		ug/l	5	0.4	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 5		ug/l	5	1	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 5		ug/l	5	0.3	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 250		ug/l	250	29	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-93-3	2-Butanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 10		ug/l	10	0.5	1	"	"	"	"	"	
67-64-1	Acetone	< 20		ug/l	20	0.7	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 20		ug/l	20	0.3	1	"	"	"	"	"	
71-43-2	Benzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 5		ug/l	5	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3	[none]	Ground Water	01-Mar-19 11:30	05-Mar-19
SC53767-03				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
75-27-4	Bromodichloromethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:53	12-Mar-19 04:54	M-PA009	190704A/	
75-25-2	Bromoform	< 4		ug/l	4	0.2	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 5		ug/l	5	0.2	1	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-00-3	Chloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
67-66-3	Chloroform	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
64-17-5	Ethanol	< 750		ug/l	750	280	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5		ug/l	5	0.2	1	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
76-13-1	Freon 113	< 10		ug/l	10	0.2	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 5		ug/l	5	0.7	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 5		ug/l	5	1	1	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-09-2	Methylene Chloride	< 1		ug/l	1	0.3	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5		ug/l	5	1	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
100-42-5	Styrene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 5		ug/l	5	0.8	1	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 30		ug/l	30	12	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 10		ug/l	10	0.7	1	"	"	"	"	"	
108-88-3	Toluene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-buten e	< 50		ug/l	50	6	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-3	[none]	Ground Water	01-Mar-19 11:30	05-Mar-19
SC53767-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
75-01-4	Vinyl Chloride	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 04:53	12-Mar-19 04:54	M-PA009	190704A/	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*101*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*101*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*102*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3510C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.5		ug/l	0.5	0.1	1	SW-846 8270D SIM	08-Mar-19 01:45	08-Mar-19 13:01	M-PA009	066WAJ0	
83-32-9	Acenaphthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.5		ug/l	0.5	0.3	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 0.5		ug/l	0.5	0.3	1	"	"	"	"	"	
129-00-0	Pyrene	< 0.5		ug/l	0.5	0.2	1	"	"	"	"	"	
Surrogate recoveries:													
38072-94-5	*1-Methylnaphthalene-d10*	*86*			*30-130 %*			"	"	"	"	"	
63466-71-7	*Benzo(a)pyrene-d12*	*68*			*30-130 %*			"	"	"	"	"	
93951-69-0	*Fluoranthene-d10*	*88*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Ground Water	01-Mar-19 13:00	05-Mar-19
SC53767-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA0009													
	C11 to C22 Aromatics	< 400		ug/l	400	400	1	MADEP EPH	08-Mar-19 01:45	13-Mar-19 11:23	M-PA009	0660020	
	C19 to C36 Aliphatics	< 500		ug/l	500	500	1	"	"	"	"	"	
	C9 to C18 Aliphatics	< 300		ug/l	300	300	1	"	"	"	"	"	
	Unadjusted C11 - C22 Aromatics	< 400		ug/l	400	400	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chloro-octadecane*	*15*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*84*			*40-140 %*			"	"	"	"	"	
84-15-1	*Orthoterphenyl*	*77*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method General Preparation													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA0009													
71-43-2	Benzene	< 5.00		ug/l	5.00	2.00	1	MADEP VPH	11-Mar-19 23:45	11-Mar-19 23:45	M-PA009	9070A54	
	C5-C8 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons	< 100		ug/l	100	20.0	1	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons	< 100		ug/l	100	50.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 10.0		ug/l	10.0	5.00	1	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.00		ug/l	5.00	3.00	1	"	"	"	"	"	
95-47-6	o-Xylene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
108-88-3	Toluene	< 5.00		ug/l	5.00	2.00	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics	< 100		ug/l	100	50.0	1	"	"	"	"	"	
Surrogate recoveries:													
98-08-8	*Trifluorotoluene-F*	*99*			*70-130 %*			"	"	"	"	"	
98-08-8	*Trifluorotoluene-P*	*100*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3020A													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA0009													
7440-36-0	Antimony	< 0.0020		mg/l	0.0020	0.00041	1	SW-846 6020A	08-Mar-19 06:03	14-Mar-19 09:40	M-PA009	6614047	
7440-38-2	Arsenic	**0.562**		mg/l	0.0020	0.00068	1	"	"	"	"	"	
7440-41-7	Beryllium	**0.0797**		mg/l	0.00050	0.000091	1	"	"	"	"	"	
7440-43-9	Cadmium	**0.0090**		mg/l	0.0010	0.00015	1	"	"	"	"	"	
7440-47-3	Chromium	**1.07**		mg/l	0.0040	0.00070	1	"	"	"	"	"	
7440-50-8	Copper	**1.01**		mg/l	0.0400	0.0099	1	"	"	"	"	"	
7439-92-1	Lead	**0.898**		mg/l	0.0030	0.0011	1	"	"	"	"	"	
7440-02-0	Nickel	**0.847**		mg/l	0.0040	0.00060	1	"	"	"	"	"	
7782-49-2	Selenium	**0.0101**		mg/l	0.0020	0.00065	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Ground Water	01-Mar-19 13:00	05-Mar-19
SC53767-04				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7440-22-4	Silver	**0.00085**		mg/l	0.00050	0.00017	1	SW-846 6020A	08-Mar-19 06:03	14-Mar-19 09:40	M-PA009	66140470	
7440-28-0	Thallium	**0.0048**		mg/l	0.00050	0.00011	1	"	"	"	"	"	
7440-66-6	Zinc	**6.67**		mg/l	0.0150	0.0062	1	"	"	"	"	"	
Prepared by method METHOD													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
7439-97-6	Mercury	**0.0014**		mg/l	0.00020	0.000050	1	SW-846 7470A	08-Mar-19 07:00	12-Mar-19 11:30	M-PA009	66057 13	
Subcontracted Analyses													
Prepared by method SW-846 5030C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 05:14	12-Mar-19 05:15	M-PA009	190704A	
71-55-6	1,1,1-Trichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 5		ug/l	5	0.4	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 5		ug/l	5	1	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 5		ug/l	5	0.3	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 250		ug/l	250	29	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-93-3	2-Butanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 10		ug/l	10	0.5	1	"	"	"	"	"	
67-64-1	Acetone	< 20		ug/l	20	0.7	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 20		ug/l	20	0.3	1	"	"	"	"	"	
71-43-2	Benzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 5		ug/l	5	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4	[none]	Ground Water	01-Mar-19 13:00	05-Mar-19
SC53767-04				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
75-27-4	Bromodichloromethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 05:14	12-Mar-19 05:15	M-PA009	190704A/	
75-25-2	Bromoform	< 4		ug/l	4	0.2	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 5		ug/l	5	0.2	1	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-00-3	Chloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
67-66-3	Chloroform	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
64-17-5	Ethanol	< 750		ug/l	750	280	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5		ug/l	5	0.2	1	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
76-13-1	Freon 113	< 10		ug/l	10	0.2	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 5		ug/l	5	0.7	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 5		ug/l	5	1	1	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-09-2	Methylene Chloride	< 1		ug/l	1	0.3	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5		ug/l	5	1	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
100-42-5	Styrene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 5		ug/l	5	0.8	1	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 30		ug/l	30	12	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 10		ug/l	10	0.7	1	"	"	"	"	"	
108-88-3	Toluene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-buten e	< 50		ug/l	50	6	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
CDW-MW-4 SC53767-04	[none]	Ground Water	01-Mar-19 13:00	05-Mar-19

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
75-01-4	Vinyl Chloride	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 05:14	12-Mar-19 05:15	M-PA009	190704A/	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*103*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*99*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*104*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW-846 3510C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
91-57-6	2-Methylnaphthalene	< 0.5		ug/l	0.5	0.1	1	SW-846 8270D SIM	08-Mar-19 01:45	08-Mar-19 13:33	M-PA009	066WAJ0	
83-32-9	Acenaphthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
56-55-3	Benzo(a)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
50-32-8	Benzo(a)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
205-99-2	Benzo(b)fluoranthene	**0.7**		ug/l	0.5	0.1	1	"	"	"	"	"	
191-24-2	Benzo(g,h,i)perylene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
207-08-9	Benzo(k)fluoranthene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
218-01-9	Chrysene	**0.5**		ug/l	0.5	0.1	1	"	"	"	"	"	
53-70-3	Dibenz(a,h)anthracene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
206-44-0	Fluoranthene	**0.8**		ug/l	0.5	0.1	1	"	"	"	"	"	
86-73-7	Fluorene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
193-39-5	Indeno(1,2,3-cd)pyrene	< 0.5		ug/l	0.5	0.1	1	"	"	"	"	"	
91-20-3	Naphthalene	< 0.5		ug/l	0.5	0.3	1	"	"	"	"	"	
85-01-8	Phenanthrene	**0.6**		ug/l	0.5	0.3	1	"	"	"	"	"	
129-00-0	Pyrene	**0.8**		ug/l	0.5	0.2	1	"	"	"	"	"	
Surrogate recoveries:													
38072-94-5	*1-Methylnaphthalene-d10*	*85*			*30-130 %*			"	"	"	"	"	
63466-71-7	*Benzo(a)pyrene-d12*	*76*			*30-130 %*			"	"	"	"	"	
93951-69-0	*Fluoranthene-d10*	*90*			*30-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip Blank	[none]	Trip Blank	01-Mar-19 00:00	05-Mar-19
SC53767-05				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses Prepared by method SW-846 5030C													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
630-20-6	1,1,1,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 05:36	12-Mar-19 05:37	M-PA009	190704A/	
71-55-6	1,1,1-Trichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 5		ug/l	5	0.4	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 5		ug/l	5	1	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 5		ug/l	5	0.3	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
123-91-1	1,4-Dioxane	< 250		ug/l	250	29	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
78-93-3	2-Butanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 10		ug/l	10	0.3	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 10		ug/l	10	0.5	1	"	"	"	"	"	
67-64-1	Acetone	< 20		ug/l	20	0.7	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 20		ug/l	20	0.3	1	"	"	"	"	"	
71-43-2	Benzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 5		ug/l	5	0.2	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-25-2	Bromoform	< 4		ug/l	4	0.2	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1		ug/l	1	0.3	1	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 5		ug/l	5	0.2	1	"	"	"	"	"	
56-23-5	Carbon Tetrachloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-00-3	Chloroethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
67-66-3	Chloroform	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip Blank SC53767-05	[none]	Trip Blank	01-Mar-19 00:00	05-Mar-19

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
Analysis performed by Eurofins Lancaster Laboratories Environmental - M-PA009													
156-59-2	cis-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	SW-846 8260C	12-Mar-19 05:36	12-Mar-19 05:37	M-PA009	190704A/	
10061-01-5	cis-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
108-20-3	di-Isopropyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
64-17-5	Ethanol	< 750		ug/l	750	280	1	"	"	"	"	"	
60-29-7	Ethyl ether	< 5		ug/l	5	0.2	1	"	"	"	"	"	
637-92-3	Ethyl t-butyl ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
76-13-1	Freon 113	< 10		ug/l	10	0.2	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 5		ug/l	5	0.7	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
179601-23-1	m+p-Xylene	< 5		ug/l	5	1	1	"	"	"	"	"	
1634-04-4	Methyl Tertiary Butyl Ether	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-09-2	Methylene Chloride	< 1		ug/l	1	0.3	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5		ug/l	5	1	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1		ug/l	1	0.4	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
100-42-5	Styrene	< 5		ug/l	5	0.2	1	"	"	"	"	"	
994-05-8	t-Amyl methyl ether	< 5		ug/l	5	0.8	1	"	"	"	"	"	
75-65-0	t-Butyl alcohol	< 30		ug/l	30	12	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 5		ug/l	5	0.3	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran	< 10		ug/l	10	0.7	1	"	"	"	"	"	
108-88-3	Toluene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-buten e	< 50		ug/l	50	6	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 1		ug/l	1	0.2	1	"	"	"	"	"	
75-01-4	Vinyl Chloride	< 1		ug/l	1	0.2	1	"	"	"	"	"	
Surrogate recoveries:													
17060-07-0	*1,2-Dichloroethane-d4*	*102*			*70-130 %*			"	"	"	"	"	
460-00-4	*4-Bromofluorobenzene*	*101*			*70-130 %*			"	"	"	"	"	
1868-53-7	*Dibromofluoromethane*	*103*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*99*			*70-130 %*			"	"	"	"	"	

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH										
Batch 190660020A - METHOD										
LCS (LCS20066Q)						Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Anthracene	**39**		ug/l	2.0	40		96	40-140		
Naphthalene	**24**		ug/l	2.0	40		59	40-140		
Dibenzo(a,h)anthracene	**33**		ug/l	2.0	40		83	40-140		
Indeno(1,2,3-cd)pyrene	**32**		ug/l	2.0	40		79	40-140		
Fluorene	**31**		ug/l	2.0	40		77	40-140		
Fluoranthene	**34**		ug/l	2.0	40		85	40-140		
2-Methylnaphthalene	**24**		ug/l	2.0	40		59	40-140		
Pyrene	**40**		ug/l	12	40		99	40-140		
Acenaphthylene	**29**		ug/l	2.0	40		72	40-140		
Phenanthrene	**31**		ug/l	2.0	40		77	40-140		
Benzo(a)anthracene	**30**		ug/l	2.0	40		75	40-140		
Benzo(a)pyrene	**35**		ug/l	2.0	40		88	40-140		
Benzo(b)fluoranthene	**33**		ug/l	2.0	40		82	40-140		
Benzo(g,h,i)perylene	**34**		ug/l	2.0	40		86	40-140		
Benzo(k)fluoranthene	**36**		ug/l	4.0	40		89	40-140		
Chrysene	**37**		ug/l	2.0	40		91	40-140		
Acenaphthene	**28**		ug/l	2.0	40		71	40-140		
C9 to C18 Aliphatics	**120**		ug/l	30	240		49	40-140		
C19 to C36 Aliphatics	**240**		ug/l	50	320		74	40-140		
Unadjusted C11 - C22 Aromatics	**550**		ug/l	40	680		81	40-140		
Surrogate: 1-Chloro-octadecane	*11*		ug/l		*20*		*56*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*17*		ug/l		*20*		*87*	*40-140*		
Surrogate: Orthoterphenyl	*16*		ug/l		*20*		*80*	*40-140*		
LCSD (P90660AY)						Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Benzo(g,h,i)perylene	**35**		ug/l	2.0	40		87	40-140	2	25
Pyrene	**40**		ug/l	12	40		99	40-140	1	25
Phenanthrene	**31**		ug/l	2.0	40		77	40-140	1	25
Naphthalene	**19**		ug/l	2.0	40		48	40-140	20	25
Indeno(1,2,3-cd)pyrene	**32**		ug/l	2.0	40		81	40-140	2	25
Fluorene	**30**		ug/l	2.0	40		74	40-140	4	25
Fluoranthene	**35**		ug/l	2.0	40		86	40-140	1	25
Chrysene	**38**		ug/l	2.0	40		94	40-140	3	25
Benzo(a)pyrene	**37**		ug/l	2.0	40		92	40-140	3	25
Benzo(a)anthracene	**31**		ug/l	2.0	40		77	40-140	2	25
Anthracene	**39**		ug/l	2.0	40		97	40-140	0	25
Acenaphthylene	**26**		ug/l	2.0	40		64	40-140	11	25
Acenaphthene	**26**		ug/l	2.0	40		65	40-140	9	25
2-Methylnaphthalene	**20**		ug/l	2.0	40		50	40-140	15	25
Benzo(b)fluoranthene	**35**		ug/l	2.0	40		86	40-140	5	25
Dibenzo(a,h)anthracene	**34**		ug/l	2.0	40		85	40-140	2	25
Benzo(k)fluoranthene	**35**		ug/l	4.0	40		87	40-140	3	25
C19 to C36 Aliphatics	**230**		ug/l	50	320		72	40-140	2	25
Unadjusted C11 - C22 Aromatics	**540**		ug/l	40	680		79	40-140	1	25
C9 to C18 Aliphatics	**110**		ug/l	30	240		44	40-140	11	25
Surrogate: Orthoterphenyl	*16*		ug/l		*20*		*79*	*40-140*		
Surrogate: 1-Chloro-octadecane	*12*		ug/l		*20*		*59*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*16*		ug/l		*20*		*82*	*40-140*		
Blank (PBLK20066B)						Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
2-Methylnaphthalene	< 2.0		ug/l	2.0				-		
Acenaphthene	< 2.0		ug/l	2.0				-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH										
Batch 190660020A - METHOD										
Blank (PBLK20066B)						Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Acenaphthylene	< 2.0		ug/l	2.0				-		
Anthracene	< 2.0		ug/l	2.0				-		
Benzo(a)anthracene	< 2.0		ug/l	2.0				-		
Benzo(a)pyrene	< 2.0		ug/l	2.0				-		
Benzo(b)fluoranthene	< 2.0		ug/l	2.0				-		
Benzo(g,h,i)perylene	< 2.0		ug/l	2.0				-		
Fluorene	< 2.0		ug/l	2.0				-		
Pyrene	< 12		ug/l	12				-		
Phenanthrene	< 2.0		ug/l	2.0				-		
Indeno(1,2,3-cd)pyrene	< 2.0		ug/l	2.0				-		
Benzo(k)fluoranthene	< 4.0		ug/l	4.0				-		
Fluoranthene	< 2.0		ug/l	2.0				-		
Dibenzo(a,h)anthracene	< 2.0		ug/l	2.0				-		
Chrysene	< 2.0		ug/l	2.0				-		
Naphthalene	< 2.0		ug/l	2.0				-		
C9 to C18 Aliphatics	< 30		ug/l	30				-		
C19 to C36 Aliphatics	< 50		ug/l	50				-		
Unadjusted C11 - C22 Aromatics	< 40		ug/l	40				-		
C11 to C22 Aromatics	< 40		ug/l	40				-		
Surrogate: Orthoterphenyl	*13*		ug/l		*20*		*67*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*17*		ug/l		*20*		*85*	*40-140*		
Surrogate: 1-Chloro-octadecane	*9.5*		ug/l		*20*		*47*	*40-140*		
MADEP VPH										
Batch 19070A54A - General Preparation										
Blank (BLKJBB)						Prepared & Analyzed: 11-Mar-19				
Unadjusted C5-C8 Aliphatics	< 100		ug/l	100				-		
Toluene	< 5.00		ug/l	5.00				-		
o-Xylene	< 5.00		ug/l	5.00				-		
Naphthalene	< 5.00		ug/l	5.00				-		
Unadjusted C9-C12 Aliphatics	< 100		ug/l	100				-		
m,p-Xylenes	< 10.0		ug/l	10.0				-		
C9-C12 Aliphatic Hydrocarbons	< 100		ug/l	100				-		
C9-C10 Aromatic Hydrocarbons	< 100		ug/l	100				-		
C5-C8 Aliphatic Hydrocarbons	< 100		ug/l	100				-		
Benzene	< 5.00		ug/l	5.00				-		
Methyl t-butyl ether	< 5.00		ug/l	5.00				-		
Ethylbenzene	< 5.00		ug/l	5.00				-		
Surrogate: Trifluorotoluene-F	*29.1*		ug/l		*30.0*		*97*	*70-130*		
Surrogate: Trifluorotoluene-P	*29.2*		ug/l		*30.0*		*97*	*70-130*		
LCS (LCS6GQ)						Prepared & Analyzed: 11-Mar-19				
o-Xylene	**49.7**		ug/l	5.00	50.0		99	70-130		
Unadjusted C9-C12 Aliphatics	**397**		ug/l	100	401		99	70-130		
Unadjusted C5-C8 Aliphatics	**309**		ug/l	100	301		103	70-130		
Toluene	**50.9**		ug/l	5.00	50.3		101	70-130		
Naphthalene	**50.5**		ug/l	5.00	50.2		101	70-130		
Methyl t-butyl ether	**49.0**		ug/l	5.00	50.0		98	70-130		
Ethylbenzene	**49.9**		ug/l	5.00	50.2		99	70-130		
C9-C12 Aliphatic Hydrocarbons	**144**		ug/l	100	151		95	70-130		
C9-C10 Aromatic Hydrocarbons	**51.2**		ug/l	100	50.1		102	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP VPH										
Batch 19070A54A - General Preparation										
LCS (LCS6GQ)						Prepared & Analyzed: 11-Mar-19				
C5-C8 Aliphatic Hydrocarbons	**157**		ug/l	100	151		104	70-130		
Benzene	**51.9**		ug/l	5.00	50.2		103	70-130		
m,p-Xylenes	**103**		ug/l	10.0	100		102	70-130		
Surrogate: Trifluorotoluene-P	*29.8*		ug/l		*30.0*		*99*	*70-130*		
Surrogate: Trifluorotoluene-F	*29.9*		ug/l		*30.0*		*100*	*70-130*		
LCSD (P90704AY)						Prepared & Analyzed: 11-Mar-19				
C5-C8 Aliphatic Hydrocarbons	**157**		ug/l	100	151		104	70-130	0	25
Unadjusted C5-C8 Aliphatics	**310**		ug/l	100	301		103	70-130	0	25
Toluene	**51.1**		ug/l	5.00	50.3		102	70-130	0	25
o-Xylene	**50.0**		ug/l	5.00	50.0		100	70-130	1	25
Naphthalene	**57.0**		ug/l	5.00	50.2		114	70-130	12	25
Methyl t-butyl ether	**50.3**		ug/l	5.00	50.0		101	70-130	3	25
m,p-Xylenes	**103**		ug/l	10.0	100		102	70-130	0	25
Ethylbenzene	**50.2**		ug/l	5.00	50.2		100	70-130	1	25
C9-C10 Aromatic Hydrocarbons	**51.6**		ug/l	100	50.1		103	70-130	1	25
Benzene	**51.8**		ug/l	5.00	50.2		103	70-130	0	25
Unadjusted C9-C12 Aliphatics	**398**		ug/l	100	401		99	70-130	0	25
C9-C12 Aliphatic Hydrocarbons	**144**		ug/l	100	151		95	70-130	0	25
Surrogate: Trifluorotoluene-F	*29.9*		ug/l		*30.0*		*100*	*70-130*		
Surrogate: Trifluorotoluene-P	*30.4*		ug/l		*30.0*		*101*	*70-130*		
SW-846 6020A										
Batch 190661404704A - SW-846 3020A										
Laboratory Dup (P001628D220822A)			**Source: SC53767-02**			Prepared: 08-Mar-19 Analyzed: 15-Mar-19				
Zinc	**3.85**		mg/l	0.150		2.78		-	32	20
Silver	< 0.0050		mg/l	0.0050		BRL		-	0	20
Nickel	**0.737**		mg/l	0.0400		0.539		-	31	20
Chromium	**0.546**		mg/l	0.0400		0.359		-	41	20
Cadmium	**0.0071**		mg/l	0.0100		0.0058		-	19	20
Arsenic	**0.512**		mg/l	0.0200		0.402		-	24	20
Antimony	< 0.0200		mg/l	0.0200		BRL		-	0	20
Copper	**1.13**		mg/l	0.400		0.844		-	29	20
Laboratory Dup (P001628D220923A)			**Source: SC53767-02**			Prepared: 08-Mar-19 Analyzed: 14-Mar-19				
Beryllium	**0.0311**		mg/l	0.00050		0.0239		-	26	20
Laboratory Dup (P001628D221828A)			**Source: SC53767-02**			Prepared & Analyzed: 08-Mar-19				
Thallium	**0.0025**		mg/l	0.00050		0.0016		-	42	20
Lead	**0.670**		mg/l	0.0030		0.498		-	29	20
Matrix Spike Dup (P001628M220826A)			**Source: SC53767-02**			Prepared: 08-Mar-19 Analyzed: 15-Mar-19				
Silver	**0.0519**		mg/l	0.0050	0.0500	BRL	104	75-125	2	20
Nickel	**0.805**	*	mg/l	0.0400	0.0500	0.539	534	75-125	1	20
Copper	**1.19**	*	mg/l	0.400	0.0500	0.844	693	75-125	0	20
Chromium	**0.583**	*	mg/l	0.0400	0.0500	0.359	448	75-125	3	20
Cadmium	**0.0122**	*	mg/l	0.0100	0.0050	0.0058	127	75-125	8	20
Arsenic	**0.466**	*	mg/l	0.0200	0.0100	0.402	633	75-125	15	20
Antimony	< 0.0200	*	mg/l	0.0200	0.0060	BRL	0	75-125	0	20
Zinc	**4.35**	*	mg/l	0.150	0.500	2.78	314	75-125	1	20
Matrix Spike Dup (P001628M220927A)			**Source: SC53767-02**			Prepared: 08-Mar-19 Analyzed: 14-Mar-19				
Beryllium	**0.0345**	*	mg/l	0.00050	0.0040	0.0239	265	75-125	2	20
Matrix Spike Dup (P001628M221833A)			**Source: SC53767-02**			Prepared & Analyzed: 08-Mar-19				
Thallium	**0.0045**	*	mg/l	0.00050	0.0020	0.0016	144	75-125	0	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 6020A										
Batch 190661404704A - SW-846 3020A										
Matrix Spike Dup (P001628M221833A)			**Source: SC53767-02**			Prepared & Analyzed: 08-Mar-19				
Lead	**0.713**	*	mg/l	0.0030	0.0150	0.498	1434	75-125	2	20
Matrix Spike (P001628R220824A)			**Source: SC53767-02**			Prepared: 08-Mar-19 Analyzed: 15-Mar-19				
Antimony	< 0.0200	*	mg/l	0.0200	0.0060	0.0028	0	75-125		
Arsenic	**0.402**	*	mg/l	0.0200	0.0100	0.402	-6	75-125		
Cadmium	**0.0113**		mg/l	0.0100	0.0050	0.0058	109	75-125		
Chromium	**0.600**	*	mg/l	0.0400	0.0500	0.359	481	75-125		
Copper	**1.20**	*	mg/l	0.400	0.0500	0.844	704	75-125		
Nickel	**0.813**	*	mg/l	0.0400	0.0500	0.539	549	75-125		
Silver	**0.0508**		mg/l	0.0050	0.0500	0.00071	102	75-125		
Zinc	**4.38**	*	mg/l	0.150	0.500	2.78	319	75-125		
Matrix Spike (P001628R220925A)			**Source: SC53767-02**			Prepared: 08-Mar-19 Analyzed: 14-Mar-19				
Beryllium	**0.0351**	*	mg/l	0.00050	0.0040	0.0239	281	75-125		
Matrix Spike (P001628R221830A)			**Source: SC53767-02**			Prepared & Analyzed: 08-Mar-19				
Lead	**0.697**	*	mg/l	0.0030	0.0150	0.498	1330	75-125		
Thallium	**0.0045**	*	mg/l	0.00050	0.0020	0.0016	144	75-125		
Blank (P06604DBB)						Prepared: 08-Mar-19 Analyzed: 14-Mar-19				
Cadmium	< 0.0010		mg/l	0.0010				-		
Lead	< 0.0030		mg/l	0.0030				-		
Copper	< 0.0400		mg/l	0.0400				-		
Zinc	< 0.0150		mg/l	0.0150				-		
Chromium	**0.00071**		mg/l	0.0040				-		
Beryllium	< 0.00050		mg/l	0.00050				-		
Arsenic	< 0.0020		mg/l	0.0020				-		
Antimony	< 0.0020		mg/l	0.0020				-		
Selenium	< 0.0020		mg/l	0.0020				-		
Silver	< 0.00050		mg/l	0.00050				-		
Thallium	< 0.00050		mg/l	0.00050				-		
Nickel	**0.00063**		mg/l	0.0040				-		
LCS (P06604DQQ)						Prepared: 08-Mar-19 Analyzed: 14-Mar-19				
Copper	**0.0522**		mg/l	0.0400	0.0500		104	89-120		
Selenium	**0.0103**		mg/l	0.0020	0.0100		103	90-113		
Nickel	**0.0533**		mg/l	0.0040	0.0500		107	90-114		
Thallium	**0.0023**		mg/l	0.00050	0.0020		117	80-120		
Zinc	**0.522**		mg/l	0.0150	0.500		104	90-115		
Lead	**0.0155**		mg/l	0.0030	0.0150		103	90-110		
Silver	**0.0503**		mg/l	0.00050	0.0500		101	88-113		
Antimony	**0.0058**		mg/l	0.0020	0.0060		97	80-120		
Arsenic	**0.0109**		mg/l	0.0020	0.0100		109	85-120		
Beryllium	**0.0042**		mg/l	0.00050	0.0040		105	90-112		
Cadmium	**0.0054**		mg/l	0.0010	0.0050		107	84-120		
Chromium	**0.0535**		mg/l	0.0040	0.0500		107	90-115		
SW-846 7470A										
Batch 190660571304 - METHOD										
Laboratory Dup (P001630D221132)			**Source: SC53767-04**			Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Mercury	**0.0022**		mg/l	0.00020		0.0014		-	48	20
Matrix Spike Dup (P001630M221136)			**Source: SC53767-04**			Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Mercury	**0.0032**	*	mg/l	0.00020	0.0010	0.0014	186	80-120	2	20
Matrix Spike (P001630R221134)			**Source: SC53767-04**			Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Mercury	**0.0033**	*	mg/l	0.00020	0.0010	0.0014	194	80-120		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 7470A										
Batch 190660571304 - METHOD										
Blank (P06671DBB)						Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Mercury	< 0.00020		mg/l	0.00020				-		
LCS (P06671DQQ)						Prepared: 08-Mar-19 Analyzed: 12-Mar-19				
Mercury	**0.0010**		mg/l	0.00020	0.0010		104	80-114		
SW-846 8260C										
Batch L190704AA - SW-846 5030C										
LCS (LCSL85Q)						Prepared & Analyzed: 11-Mar-19				
1,1-Dichloroethane	**20**		ug/l	1	20		101	70-130		
1,2-Dibromo-3-chloropropane	**20**		ug/l	5	20		101	70-130		
1,3-Dichlorobenzene	**21**		ug/l	5	20		103	70-130		
1,3,5-Trimethylbenzene	**21**		ug/l	5	20		107	70-130		
1,3,5-Trichlorobenzene	**20**		ug/l	5	20		99	70-130		
1,4-Dichlorobenzene	**21**		ug/l	5	20		104	70-130		
1,2-Dichloropropane	**19**		ug/l	1	20		96	70-130		
1,4-Dioxane	**450**		ug/l	250	500		90	70-130		
1,2-Dichloroethane	**24**		ug/l	1	20		119	70-130		
1,2-Dichlorobenzene	**21**		ug/l	5	20		103	70-130		
1,2-Dibromoethane	**20**		ug/l	1	20		102	70-130		
1,3-Dichloropropane	**20**		ug/l	1	20		100	70-130		
1,2,4-Trimethylbenzene	**21**		ug/l	5	20		107	70-130		
1,2,4-Trichlorobenzene	**20**		ug/l	5	20		99	70-130		
1,2,3-Trichloropropane	**20**		ug/l	5	20		102	70-130		
1,2,3-Trichlorobenzene	**20**		ug/l	5	20		100	70-130		
1,1-Dichloroethene	**23**		ug/l	1	20		113	70-130		
1,1,2-Trichloroethane	**21**		ug/l	1	20		105	70-130		
1,1,2,2-Tetrachloroethane	**19**		ug/l	1	20		97	70-130		
1,1,1-Trichloroethane	**24**		ug/l	1	20		122	70-130		
1,1,1,2-Tetrachloroethane	**21**		ug/l	1	20		107	70-130		
Freon 113	**25**		ug/l	10	20		125	70-130		
2,2-Dichloropropane	**23**		ug/l	1	20		117	70-130		
1,1-Dichloropropene	**21**		ug/l	5	20		107	70-130		
t-Amyl methyl ether	**19**		ug/l	5	20		97	70-130		
Ethylbenzene	**21**		ug/l	1	20		105	70-130		
Hexachlorobutadiene	**19**		ug/l	5	20		95	70-130		
Isopropylbenzene	**22**		ug/l	5	20		108	70-130		
m+p-Xylene	**43**		ug/l	5	40		107	70-130		
Methyl Tertiary Butyl Ether	**19**		ug/l	1	20		97	70-130		
Methylene Chloride	**20**		ug/l	1	20		102	70-130		
Naphthalene	**20**		ug/l	5	20		100	70-130		
n-Butylbenzene	**20**		ug/l	5	20		102	70-130		
n-Propylbenzene	**21**		ug/l	5	20		105	70-130		
o-Xylene	**21**		ug/l	1	20		104	70-130		
p-Isopropyltoluene	**22**		ug/l	5	20		108	70-130		
Ethyl ether	**17**		ug/l	5	20		87	70-130		
Styrene	**21**		ug/l	5	20		106	70-130		
Tetrahydrofuran	**92**		ug/l	10	100		92	70-130		
t-Butyl alcohol	**190**		ug/l	30	200		96	70-130		
tert-Butylbenzene	**21**		ug/l	5	20		104	70-130		
Tetrachloroethene	**21**		ug/l	1	20		106	70-130		
Toluene	**20**		ug/l	1	20		102	70-130		
trans-1,2-Dichloroethene	**21**		ug/l	1	20		107	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch L190704AA - SW-846 5030C										
LCS (LCSL85Q)					Prepared & Analyzed: 11-Mar-19					
trans-1,3-Dichloropropene	**20**		ug/l	1	20		100	70-130		
trans-1,4-Dichloro-2-butene	**71**		ug/l	50	100		71	70-130		
Trichloroethene	**22**		ug/l	1	20		108	70-130		
Trichlorofluoromethane	**22**		ug/l	1	20		111	70-130		
Vinyl Chloride	**18**		ug/l	1	20		92	70-130		
2-Butanone	**140**		ug/l	10	150		91	70-130		
Ethyl t-butyl ether	**18**		ug/l	1	20		90	70-130		
sec-Butylbenzene	**21**		ug/l	5	20		105	70-130		
Acrylonitrile	**83**		ug/l	20	100		83	70-130		
2-Chlorotoluene	**21**		ug/l	5	20		104	70-130		
2-Hexanone	**88**		ug/l	10	100		88	70-130		
di-Isopropyl ether	**17**		ug/l	1	20		84	70-130		
4-Chlorotoluene	**21**		ug/l	5	20		103	70-130		
Acetone	**150**		ug/l	20	150		99	70-130		
Benzene	**20**		ug/l	1	20		102	70-130		
Bromobenzene	**20**		ug/l	5	20		102	70-130		
Bromochloromethane	**18**		ug/l	5	20		92	70-130		
Bromodichloromethane	**22**		ug/l	1	20		110	70-130		
Bromoform	**19**		ug/l	4	20		93	70-130		
Bromomethane	**18**		ug/l	1	20		90	70-130		
Carbon Disulfide	**19**		ug/l	5	20		94	70-130		
Dibromochloromethane	**21**		ug/l	1	20		105	70-130		
Chlorobenzene	**21**		ug/l	1	20		107	70-130		
Chloroethane	**18**		ug/l	1	20		91	70-130		
Chloroform	**22**		ug/l	1	20		112	70-130		
Chloromethane	**15**		ug/l	1	20		77	70-130		
cis-1,2-Dichloroethene	**21**		ug/l	1	20		106	70-130		
cis-1,3-Dichloropropene	**20**		ug/l	1	20		102	70-130		
Dibromomethane	**21**		ug/l	1	20		107	70-130		
4-Methyl-2-pentanone	**88**		ug/l	10	100		88	70-130		
Carbon Tetrachloride	**25**		ug/l	1	20		127	70-130		
Dichlorodifluoromethane	**19**		ug/l	1	20		96	70-130		
Surrogate: Toluene-d8	*49*		ug/l		*50*		*99*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*52*		ug/l		*50*		*105*	*70-130*		
Surrogate: Dibromofluoromethane	*53*		ug/l		*50*		*106*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51*		ug/l		*50*		*103*	*70-130*		
LCSD (LCSL85Y)					Prepared & Analyzed: 11-Mar-19					
Ethyl t-butyl ether	**18**		ug/l	1	20		90	70-130	0	20
cis-1,2-Dichloroethene	**21**		ug/l	1	20		105	70-130	1	20
Isopropylbenzene	**22**		ug/l	5	20		108	70-130	1	20
Freon 113	**24**		ug/l	10	20		121	70-130	3	20
Chlorobenzene	**21**		ug/l	1	20		106	70-130	0	20
m+p-Xylene	**42**		ug/l	5	40		106	70-130	1	20
Ethylbenzene	**21**		ug/l	1	20		105	70-130	0	20
Methyl Tertiary Butyl Ether	**19**		ug/l	1	20		96	70-130	1	20
Hexachlorobutadiene	**19**		ug/l	5	20		96	70-130	1	20
Ethyl ether	**17**		ug/l	5	20		83	70-130	5	20
di-Isopropyl ether	**17**		ug/l	1	20		87	70-130	3	20
Dichlorodifluoromethane	**19**		ug/l	1	20		94	70-130	2	20
Dibromomethane	**21**		ug/l	1	20		107	70-130	0	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch L190704AA - SW-846 5030C										
LCSD (LCSL85Y)					Prepared & Analyzed: 11-Mar-19					
cis-1,3-Dichloropropene	**21**		ug/l	1	20		103	70-130	1	20
Chloromethane	**16**		ug/l	1	20		80	70-130	4	20
Methylene Chloride	**20**		ug/l	1	20		102	70-130	1	20
Toluene	**21**		ug/l	1	20		104	70-130	2	20
Chloroform	**22**		ug/l	1	20		110	70-130	2	20
Chloroethane	**19**		ug/l	1	20		93	70-130	2	20
Dibromochloromethane	**21**		ug/l	1	20		103	70-130	1	20
tert-Butylbenzene	**21**		ug/l	5	20		107	70-130	3	20
Vinyl Chloride	**18**		ug/l	1	20		91	70-130	1	20
1,2-Dibromo-3-chloropropane	**20**		ug/l	5	20		100	70-130	1	20
Carbon Tetrachloride	**25**		ug/l	1	20		124	70-130	2	20
Trichlorofluoromethane	**21**		ug/l	1	20		107	70-130	4	20
Trichloroethene	**22**		ug/l	1	20		111	70-130	3	20
trans-1,4-Dichloro-2-butene	**74**		ug/l	50	100		74	70-130	4	20
trans-1,3-Dichloropropene	**20**		ug/l	1	20		100	70-130	0	20
Tetrachloroethene	**21**		ug/l	1	20		105	70-130	1	20
Tetrahydrofuran	**89**		ug/l	10	100		89	70-130	3	20
Naphthalene	**20**		ug/l	5	20		99	70-130	1	20
t-Butyl alcohol	**190**		ug/l	30	200		96	70-130	0	20
t-Amyl methyl ether	**19**		ug/l	5	20		93	70-130	4	20
Styrene	**21**		ug/l	5	20		105	70-130	1	20
sec-Butylbenzene	**21**		ug/l	5	20		106	70-130	1	20
p-Isopropyltoluene	**21**		ug/l	5	20		107	70-130	1	20
o-Xylene	**21**		ug/l	1	20		104	70-130	0	20
n-Propylbenzene	**21**		ug/l	5	20		106	70-130	1	20
n-Butylbenzene	**21**		ug/l	5	20		103	70-130	1	20
trans-1,2-Dichloroethene	**22**		ug/l	1	20		109	70-130	2	20
1,2,3-Trichlorobenzene	**20**		ug/l	5	20		99	70-130	1	20
Carbon Disulfide	**19**		ug/l	5	20		94	70-130	0	20
1,3,5-Trimethylbenzene	**22**		ug/l	5	20		108	70-130	1	20
1,2-Dichlorobenzene	**21**		ug/l	5	20		103	70-130	1	20
1,2-Dichloropropane	**20**		ug/l	1	20		98	70-130	3	20
1,2-Dichloroethane	**24**		ug/l	1	20		119	70-130	1	20
1,2-Dibromoethane	**21**		ug/l	1	20		105	70-130	3	20
1,2,4-Trimethylbenzene	**21**		ug/l	5	20		106	70-130	1	20
1,3-Dichloropropane	**20**		ug/l	1	20		101	70-130	1	20
1,2,3-Trichloropropane	**21**		ug/l	5	20		104	70-130	2	20
1,3-Dichlorobenzene	**21**		ug/l	5	20		103	70-130	0	20
1,1-Dichloropropene	**22**		ug/l	5	20		109	70-130	1	20
1,1-Dichloroethene	**23**		ug/l	1	20		113	70-130	0	20
1,1-Dichloroethane	**20**		ug/l	1	20		100	70-130	0	20
1,1,2-Trichloroethane	**21**		ug/l	1	20		106	70-130	1	20
1,1,2,2-Tetrachloroethane	**20**		ug/l	1	20		98	70-130	1	20
1,1,1-Trichloroethane	**24**		ug/l	1	20		119	70-130	3	20
1,1,1,2-Tetrachloroethane	**21**		ug/l	1	20		105	70-130	2	20
1,2,4-Trichlorobenzene	**20**		ug/l	5	20		98	70-130	1	20
Acrylonitrile	**84**		ug/l	20	100		84	70-130	1	20
Bromomethane	**18**		ug/l	1	20		89	70-130	1	20
Bromoform	**18**		ug/l	4	20		92	70-130	1	20
Bromodichloromethane	**22**		ug/l	1	20		111	70-130	0	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch L190704AA - SW-846 5030C										
LCSD (LCSL85Y)					Prepared & Analyzed: 11-Mar-19					
Bromochloromethane	**18**		ug/l	5	20		90	70-130	2	20
Bromobenzene	**21**		ug/l	5	20		103	70-130	0	20
1,3,5-Trichlorobenzene	**20**		ug/l	5	20		100	70-130	1	20
Benzene	**20**		ug/l	1	20		101	70-130	1	20
1,4-Dichlorobenzene	**21**		ug/l	5	20		103	70-130	1	20
Acetone	**130**		ug/l	20	150		88	70-130	12	20
4-Methyl-2-pentanone	**90**		ug/l	10	100		90	70-130	2	20
4-Chlorotoluene	**21**		ug/l	5	20		104	70-130	1	20
2-Hexanone	**90**		ug/l	10	100		90	70-130	2	20
2-Chlorotoluene	**21**		ug/l	5	20		103	70-130	1	20
2-Butanone	**140**		ug/l	10	150		93	70-130	3	20
2,2-Dichloropropane	**23**		ug/l	1	20		116	70-130	1	20
1,4-Dioxane	**420**		ug/l	250	500		84	70-130	7	20
Surrogate: 4-Bromofluorobenzene	*52*		ug/l		*50*		*105*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*50*		ug/l		*50*		*101*	*70-130*		
Surrogate: Toluene-d8	*50*		ug/l		*50*		*99*	*70-130*		
Surrogate: Dibromofluoromethane	*52*		ug/l		*50*		*105*	*70-130*		
LCS (LCSL86Q)					Prepared & Analyzed: 11-Mar-19					
Ethanol	**530**		ug/l	750	500		105	70-130		
LCSD (LCSL86Y)					Prepared & Analyzed: 11-Mar-19					
Ethanol	**800**	*	ug/l	750	500		160	70-130	41	20
Blank (VBLKL85B)					Prepared & Analyzed: 11-Mar-19					
p-Isopropyltoluene	< 5		ug/l	5				-		
Dibromomethane	< 1		ug/l	1				-		
Isopropylbenzene	< 5		ug/l	5				-		
Hexachlorobutadiene	< 5		ug/l	5				-		
Freon 113	< 10		ug/l	10				-		
Ethylbenzene	< 1		ug/l	1				-		
Ethyl t-butyl ether	< 1		ug/l	1				-		
Ethyl ether	< 5		ug/l	5				-		
Ethanol	< 750		ug/l	750				-		
Carbon Tetrachloride	< 1		ug/l	1				-		
Dichlorodifluoromethane	< 1		ug/l	1				-		
Methylene Chloride	< 1		ug/l	1				-		
Dibromochloromethane	< 1		ug/l	1				-		
cis-1,3-Dichloropropene	< 1		ug/l	1				-		
cis-1,2-Dichloroethene	< 1		ug/l	1				-		
Chloromethane	< 1		ug/l	1				-		
Chloroform	< 1		ug/l	1				-		
Chloroethane	< 1		ug/l	1				-		
Chlorobenzene	< 1		ug/l	1				-		
di-Isopropyl ether	< 1		ug/l	1				-		
1,1,1,2-Tetrachloroethane	< 1		ug/l	1				-		
Vinyl Chloride	< 1		ug/l	1				-		
Trichlorofluoromethane	< 1		ug/l	1				-		
Trichloroethene	< 1		ug/l	1				-		
trans-1,4-Dichloro-2-butene	< 50		ug/l	50				-		
trans-1,3-Dichloropropene	< 1		ug/l	1				-		
trans-1,2-Dichloroethene	< 1		ug/l	1				-		
Toluene	< 1		ug/l	1				-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch L190704AA - SW-846 5030C										
Blank (VBLKL85B)						Prepared & Analyzed: 11-Mar-19				
m+p-Xylene	< 5		ug/l	5				-		
Tetrachloroethene	< 1		ug/l	1				-		
Methyl Tertiary Butyl Ether	< 1		ug/l	1				-		
t-Butyl alcohol	< 30		ug/l	30				-		
t-Amyl methyl ether	< 5		ug/l	5				-		
Styrene	< 5		ug/l	5				-		
sec-Butylbenzene	< 5		ug/l	5				-		
o-Xylene	< 1		ug/l	1				-		
n-Butylbenzene	< 5		ug/l	5				-		
Naphthalene	< 5		ug/l	5				-		
tert-Butylbenzene	< 5		ug/l	5				-		
n-Propylbenzene	< 5		ug/l	5				-		
1,2,3-Trichlorobenzene	< 5		ug/l	5				-		
1,3,5-Trimethylbenzene	< 5		ug/l	5				-		
1,3,5-Trichlorobenzene	< 5		ug/l	5				-		
1,2-Dichloropropane	< 1		ug/l	1				-		
1,2-Dichloroethane	< 1		ug/l	1				-		
1,2-Dichlorobenzene	< 5		ug/l	5				-		
1,2-Dibromoethane	< 1		ug/l	1				-		
1,1,1-Trichloroethane	< 1		ug/l	1				-		
1,3-Dichlorobenzene	< 5		ug/l	5				-		
1,2,3-Trichloropropane	< 5		ug/l	5				-		
1,2-Dibromo-3-chloropropane	< 5		ug/l	5				-		
1,1-Dichloropropene	< 5		ug/l	5				-		
1,1-Dichloroethene	< 1		ug/l	1				-		
1,1-Dichloroethane	< 1		ug/l	1				-		
1,1,2-Trichloroethane	< 1		ug/l	1				-		
1,1,2,2-Tetrachloroethane	< 1		ug/l	1				-		
Carbon Disulfide	< 5		ug/l	5				-		
Tetrahydrofuran	< 10		ug/l	10				-		
1,2,4-Trimethylbenzene	< 5		ug/l	5				-		
2-Hexanone	< 10		ug/l	10				-		
Bromoform	< 4		ug/l	4				-		
Bromobenzene	< 5		ug/l	5				-		
Bromodichloromethane	< 1		ug/l	1				-		
Acetone	< 20		ug/l	20				-		
Bromochloromethane	< 5		ug/l	5				-		
4-Methyl-2-pentanone	< 10		ug/l	10				-		
Benzene	< 1		ug/l	1				-		
1,3-Dichloropropane	< 1		ug/l	1				-		
Acrylonitrile	< 20		ug/l	20				-		
2-Chlorotoluene	< 5		ug/l	5				-		
1,2,4-Trichlorobenzene	< 5		ug/l	5				-		
Bromomethane	< 1		ug/l	1				-		
2-Butanone	< 10		ug/l	10				-		
2,2-Dichloropropane	< 1		ug/l	1				-		
1,4-Dioxane	< 250		ug/l	250				-		
1,4-Dichlorobenzene	< 5		ug/l	5				-		
4-Chlorotoluene	< 5		ug/l	5				-		
Surrogate: Dibromofluoromethane	*53*		ug/l		*50*		*107*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8260C										
Batch L190704AA - SW-846 5030C										
Blank (VBLKL85B)						Prepared & Analyzed: 11-Mar-19				
Surrogate: 4-Bromofluorobenzene	*51*		ug/l		*50*		*103*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52*		ug/l		*50*		*103*	*70-130*		
Surrogate: Toluene-d8	*49*		ug/l		*50*		*98*	*70-130*		
SW-846 8270D SIM										
Batch 19066WAJ026 - SW-846 3510C										
LCS (066WJLCSQ)						Prepared & Analyzed: 08-Mar-19				
Acenaphthene	**0.9**		ug/l	0.05	1		93	40-140		
Acenaphthylene	**0.8**		ug/l	0.05	1		79	40-140		
2-Methylnaphthalene	**0.9**		ug/l	0.05	1		88	40-140		
Anthracene	**0.9**		ug/l	0.05	1		90	40-140		
Benzo(a)anthracene	**0.9**		ug/l	0.05	1		87	40-140		
Benzo(a)pyrene	**0.9**		ug/l	0.05	1		92	40-140		
Benzo(b)fluoranthene	**1**		ug/l	0.05	1		96	40-140		
Benzo(g,h,i)perylene	**0.8**		ug/l	0.05	1		81	40-140		
Benzo(k)fluoranthene	**0.9**		ug/l	0.05	1		85	40-140		
Chrysene	**0.8**		ug/l	0.05	1		84	40-140		
Dibenz(a,h)anthracene	**0.9**		ug/l	0.05	1		94	40-140		
Fluoranthene	**0.9**		ug/l	0.05	1		89	40-140		
Fluorene	**0.9**		ug/l	0.05	1		92	40-140		
Indeno(1,2,3-cd)pyrene	**0.9**		ug/l	0.05	1		90	40-140		
Phenanthrene	**0.9**		ug/l	0.05	1		91	40-140		
Pyrene	**0.9**		ug/l	0.05	1		87	40-140		
Naphthalene	**0.9**		ug/l	0.05	1		88	40-140		
Surrogate: Benzo(a)pyrene-d12	*0.9*		ug/l		*1*		*89*	*30-130*		
Surrogate: Fluoranthene-d10	*0.9*		ug/l		*1*		*92*	*30-130*		
Surrogate: 1-Methylnaphthalene-d10	*0.9*		ug/l		*1*		*94*	*30-130*		
LCSD (P6WJLCSY)						Prepared & Analyzed: 08-Mar-19				
Benzo(k)fluoranthene	**0.9**		ug/l	0.05	1		93	40-140	9	20
Pyrene	**0.9**		ug/l	0.05	1		86	40-140	1	20
Phenanthrene	**0.9**		ug/l	0.05	1		92	40-140	2	20
Indeno(1,2,3-cd)pyrene	**0.9**		ug/l	0.05	1		93	40-140	3	20
Fluorene	**0.9**		ug/l	0.05	1		91	40-140	2	20
Fluoranthene	**0.9**		ug/l	0.05	1		90	40-140	1	20
Naphthalene	**0.9**		ug/l	0.05	1		88	40-140	0	20
Chrysene	**0.8**		ug/l	0.05	1		83	40-140	1	20
2-Methylnaphthalene	**0.9**		ug/l	0.05	1		87	40-140	1	20
Benzo(g,h,i)perylene	**0.8**		ug/l	0.05	1		83	40-140	3	20
Benzo(b)fluoranthene	**0.9**		ug/l	0.05	1		88	40-140	8	20
Benzo(a)pyrene	**0.9**		ug/l	0.05	1		91	40-140	1	20
Benzo(a)anthracene	**0.9**		ug/l	0.05	1		86	40-140	0	20
Anthracene	**0.9**		ug/l	0.05	1		92	40-140	2	20
Acenaphthylene	**0.8**		ug/l	0.05	1		79	40-140	1	20
Acenaphthene	**0.9**		ug/l	0.05	1		89	40-140	4	20
Dibenz(a,h)anthracene	**1**		ug/l	0.05	1		97	40-140	3	20
Surrogate: Benzo(a)pyrene-d12	*0.9*		ug/l		*1*		*87*	*30-130*		
Surrogate: Fluoranthene-d10	*0.9*		ug/l		*1*		*92*	*30-130*		
Surrogate: 1-Methylnaphthalene-d10	*0.9*		ug/l		*1*		*91*	*30-130*		
Blank (SBLKWJ066B)						Prepared & Analyzed: 08-Mar-19				
Benzo(b)fluoranthene	< 0.05		ug/l	0.05				-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW-846 8270D SIM										
Batch 19066WAJ026 - SW-846 3510C										
Blank (SBLKWJ066B)						Prepared & Analyzed: 08-Mar-19				
Chrysene	< 0.05		ug/l	0.05				-		
2-Methylnaphthalene	< 0.05		ug/l	0.05				-		
Acenaphthene	< 0.05		ug/l	0.05				-		
Acenaphthylene	< 0.05		ug/l	0.05				-		
Anthracene	< 0.05		ug/l	0.05				-		
Benzo(a)anthracene	< 0.05		ug/l	0.05				-		
Benzo(a)pyrene	< 0.05		ug/l	0.05				-		
Benzo(k)fluoranthene	< 0.05		ug/l	0.05				-		
Benzo(g,h,i)perylene	< 0.05		ug/l	0.05				-		
Pyrene	< 0.05		ug/l	0.05				-		
Dibenz(a,h)anthracene	< 0.05		ug/l	0.05				-		
Fluoranthene	< 0.05		ug/l	0.05				-		
Fluorene	< 0.05		ug/l	0.05				-		
Indeno(1,2,3-cd)pyrene	< 0.05		ug/l	0.05				-		
Naphthalene	< 0.05		ug/l	0.05				-		
Phenanthrene	< 0.05		ug/l	0.05				-		
Surrogate: Fluoranthene-d10	*0.9*		ug/l		*1*		*93*	*30-130*		
Surrogate: 1-Methylnaphthalene-d10	*0.9*		ug/l		*1*		*88*	*30-130*		
Surrogate: Benzo(a)pyrene-d12	*0.9*		ug/l		*1*		*87*	*30-130*		

Notes and Definitions

*	Outside of specification
K3	ICAL Verification & CCAL Verification are above QC limits; Sample result is ND
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

SCS3767 - R3

eurofins | Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- ☐ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: samsel@gmail.com

Invoice To: CDW consultants Inc
6 Huron Drive
Natic MA 01760
508-~~282~~875-2657

Project No:

Site Name: Manchester Memorial School

Location: Manchester By the Sea State: MA

Sampler(s): S. Amsel

Telephone #:

Project Mgr: Sue Cabelhan

P.O No.: _____ Quote #: _____

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=_____ 12=_____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=_____ X2=_____ X3=_____

G= Grab C= Composite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	VPH	EPH	VOCs 8260	PP13 Metals	Check if chlorinated
						Containers				Analysis				
										List Preservative Code below:				
										2	2	2	5	
SCS3767-01	CDW-MW-1	3/1/19	1400	G	GW	3	3		1	X	X	X	X	☐
-02	CDW-MW-2	3/1/19	1000	G	GW	3	3		1	X	X	X	X	☐
-03	CDW-MW-3	3/1/19	1130	G	GW	3	3		1	X	X	X	X	☐
-04	CDW-MW-4	3/1/19	1300	G	GW	3	3		1	X	X	X	X	☐
														☐
														☐
														☐
														☐
														☐
														☐

QA/QC Reporting Notes:
* additional charges may apply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: _____
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:
		3/5/19	1305
		3/5/19	15:20

Temp °C
Observed 2.0
Correction Factor 0
Corrected 2.0
IR Gun # 01

☒ EDD format:
☒ E-mail to: samsel@cdwconsultants.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

SCS3767

eurofins | Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- Standard TAT - 7 to 10 business days
- Rush TAT - Date Needed: _____

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: samsel@gmail.com
Telephone #:
Project Mgr: Sue Cabrelli

Invoice To: CDW consultants Inc
6 Huron Drive
Natick MA 01760
508-~~8~~875-2652
P.O No.: Quote #:

Project No:
Site Name: Manchester Memorial School
Location: Manchester By the Sea State: MA
Sampler(s): S. Amsell

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11=_____ 12=_____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1=_____ X2=_____ X3=_____

G=Grab C=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	List Preservative Code below: 2 2 2 5	Analysis: VPH	EPH	VOCs 8260	PP13 Metals	Check if chlorinated
SCS3762 01	CDW-MW-1	3/1/19	1400	G	GW	3	3		1		X	X	X	X	☐
02	CDW-MW-2	3/1/19	1000	G	GW	3	3		1		X	X	X	X	☐
03	CDW-MW-3	3/1/19	1130	G	GW	3	3		1		X	X	X	X	☐
04	CDW-MW-4	3/1/19	1300	G	GW	3	3		1		X	X	X	X	☐
05	Trip Blank					1							X		☐
															☐
															☐
															☐
															☐
															☐

TB added per client approval
BM 3/6

QA/QC Reporting Notes:
* additional charges may apply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC ☐ DQA*
☐ NSP A* ☐ NSP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other:
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:
		3/5/19	1305
		3/5/19	15:20

Temp °C: Observed 2.0 Correction Factor 0 Corrected 2.0 IR ID # 01

☒ EDD format:
☒ E-mail to: samsel@cdwconsultants.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Batch Summary

190660020A

Subcontracted Analyses

LCS20066Q
P90660AY
PBLK20066B
SC53767-01 (CDW-MW-1)
SC53767-02 (CDW-MW-2)
SC53767-03 (CDW-MW-3)
SC53767-04 (CDW-MW-4)

190660571304

Subcontracted Analyses

P001630D221132
P001630M221136
P001630R221134
P06671DBB
P06671DQQ
SC53767-01 (CDW-MW-1)
SC53767-02 (CDW-MW-2)
SC53767-03 (CDW-MW-3)
SC53767-04 (CDW-MW-4)

190661404704A

Subcontracted Analyses

P001628D220822A
P001628D220923A
P001628D221828A
P001628M220826A
P001628M220927A
P001628M221833A
P001628R220824A
P001628R220925A
P001628R221830A
P06604DBB
P06604DQQ
SC53767-01 (CDW-MW-1)
SC53767-02 (CDW-MW-2)
SC53767-02RE1 (CDW-MW-2)
SC53767-03 (CDW-MW-3)
SC53767-04 (CDW-MW-4)

19066WAJ026

Subcontracted Analyses

066WJLCSQ
P6WJLCSY
SBLKWJ066B
SC53767-01 (CDW-MW-1)
SC53767-02 (CDW-MW-2)
SC53767-03 (CDW-MW-3)
SC53767-04 (CDW-MW-4)

19070A54A

Subcontracted Analyses

BLKJBB
LCS6GQ
P90704AY
SC53767-01 (CDW-MW-1)
SC53767-02 (CDW-MW-2)
SC53767-03 (CDW-MW-3)
SC53767-04 (CDW-MW-4)

L190704AA

Subcontracted Analyses

LCSL85Q
LCSL85Y
LCSL86Q
LCSL86Y
SC53767-01 (CDW-MW-1)
SC53767-02 (CDW-MW-2)
SC53767-03 (CDW-MW-3)
SC53767-04 (CDW-MW-4)
SC53767-05 (Trip Blank)
VBLKL85B

CDW CONSULTANTS, INC.
CIVIL & ENVIRONMENTAL ENGINEERS

April 24, 2019

Ms. Debbie McDonald
JCJ Architecture
One State Street, Suite 900
Boston, MA 02109

RE: Groundwater Resampling
Manchester Memorial Elementary School
43 Lincoln Street
Manchester by the Sea, Massachusetts

Dear Ms. McDonald:

During the Phase II subsurface investigation at the Manchester Memorial Elementary School, in Manchester by the Sea, Massachusetts (Site), dissolved metals; arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, thallium and zinc were detected in groundwater samples. The detected concentrations of metals in all four wells were above the applicable Massachusetts Contingency Plan (MCP) Reportable Concentration for GW-1 classified groundwater, and represented a 120-day reporting condition to the Massachusetts Department of Environmental Protection (MassDEP). However, due to the high levels of turbidity encountered in the groundwater, CDW recommended resampling the four monitoring wells within the 120-day reporting window, to determine if the metals concentrations were an anomaly due to turbidity.

On April 4, 2019, CDW collected groundwater samples from monitoring wells (MW-1, MW2, MW-3, MW-4). At least three well volumes were purged from the well prior to collecting the samples. The groundwater collected exhibited minor turbidity as compared to the initial sampling event. The groundwater samples were collected via peristaltic pump with an inline filter. The samples were submitted to CDW's subcontractor, Con-Test Analytical Laboratory for analysis of dissolved metals. An additional unfiltered sample was also collected for total metals.

None of the metals detected in groundwater are at concentrations above the applicable MCP Reportable Concentrations for groundwater. Therefore, in CDW's opinion, the initial groundwater analytical results are an anomaly due to excess turbidity, and there is no MCP reporting requirement based upon the resampling and analysis of groundwater. The groundwater analytical results are located in Table 1, and the laboratory analytical report is attached.

TABLE 1
Groundwater Sampling Results
Manchester Memorial Elementary School

Client ID:	MA RCGW-1	MW-1	MW-1	MW-2	MW-3	MW-4
Lab ID:		**19D0358-01**	**19D0358-01**	**19D0358-02**	**19D0358-03**	**19D0358-04**
Matrix:		**Ground Water**	**Ground Water**	**Ground Water**	**Ground Water**	**Ground Water**
Sampled:		**4-Apr-19**	**4-Apr-19**	**4-Apr-19**	**4-Apr-19**	**4-Apr-19**
Depth to Groundwater (feet):		**15.9**	**15.9**	**14.4**	**16.2**	**16.41**
		Total Metals	**Dissolved Metals**	**Dissolved Metals**	**Dissolved Metals**	**Dissolved Metals**
SW-846 6020A (ug/l)						
Antimony	6	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	10	<0.40	<0.40	1.0	<1.0	<0.40
Beryllium	4	<0.40	<0.40	<0.40	<0.40	<0.40
Cadmium	4	<0.50	<0.50	1.3	<0.40	<0.50
Chromium	100	<1.0	<1.0	1.8	<0.50	<1.0
Copper	10000	<5.0	<5.0	11	<5.0	<5.0
Lead	10	<1.0	<1.0	7.5	<1.0	<1.0
Nickel	100	8.3	<5.0	55	14	<5.0
Selenium	50	<5.0	<5.0	<5.0	<5.0	<5.0
Silver	7	<0.50	<0.50	<0.50	<0.50	<0.50
Thallium	2	<0.20	<0.20	<0.20	<0.20	<0.20
Zinc	900	21	17	59	21	10
SW-846 7470A (mg/l)						
Mercury	0.002	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010

A Value with a < in front of = Not Detected above detection limit of value listed.

GW-1 = Massachusetts Contingency Plan GW-1 Reportable Concentrations (converted to match units of analyte value).

ug/L = micrograms per liter equivelent to parts per billion.

mg/L = milligrams per liter equivelent to parts per million.

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

April 12, 2019

Sue Cahalan
CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760

Project Location: Manchester Elementary
Client Job Number:
Project Number: 1838.10
Laboratory Work Order Number: 19D0358

Enclosed are results of analyses for samples received by the laboratory on April 5, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Michelle M. Koch
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

19D0358-01 5

19D0358-02 7

19D0358-03 8

19D0358-04 9

Sample Preparation Information 10

QC Data 11

Metals Analyses (Total) 11

B227885 11

B227911 11

Metals Analyses (Dissolved) 13

B227789 13

B227794 13

Flag/Qualifier Summary 14

Certifications 15

Chain of Custody/Sample Receipt 16

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760
ATTN: Sue Cahalan

REPORT DATE: 4/12/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1838.10

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19D0358

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Manchester Elementary

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-1	19D0358-01	Ground Water		SW-846 6020B	
				SW-846 7470A	
MW-2	19D0358-02	Ground Water		SW-846 6020B	
				SW-846 7470A	
MW-3	19D0358-03	Ground Water		SW-846 6020B	
				SW-846 7470A	
MW-4	19D0358-04	Ground Water		SW-846 6020B	
				SW-846 7470A	

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Tod E. Kopyscinski
Laboratory Director

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Manchester Elementary | Sample Description: | Work Order: 19D0358

Date Received: 4/5/2019

Field Sample #: MW-1 | Sampled: 4/4/2019 09:00

Sample ID: 19D0358-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/10/19	4/11/19 16:16	QNW
Arsenic	ND	0.40	µg/L	1		SW-846 6020B	4/10/19	4/11/19 16:16	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	4/10/19	4/12/19 11:52	QNW
Cadmium	ND	0.50	µg/L	1		SW-846 6020B	4/10/19	4/11/19 16:16	QNW
Chromium	ND	1.0	µg/L	1		SW-846 6020B	4/10/19	4/11/19 16:16	QNW
Copper	ND	5.0	µg/L	1		SW-846 6020B	4/10/19	4/11/19 16:16	QNW
Lead	ND	1.0	µg/L	1		SW-846 6020B	4/10/19	4/11/19 16:16	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	4/11/19	4/12/19 9:32	AJL
Nickel	8.5	5.0	µg/L	1		SW-846 6020B	4/10/19	4/11/19 16:16	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	4/10/19	4/11/19 16:16	QNW
Silver	ND	0.50	µg/L	1		SW-846 6020B	4/10/19	4/11/19 16:16	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	4/10/19	4/11/19 16:16	QNW
Zinc	17	10	µg/L	1		SW-846 6020B	4/10/19	4/11/19 16:16	QNW

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Manchester Elementary | Sample Description: | Work Order: 19D0358

Date Received: 4/5/2019

Field Sample #: MW-1 | Sampled: 4/4/2019 09:00

Sample ID: 19D0358-01

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 12:59	QNW
Arsenic	ND	0.40	µg/L	1		SW-846 6020B	4/9/19	4/10/19 12:59	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	4/9/19	4/10/19 12:59	QNW
Cadmium	ND	0.50	µg/L	1		SW-846 6020B	4/9/19	4/10/19 12:59	QNW
Chromium	ND	1.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 12:59	QNW
Copper	ND	5.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 12:59	QNW
Lead	ND	1.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 12:59	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	4/10/19	4/11/19 14:02	TBC
Nickel	8.3	5.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 12:59	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 12:59	QNW
Silver	ND	0.50	µg/L	1		SW-846 6020B	4/9/19	4/10/19 12:59	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	4/9/19	4/10/19 12:59	QNW
Zinc	21	10	µg/L	1		SW-846 6020B	4/9/19	4/10/19 12:59	QNW

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Manchester Elementary | Sample Description: | Work Order: 19D0358

Date Received: 4/5/2019

Field Sample #: MW-2 | Sampled: 4/4/2019 10:00

Sample ID: 19D0358-02

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:03	QNW
Arsenic	1.0	0.40	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:03	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:03	QNW
Cadmium	1.3	0.50	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:03	QNW
Chromium	1.8	1.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:03	QNW
Copper	11	5.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:03	QNW
Lead	7.5	1.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:03	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	4/10/19	4/11/19 14:04	TBC
Nickel	55	5.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:03	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:03	QNW
Silver	ND	0.50	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:03	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:03	QNW
Zinc	59	10	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:03	QNW

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Manchester Elementary | Sample Description: | Work Order: 19D0358

Date Received: 4/5/2019

Field Sample #: MW-3 | Sampled: 4/4/2019 11:00

Sample ID: 19D0358-03

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:06	QNW
Arsenic	ND	0.40	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:06	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:06	QNW
Cadmium	0.53	0.50	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:06	QNW
Chromium	ND	1.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:06	QNW
Copper	ND	5.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:06	QNW
Lead	ND	1.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:06	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	4/10/19	4/11/19 14:06	TBC
Nickel	14	5.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:06	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:06	QNW
Silver	ND	0.50	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:06	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:06	QNW
Zinc	21	10	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:06	QNW

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Manchester Elementary | Sample Description: | Work Order: 19D0358

Date Received: 4/5/2019

Field Sample #: MW-4 | Sampled: 4/4/2019 12:00

Sample ID: 19D0358-04

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:24	QNW
Arsenic	ND	0.40	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:24	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:24	QNW
Cadmium	ND	0.50	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:24	QNW
Chromium	ND	1.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:24	QNW
Copper	ND	5.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:24	QNW
Lead	ND	1.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:24	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	4/10/19	4/11/19 14:07	TBC
Nickel	ND	5.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:24	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:24	QNW
Silver	ND	0.50	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:24	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:24	QNW
Zinc	14	10	µg/L	1		SW-846 6020B	4/9/19	4/10/19 13:24	QNW

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3005A Dissolved-SW-846 6020B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0358-01 [MW-1]	B227794	50.0	50.0	04/09/19
19D0358-02 [MW-2]	B227794	50.0	50.0	04/09/19
19D0358-03 [MW-3]	B227794	50.0	50.0	04/09/19
19D0358-04 [MW-4]	B227794	50.0	50.0	04/09/19

Prep Method: SW-846 3005A-SW-846 6020B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0358-01 [MW-1]	B227885	50.0	50.0	04/10/19

Prep Method: SW-846 7470A Dissolved-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0358-01 [MW-1]	B227789	6.00	6.00	04/10/19
19D0358-02 [MW-2]	B227789	6.00	6.00	04/10/19
19D0358-03 [MW-3]	B227789	6.00	6.00	04/10/19
19D0358-04 [MW-4]	B227789	6.00	6.00	04/10/19

Prep Method: SW-846 7470A Prep-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0358-01 [MW-1]	B227911	6.00	6.00	04/11/19

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B227885 - SW-846 3005A										
Blank (B227885-BLK1)				Prepared: 04/10/19 Analyzed: 04/11/19						
Antimony	ND	1.0	µg/L							
Arsenic	ND	0.40	µg/L							
Beryllium	ND	0.40	µg/L							
Cadmium	ND	0.50	µg/L							
Chromium	ND	1.0	µg/L							
Copper	ND	5.0	µg/L							
Lead	ND	1.0	µg/L							
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.50	µg/L							
Thallium	ND	0.20	µg/L							
Zinc	ND	10	µg/L							
LCS (B227885-BS1)				Prepared: 04/10/19 Analyzed: 04/11/19						
Antimony	569	10	µg/L	500		114	80-120			
Arsenic	549	4.0	µg/L	500		110	80-120			
Beryllium	588	4.0	µg/L	500		118	80-120			
Cadmium	563	5.0	µg/L	500		113	80-120			
Chromium	547	10	µg/L	500		109	80-120			
Copper	1100	50	µg/L	1000		110	80-120			
Lead	560	10	µg/L	500		112	80-120			
Nickel	559	50	µg/L	500		112	80-120			
Selenium	539	50	µg/L	500		108	80-120			
Silver	554	5.0	µg/L	500		111	80-120			
Thallium	539	2.0	µg/L	500		108	80-120			
Zinc	1100	100	µg/L	1000		110	80-120			
LCS Dup (B227885-BSD1)				Prepared: 04/10/19 Analyzed: 04/11/19						
Antimony	533	10	µg/L	500		107	80-120	6.52	20	
Arsenic	516	4.0	µg/L	500		103	80-120	6.36	20	
Beryllium	554	4.0	µg/L	500		111	80-120	5.98	20	
Cadmium	529	5.0	µg/L	500		106	80-120	6.31	20	
Chromium	505	10	µg/L	500		101	80-120	7.99	20	
Copper	1020	50	µg/L	1000		102	80-120	7.56	20	
Lead	520	10	µg/L	500		104	80-120	7.32	20	
Nickel	517	50	µg/L	500		103	80-120	7.83	20	
Selenium	511	50	µg/L	500		102	80-120	5.40	20	
Silver	519	5.0	µg/L	500		104	80-120	6.61	20	
Thallium	504	2.0	µg/L	500		101	80-120	6.83	20	
Zinc	1040	100	µg/L	1000		104	80-120	6.13	20	
Batch B227911 - SW-846 7470A Prep										
Blank (B227911-BLK1)				Prepared: 04/11/19 Analyzed: 04/12/19						
Mercury	ND	0.00010	mg/L							

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B227911 - SW-846 7470A Prep										
LCS (B227911-BS1)				Prepared: 04/11/19 Analyzed: 04/12/19						
Mercury	0.00405	0.00010	mg/L	0.00400		101	80-120			
LCS Dup (B227911-BSD1)				Prepared: 04/11/19 Analyzed: 04/12/19						
Mercury	0.00397	0.00010	mg/L	0.00400		99.2	80-120	2.12	20	

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B227789 - SW-846 7470A Dissolved										
Blank (B227789-BLK1)				Prepared: 04/10/19 Analyzed: 04/11/19						
Mercury	ND	0.00010	mg/L							
LCS (B227789-BS1)				Prepared: 04/10/19 Analyzed: 04/11/19						
Mercury	0.00339	0.00010	mg/L	0.00400		84.8	80-120			
LCS Dup (B227789-BSD1)				Prepared: 04/10/19 Analyzed: 04/11/19						
Mercury	0.00402	0.00010	mg/L	0.00400		101	80-120	17.0	20	
Batch B227794 - SW-846 3005A Dissolved										
Blank (B227794-BLK1)				Prepared: 04/09/19 Analyzed: 04/10/19						
Antimony	ND	1.0	µg/L							
Arsenic	ND	0.40	µg/L							
Beryllium	ND	0.40	µg/L							
Cadmium	ND	0.50	µg/L							
Chromium	ND	1.0	µg/L							
Copper	ND	5.0	µg/L							
Lead	ND	1.0	µg/L							
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.50	µg/L							
Thallium	ND	0.20	µg/L							
Zinc	ND	10	µg/L							
LCS (B227794-BS1)				Prepared: 04/09/19 Analyzed: 04/10/19						
Antimony	517	10	µg/L	500		103	80-120			
Arsenic	506	4.0	µg/L	500		101	80-120			
Beryllium	516	4.0	µg/L	500		103	80-120			
Cadmium	516	5.0	µg/L	500		103	80-120			
Chromium	517	10	µg/L	500		103	80-120			
Copper	1030	50	µg/L	1000		103	80-120			
Lead	516	10	µg/L	500		103	80-120			
Nickel	531	50	µg/L	500		106	80-120			
Selenium	496	50	µg/L	500		99.3	80-120			
Silver	513	5.0	µg/L	500		103	80-120			
Thallium	494	2.0	µg/L	500		98.7	80-120			
Zinc	1030	100	µg/L	1000		103	80-120			
LCS Dup (B227794-BSD1)				Prepared: 04/09/19 Analyzed: 04/10/19						
Antimony	497	10	µg/L	500		99.5	80-120	3.78	20	
Arsenic	488	4.0	µg/L	500		97.6	80-120	3.54	20	
Beryllium	495	4.0	µg/L	500		98.9	80-120	4.14	20	
Cadmium	497	5.0	µg/L	500		99.4	80-120	3.71	20	
Chromium	494	10	µg/L	500		98.9	80-120	4.39	20	
Copper	989	50	µg/L	1000		98.9	80-120	4.53	20	
Lead	498	10	µg/L	500		99.6	80-120	3.54	20	
Nickel	504	50	µg/L	500		101	80-120	5.11	20	
Selenium	484	50	µg/L	500		96.8	80-120	2.56	20	
Silver	494	5.0	µg/L	500		98.9	80-120	3.70	20	
Thallium	476	2.0	µg/L	500		95.1	80-120	3.71	20	
Zinc	985	100	µg/L	1000		98.5	80-120	4.20	20	

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6020B in Water	
Antimony	CT,NH,NY,ME,VA,NC
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,NC,ME,VA
Arsenic	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,NC,ME,VA
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,NC,ME,VA
Cadmium	CT,NH,NY,RI,ME,VA,NC
Chromium	CT,NH,NY,NC,ME,VA
Chromium	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,NC,ME,VA
Lead	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,NC,ME,VA
Nickel	CT,NH,NY,NC,ME,VA
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,NC,ME,VA
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NC,NH,NY,ME,VA
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,NC,ME,VA
Thallium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,NC,ME,VA
SW-846 7470A in Water	
Mercury	CT,NH,NY,NC,ME,VA
Mercury	CT,NH,NY,NC,ME,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019

eurofins | Spectrum Analytical

mmk

19D0358

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: CDW Consultants Inc
6 Huron Drive
Natick MA 01760
samsel@cdwconsultants.com
Telephone #:
Project Mgr: S. Carhalan

Invoice To: CDW Consultants Inc
6 Huron Drive
Natick MA 01760
P.O No.: Quote #:

Project No: 1838.10
Site Name: Manchester Elementary
Location: Manchester By the Sea State: MA
Sampler(s): S. Amsel

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11= 12=

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1= X2= X3=

G= Grab C=Composite

List Preservative Code below: 4

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analysis: PP13 Metals	Check if chlorinated
01	MW-1	4/4/19	9:00	G	GW		1		2		☐
02	MW-2	4/4/19	10:00	G	GW		1		2		☐
03	MW-3	4/4/19	11:00	G	GW		1		2		☐
04	MW-4	4/4/19	12:00	G	GW		1		2		☐
											☐
											☐
											☐
											☐
											☐
											☐

Per client - all four for dissolved PP13. MW-1 dissolved plus total 4/8/19mmk

QA/QC Reporting Notes:
* additional charges may apply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other:
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp °C
Shay Ard	Paul Chesterton	4/4/19	5:00pm	Observed
Fridge	Paul Chesterton	4-5-19	1637	Correction Factor
Paul Chesterton		4-5-19	1745	Corrected
AB	5.4°C	4-5-19	1749	ID/ID #:
AB				

☒ EDD format:
☒ E-mail to: samsel@cdwconsultants.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Sample shipping address: 11 Almgren Drive • Agawam, MA 01001 • 413-789-9018 • www.EurofinsUS.com/Spectrum

4-5-19 1900 4/5/19 1900

Rev. Nov 2016

Table of Contents

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client CDW

Received By RLF Date 4/5/19 Time 1900

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 5.4 C
By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? NA Were Samples Tampered with? NA
Was COC Relinquished ? T Does Chain Agree With Samples? T
Are there broken/leaking/loose caps on any samples? F
Is COC in ink/ Legible? T Were samples received within holding time? T
Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T
Are Sample labels filled out and legible? T
Are there Lab to Filters? F Who was notified? _____
Are there Rushes? F Who was notified? _____
Are there Short Holds? F Who was notified? _____
Is there enough Volume? T
Is there Headspace where applicable? NA MS/MSD? F
Proper Media/Containers Used? T Is splitting samples required? F
Were trip blanks received? F On COC? F
Do all samples have the proper pH? Acid TPHA Base NA

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	4	1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic	4	8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	~~3~~ Bnp 4	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

194

1. Identification

Product Identity: **2 Multi-Shine**

Recommended Use: Water Based Glass & Surface Cleaner

Producer / Distributor

Multi-Clean
600 Cardigan Road
Shoreview, MN 55126

Telephone Number for Information: 651-481-1900

Emergency Telephone Number: 800-255-3924

2. Hazard Identification

Classification:

Health Class	Physical Class	Environment Class
Mild Skin Irritation Category 3 Eye Irritant Category 2		Acute Aquatic Toxicity Category 3

Label

Symbols

Signal Word Warning

Hazard Statements:

Causes eye and mild skin irritation

Precautionary Statements:

If Skin Irritation Occurs: Get medical advice/attention
Wash hands thoroughly after handling.
If In Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention

3. Composition/Information on Ingredients

Ingredient	CAS Number	Percent by Weight
Surfactants	Proprietary	20 - 30
Water	7732-18-5	60 - 100

4. First-Aid Measures:

Ingestion: If Swallowed: Drink two glasses of water and call a physician immediately.

Eye Contact: Flush eyes with running water for at least 15 minutes. If irritation persists, obtain medical attention.

Skin Contact: Flush thoroughly with cool water. Remove and wash contaminated clothing before reuse.

Inhalation: Move to fresh air.

5. Fire Fighting Measures:

Suitable Extinguishing Media: Not Applicable

Special Fire Fighting Procedures: Not Applicable

Unusual Fire and Explosion Hazards None are known

6. Accidental Release Measures:

Dike and contain spill with inert material (sand, earth, etc.). Collect spill with a mop, absorbent material (example: floor-dry) or vacuum. Thoroughly rinse affected area with water.

7. Handling and Storage:

Handling: Keep from freezing. Keep out of reach of children.

Storage: Normal care for storage.

8. Exposure Controls / Personal Protection:

Exposure Limits

Ingredients	CAS Number	Osha PEL	ACGIH TLV
None Listed	XXXX	XXX	XXX

Exposure Controls

Engineering Controls: Normal good ventilation is sufficient

Personal Protective Equipment:

Eye Protection: Approved Safety Goggles or Glasses

Skin Protection: Chemical Resistant Rubber Gloves

Respiratory Protection: Not required, Avoid breathing spray mist

9. Physical and Chemical Properties:

Physical State: Liquid

Appearance: Blue

Odor: No Fragrance Added

Solubility: Complete

Evaporation Rate: NA

Vapor Pressure (MM HG): NA

Vapor Density (Air = 1): > 1

pH: 10.5 - 11.5 (Conc.); 10 - 11 (In-Use)

Specific Gravity (H2O = 1): 1.005

Flammability: None

Flash Point: None

Boiling Point: > 212° F (100°C)

%volatile: > 95%

10. Stability and Reactivity:

Chemical Stability: Stable

Possibility of Hazardous Reactions: None are known

Incompatability (Materials to Avoid): Oxidizing Material

Hazardous Decomposition or By-products: None

Hazardous Polymerization: Will not Occur

Conditions to Avoid: None are known

11. Toxicological Information:

Signs and Symptoms of Overexposure: Causes irritation on direct contact

Acute Effects:

Eye Contact: Causes irritation on contact

Skin Contact: Causes mild irritation on prolonged or repeated contact

Inhalation: Breathing mists may be harmful

Ingestion: May be harmful if swallowed

Target Organ Effects: None Known

Chronic Effects: None Known

Acute Toxicity Values:

Oral LD $_{50}$ > 5000 mg/kg

Dermal LD $_{50}$ > 5000 mg/kg

Inhalation (Vapor) LC $_{50}$ > 50 mg/l

12. Ecological Information:

Persistence and Degradability: Product is Readily Biodegradable

Bio Accumulative Potential: Not Available

Mobility in Soil: Not Available

Aquatic Toxicity: Harmful to Aquatic Life

13. Disposal Considerations:

Material that cannot be used during normal use should be disposed of in accordance with all applicable local, state and federal regulations. Waste from normal cleaning procedures may be disposed of in a sanitary sewer depending on the materials and/or contaminants being cleaned as well as local, state and federal sewer regulations.

14. Transportation Information:

UN Number: None

Shipping Name: Cleaning Compound, Liquid

Transport Hazard Class: None

Packing Group: None

Marine Pollutant: NO

15. Regulatory Information:

TSCA Status: All ingredients listed

Clean Water Act: None of the chemicals in this product are listed under the CWA

Clean Air Act: None of the chemicals in this product are listed under the CAA

CERCLA Reportable Quantity: None

SARA Title III Information:

Section 302 Extremely Hazardous Chemicals: None Listed

Section 311 / 312 Hazard Category: Immediate Health, Chronic Health

Section 313 Toxic Chemicals None Listed

State Regulations: Notice State of California; Warning; This product may contain chemicals known to the state of California to cause cancer or reproductive defects as trace impurities in the standard industrial materials used in the manufacture of this product.

International Regulations: None

California Cleaning Product Right to Know Act of 2017 (SB 258)

Raw Material	CAS No	Function	List
Water	7732-18-5	Diluent	Not Applicable
Surfactant	Withheld	Cleaning agent	Not Applicable
Colorant	Withheld	Dye	Not Applicable

16. Other Information:

Prepared By: Jeremy Waldner

Telephone Number: 651-481-1900

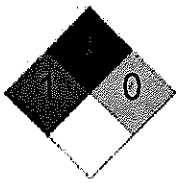
Revision Date: 1/1/2020

Supersedes: 1/16/2018

This SDS applies to the following Part Numbers

908722
908727
951322PL

The information contained herein is based on data considered accurate; however no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. The company assumes no responsibility for personal injury or property damage to vendees, users, or third parties caused by the material. Such vendees or users assume all risks associated with the use of the material.





371

1. Identification

Product Identity: **Neutra-Zyme**

Recommended Use: Bio-Enzymatic Neutral Cleaner (Fragrance Added)

Producer / Distributor

Multi-Clean
600 Cardigan Road
Shoreview, MN 55126

Telephone Number for Information: 651-481-1900

Emergency Telephone Number: 800-255-3924

2. Hazard Identification

Classification:

Health Class | **Physical Class** | **Environment Class**

Product Classified as Non-Hazardous

Label

Symbols

Signal Word

Hazard Statements:

Product Classified as Non-Hazardous

Precautionary Statements:

Read label before use.
Keep out of reach of children.

3. Composition/Information on Ingredients

Ingredient	CAS Number	Percent by Weight
Nonionic Surfactant	Proprietary	5 - 10
Fragrance Oil	Proprietary	0.5 - 1.5
Bacterial Spore Blend	Proprietary	1 - 5
Water	7732-18-5	60 - 100

4. First-Aid Measures:

Ingestion: Clean mouth with water and drink afterwards plenty of water.

Eye Contact: Flush eyes with running water for at least 15 minutes. If irritation persists, obtain medical attention

Skin Contact: If irritation develops, discontinue Use. Rinse with cool water.

Inhalation: Move to fresh air.

5. Fire Fighting Measures:

Suitable Extinguishing Media: Not Applicable

Special Fire Fighting Procedures: Not Applicable

Unusual Fire and Explosion Hazards Not Applicable

6. Accidental Release Measures:

Dike and contain spill with inert material (sand, earth, etc.). Collect spill with a mop, absorbent material (example: floor-dry) or vacuum. Thoroughly rinse affected area with water.

7. Handling and Storage:

Handling: Keep from freezing. Keep out of reach of children.

Storage: Normal care for storage.

8. Exposure Controls / Personal Protection:

Exposure Limits

Ingredients	CAS Number	Osha PEL	ACGIH TLV
None listed	XXXX	XXX	XXX

Exposure Controls

Engineering Controls: Normal good ventilation is sufficient

Personal Protective Equipment:

Eye Protection: Approved Safety Goggles or Glasses

Skin Protection: Not Required

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

9. Physical and Chemical Properties:

Physical State: Liquid
Appearance: Green
Odor: Fresh Mint
Solubility: Complete
Evaporation Rate: NA
Vapor Pressure (MM HG): NA
Vapor Density (Air = 1): NA

pH: 6 - 7 (concentrate), 6 - 7 (in use)
Specific Gravity (H2O = 1): 1.00
Flammability: None
Flash Point: None
Boiling Point: 212° F (100°C)
%volatile: > 85%

10. Stability and Reactivity:

Chemical Stability: Stable
Possibility of Hazardous Reactions: None are known
Incompatability (Materials to Avoid): None are known
Hazardous Decomposition or By-products: None
Hazardous Polymerization: Will not Occur
Conditions to Avoid: None are known

11. Toxicological Information:

Signs and Symptoms of Overexposure: May cause irritation to Eyes on direct contact

Acute Effects:

Eye Contact: Contact with eyes may cause irritation.
Skin Contact: Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Inhalation: Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion: May cause gastro intestinal irritation.

Target Organ Effects: None Known
Chronic Effects: None Known
Acute Toxicity Values:

Oral LD_{50} Product Considered Non-Toxic
Dermal LD_{50} Product Considered Non-Toxic
Inhalation (Vapor) LC_{50} Vapors Considered Non-T

12. Ecological Information:

Persistence and Degradability: Not Available
Bio Accumulative Potential: Not Available
Mobility in Soil: Not Available
Aquatic Toxicity: Not Available

13. Disposal Considerations:

Material that cannot be used during normal use should be disposed of in accordance with all applicable local, state and federal regulations. Waste from normal cleaning procedures may be disposed of in a sanitary sewer depending on the materials and/or contaminants being cleaned as well as local, state and federal sewer regulations.

14. Transportation Information:

UN Number: None
Shipping Name: Cleaning Compound, Liquid
Transport Hazard Class: None
Packing Group: None
Marine Pollutant: NO

15. Regulatory Information:

TSCA Status: All ingredients listed

Clean Water Act: None of the chemicals in this product are listed under the CWA

Clean Air Act: None of the chemicals in this product are listed under the CAA

CERCLA Reportable Quantity: None

SARA Title III Information:

Section 302 Extremely Hazardous Chemicals: None Listed

Section 311 / 312 Hazard Category: None

Section 313 Toxic Chemicals: None Listed

State Regulations: None

International Regulations: None

16. Other Information:

Prepared By: Eric Scholl

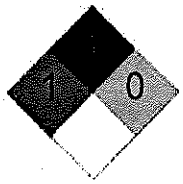
Telephone Number: 651-481-1900

Revision Date: 4/28/2016

Supersedes: 6/7/2013

This SDS applies to the following Part Numbers

The information contained herein is based on data considered accurate; however no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. The company assumes no responsibility for personal injury or property damage to vendees, users, or third parties caused by the material. Such vendees or users assume all risks associated with the use of the material.





429

1. Identification:

Product Identity: **128 E-Fecticide**

Recommended Use: Disinfectant cleaner

Producer / Distributor

Multi-Clean
600 Cardigan Road
Shoreview, MN 55126

Telephone Number for Information: 651-481-1900

Emergency Telephone Number: 800-255-3924

2. Hazard Identification

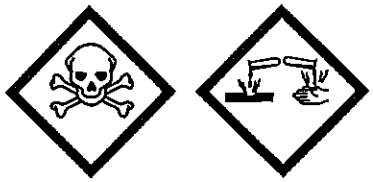
GHS Classification:

Product as Sold

Acute Oral Toxicity Category 4
Acute Dermal Toxicity Category 3
Skin Corrosion Category 1B
Serious Eye Damage Category 1
Short-term Aquatic Hazard Category 1
Long-term Aquatic Hazard Category 2

Label

Symbols



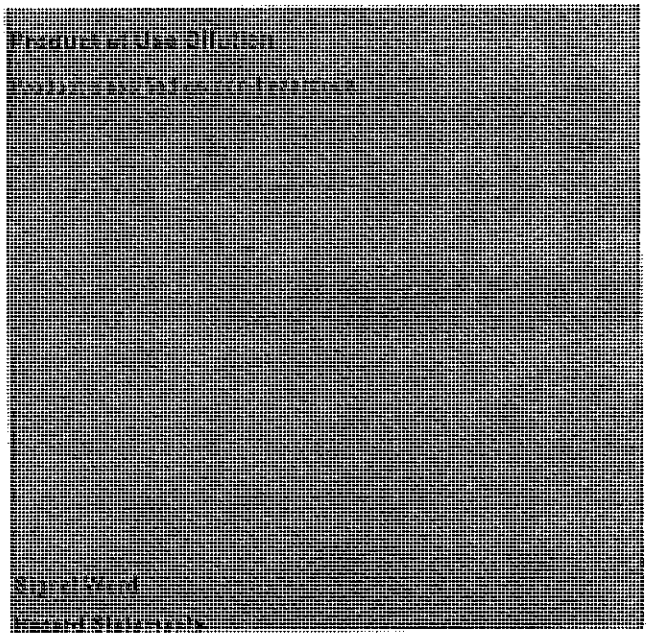
Signal Word Danger

Hazard Statements:

H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements:

Prevention: P260 Do not breathe mist or vapours.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ faca protection.
Response: P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/ doctor.
P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.
P391 Collect spillage.
Storage: P402 + P404 Store in a dry place. Store in a closed container.
P405 Store locked up.
P410 + P403 Protect from sunlight. Store in a well-ventilated place.
Disposal: P501 Dispose of contents/container in accordance with local regulations.



Product Classified as Non-Hazardous



3. Composition/Information on Ingredients

Ingredient	CAS Number	Percent by Weight: Product as Sold	Product at Use Dilution
Dimethyldioctylammonium Chloride	5538-94-3	10 - 12	
Quaternary Ammonium Compounds, Benzyl-C12-18-alkyldimethyl, chlorides	68391-01-5	6 - 8	
Quaternary ammonium compounds, coco alkyltrimethyl, chlorides	81789-18-2	4 - 6	

4. First-Aid Measures:

Product as Sold

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CONTROL CENTER AND SEEK MEDICAL ATTENTION

Ingestion: IF SWALLOWED: Call a poison control center or doctor immediately. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor.

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing at least 15 minutes.

Skin Contact: IF ON SKIN: Immediately take off all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse.

5. Fire Fighting Measures:

	Product as Sold	Product at Use Dilution
Suitable Extinguishing Media:	Water - Foam - Dry Chemical	Not Applicable
Special Fire Fighting Procedures:	Not Applicable	Not Applicable
Unusual Fire and Explosion Hazards	Products of combustion are toxic	None Known

6. Accidental Release Measures:

Contain spillage, and then collect with non-combustible ab-sorbent material, (e.g. sand, earth, diatomaceous earth, ver-miculite) and place in container for disposal according to local / national regulations. Do not flush into surface water or sanitary sewer system.

7. Handling and Storage:

Product as Sold

Handling: Read label before use. Avoid Contact with skin and eyes. Do not breath spray mist. Use only in well ventilated areas. Wash hands thoroughly after handling. Do not eat, drink, or smoke when using this product. Keep out of reach of children. Do not reuse empty container.

Storage: Store locked up. Store in a well ventilated place. Store only in original containers. Do not contaminate food or water by storage or disposal.

8. Exposure Controls / Personal Protection:

Exposure Limits:

Ingredients / Product as Sold	CAS Number	Osha PEL	ACGIH TLV
Ethyl Alcohol	64-17-5	1000 ppm	1000 ppm

	Product AS SOLD	Product at Use Dilution
Exposure Controls:		
Engineering Controls:	Normal good ventilation is sufficient. If exposure levels are exceeded, use local ventillation.	
Personal Protective Equipment:		
Eye Protection:	Approved Safety Goggles or Glasses	
Skin Protection:	Chemical Resistant Rubber Gloves	
Respiratory Protection:	In the case of vapor formation use an approved respirator	

9. Physical and Chemical Properties:

Product as Sold

Physical State: Liquid
Specific Gravity (H2O = 1): 0.98
Solubility: Complete
Flammability: None
Flash Point: None
Boiling Point: > 212° F (100°C)

Appearance: Green
Vapor Pressure (MM HG): Not Available
Vapor Density (Air = 1): Not Available
Auto Ign Temp Not Available
Decomposition Temp Not Available
Freezing Point 32 F

Odor: Fresh Floral
Viscosity <5 centipoise
pH: 7 - 8.5
%volatile: > 75%
LEL / UEL Not Available
Evaporation Rate: Not Available

10. Stability and Reactivity:

Product as Sold

Chemical Stability: Stable
Possibility of Hazardous Reactions: Thermal decomposition may produce toxic vapors/fumes of amines or other organic materials
Incompatability (Materials to Avoid): Other Cleaners or Deodorants
Hazardous Decomposition or By-products: Oxides of carbon and Nitrogen
Hazardous Polymerization: Will not Occur
Conditions to Avoid: None are known

11. Toxicological Information:

Product as Sold

Signs and Symptoms of Overexposure: Causes severe skin burns and eye damage

Acute Effects:
Eye Contact: Causes serious eye damage.
Skin Contact: Causes severe skin burns. Toxic in contact with skin
Inhalation: Toxic if inhaled. Avoid breathing mist and vapor.

Ingestion: Harmful if swallowed
Target Organ Effects: None Known
Chronic Effects: None Known

Acute Toxicity Values:	Product AS SOLD
Oral LD_{50}	LD50 (Rat, male and female): 1,140 mg/kg
Dermal LD_{50}	LD50 (Rat, male and female): > 250 mg/kg
Inhalation (Vapor) LC_{50}	LC50 (Rat, male and female): 0.59 mg/l Test atmosphere: vapour Acute toxicity estimate: 40 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method

[redacted]

12. Ecological Information:

	Product as Sold	Product at Use Dilution
Persistence and Degradability:	Not Applicable	Product is Readily Biodegradable
Bio Accumulative Potential:	Not Applicable	Not Available
Mobility in Soil:	Not Applicable	Not Available
Aquatic Toxicity:	Not Applicable	Not Available

13. Disposal Considerations:

Product as Sold

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional office for guidance.

Product at Use Dilution

Material that cannot be used during normal use should be disposed of in accordance with all applicable local, state and federal regulations. Waste from normal cleaning procedures may be disposed of in a sanitary sewer depending on the materials and/or contaminants being cleaned as well as local, state and federal sewer regulations.

14. Transportation Information:

	Product as Sold
UN Number:	UN1903
Shipping Name:	Disinfectant, Liquid, Corrosive,N.O.S.(Quaternary Ammonium) Limited Quantity for 1 G container or less.
Transport Hazard Class:	8
Packing Group:	III
Marine Pollutant:	NO

[redacted]

15. Regulatory Information:

TSCA Status: All ingredients listed

Clean Water Act: Edetic Acid (60-00-4) is listed in the Clean Water Act as a Hazardous Substance.

Clean Air Act: None of the chemicals in this product are listed under the CAA

CERCLA Reportable Quantity: Edetic Acid (60-00-4), > 5000 lbs.

SARA Title III Information:

Section 302 Extremely Hazardous Chemicals: None Listed

Section 311 / 312 Hazard Category: Immediate Health

Section 313 Toxic Chemicals None Listed

State Regulations: None

International Regulations: None

California Cleaning Product Right to Know Act of 2017 (SB 258)

Raw Material	CAS No	Function	List
Water	7732-18-5	Diluent	Not Applicable
Quaternary Ammonium Compounds	5538-94-3, 68391-01-5, 61789-18-2	Disinfectant	Not Applicable
Ethylenediamine Tetraacetate	64-02-8	Chelator	Not Applicable
Fragrance	Withheld	Fragrance	Not Applicable
Ethylenediamine Tetraacetic Acid	60-00-4	Chelator	Not Applicable

Colorant	Withheld	Dye	Not Applicable

16. Other Information:

Prepared By: Multi-Clean Regulatory

Telephone Number: 651-481-1900

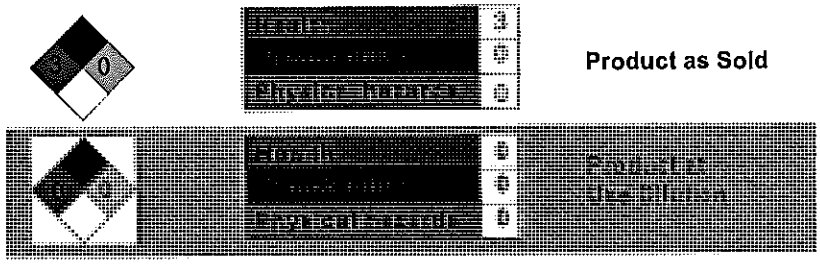
Revision Date: 1/28/2025

Supersedes: 11/9/2022

This SDS applies to the following Part Numbers:

902492
902493
902495
902497
902494

The information contained herein is based on data considered accurate; however no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. The company assumes no responsibility for personal injury or property damage to vendees, users, or third parties caused by the material. Such vendees or users assume all risks associated with the use of the material.



Product as Sold

Safety Data Sheet

1 – PRODUCT IDENTIFICATION

PRODUCT NAME: ..... Ultra Line Stripper
PRODUCT TYPE: ..... Alkaline liquid cleaning compound
PRODUCT NUMBER: ..... UL1100XXX (Last 3 characters vary with the packaging)
CONTROL NUMBER: UL1100XXX

COMPANY: ..... **Simoniz USA, Inc.**
201 Boston Turnpike
Bolton, CT 06043
1-800-227-5536
www.simoniz.com

EMERGENCY PHONE: ..... (800) 255-3924 (CHEM-TEL)

2 – HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE/MIXTURE: ....Skin Corrosion (1) Serious Eye Damage (1) Specific Target Organ Toxicity, Single Exposure; Respiratory Tract Irritation (3) Acute Toxicity, Oral (4)

SYMBOLS: .....



SIGNAL WORD: ..... DANGER!
HAZARD STATEMENT: ..... Causes severe skin burns and eye damage. May cause respiratory irritation. Harmful if swallowed.

PRECAUTIONARY STATEMENTS:

PREVENTION: ..... Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Do not touch eyes. Wear protective gloves / protective clothing / eye protection / face protection. Avoid breathing dust / fume / gas / mist / vapors / spray. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product.

RESPONSE: ..... IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical help. IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help immediately. Specific treatment (see First AID section). IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get emergency medical help.

STORAGE: ..... Store locked up. Store in a well-ventilated place. Keep container tightly closed.

DISPOSAL: ..... Dispose of container and contents in accordance with local regulations.

3 – COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	C.A.S. NUMBER
Water	7732-18-5
2-Butoxy Ethanol	111-76-2
2-Aminoethanol	141-43-5
Potassium Hydroxide	1310-58-3
Sodium Xylenesulfonate	1300-72-7
Alcohols, C_{9-11}, ethoxylated	68439-46-3

Percentages of ingredients are being withheld as trade secret information. This information will be disclosed as necessary to authorized individuals

4 – FIRST-AID MEASURES

BREATHING (INHALATION): Maintain adequate ventilation in work area. If signs of discomfort or irritation occur, remove to fresh air. If symptoms persist or burns occur, get immediate medical attention!

SWALLOWING (INGESTION): DO NOT INDUCE VOMITING! Drink a large quantity of water or milk. Do not attempt to give liquids to an unconscious person. Get immediate medical attention!

EYES: Flush eyes with a large quantity of fresh water for at least 15 minutes. Apply ice compresses and get immediate emergency medical attention by an eye specialist! It may be necessary to bring person to a hospital emergency room.

SKIN (DERMAL): Flush from skin and clothing with large quantity of fresh water for at least 15 minutes. If burns occur or irritation persists, get immediate medical attention! Wash contaminated clothing before reuse.

5 – FIRE-FIGHTING MEASURES

FLASHPOINT: This product is non-flammable.

EXTINGUISHING MEDIA: Use extinguishing media suitable for materials already burning.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters working in areas where this product is present should be equipped with an approved, fully enclosed SCBA.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Do NOT use water on undiluted product.

6 – ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES: Dike to prevent spillage into streams or sewer systems. Consult local, state and federal authorities.

WASTE DISPOSAL: As recommended by local, state and federal authorities.

7 – HANDLING and STORAGE

STORAGE: ..... Store in a cool, well-ventilated area. Avoid overheating or freezing. Keep container tightly closed. Store locked up. Do NOT store this product in an unmarked container.

HANDLING: ..... Wear eye and hand protection if product is likely to splash. Do NOT transfer this product to an unmarked container. Spilled material is slippery. Keep away from children!

8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION: Not usually needed in well-ventilated areas. If needed, use a NIOSH approved respirator.

PROTECTIVE CLOTHING: ..... Nitrile or PVC gloves, and chemical splash goggles.

ADDITIONAL MEASURES: ..... Under normal use according to label instructions, special protection should not be necessary. Wear eye and hand protection if product is likely to splash. Keep away from children!

INGREDIENT	C.A.S. NUMBER	OSHA PEL*
Water	7732-18-5	No limits established
2-Butoxy Ethanol	111-76-2	50 ppm, 240 mg/m^3
2-Aminoethanol	141-43-5	3 ppm, 6 mg/m^3
Potassium Hydroxide	1310-58-3	NIOSH: 2 mg/m^3 (C)
Sodium Xylenesulfonate	1300-72-7	No limits established
Alcohols, $C_{9\text{-}11}$, ethoxylated	68439-46-3	No limits established

*When OSHA 8-hour TWA; STEL; and Ceiling PEL values are not established, NIOSH REL and ACGIH TLV© values will be shown and indicated as such.

9 – PHYSICAL / CHEMICAL PROPERITES

APPEARANCE & ODOR: ..... Purple transparent liquid, rose scented.
ODOR THRESHOLD: ..... N/A
pH: ..... Greater than 13.4
MELTING POINT: ..... N/A
FREEZING POINT: ..... N/A
BOILING POINT: ..... 210 degrees F.
BOILING POINT RANGE: ..... N/A
FLASHPOINT: ..... This product is non-flammable.
EVAPORATION RATE: ..... N/A
FLAMMABILITY (solid/gas): ..... N/A
EXPLOSION LIMITS: ..... N/A
VAPOR PRESSURE: ..... N/A
VAPOR DENSITY (AIR=1): ..... Greater than 1.
SPECIFIC GRAVITY: 1.01
SOLUBILITY IN WATER: ..... Completely soluble.
PARTITION COEFFICIENT: ..... N/A
AUTO-IGNITION TEMPERATURE: ..... N/A
DECOMPOSITION TEMPERATURE: ..... N/A
VISCOSITY: ..... Water thin

10 – STABILITY and REACTIVITY

STABILITY: ..... Stable under normal conditions.
HAZARDOUS DECOMP.: ..... This product not known to polymerize.
INCOMPATIBILITY: ..... Do not mix with caustic material or other detergents.

11 – TOXICOLOGICAL INFORMATION

ROUTE(S) OF ENTRY: ..... Absorption through skin and eyes. Ingestion. Inhalation.
LISTED CARCINOGEN: ..... None over 0.1%.
MEDICAL CONDITION AGGRAVATED: ..... May aggravate pre-existing dermatitis, and asthama or other respiratory disorders.
INHALATION: ..... Undiluted product can cause irritation and burns to mouth, nose, throat and respiratory tract if inhaled. Prolonged or significant exposure to fumes may result in asthama-like symptoms.
INGESTION: ..... Undiluted product can be harmful to health if ingested, and can cause irritation, burns and other serious damage to mouth, esophagus and stomach if swallowed.
EYES: ..... Undiluted product can cause serious irritation, redness, burns, blindness or other permanent damage if not immediately flushed from eyes.
SKIN (DERMAL): ..... Undiluted product can cause severe irritation, redness and burns to the exposed area if not immediately flushed from skin.
ACUTE TOXICITY* (ORAL): ..... 1,831.72 mg/kg
ACUTE TOXICITY* (DERMAL): ..... >5,000 mg/kg
ACUTE TOXCITY* (INHALATION): ..... >20,000 ppm V (Gas), >20 mg/l (Vapor), >5 mg/l (Dust)

*Determined using the additivity formula for mixtures (GHS Purple Book, 3.1.3.6)

12 – ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND DISTRIBUTION: N/A

13 – DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: ..... As recommended by local, state and federal authorities.

14 – TRANSPORTATION INFORMATION

DOT:
PROPER SHIPPING NAME: ..... Compounds, cleaning liquid (contains Ethanolamine, Potassium hydroxide)
HAZARD CLASS: 8
UN/NA NUMBER: ..... NA 1760
PACKAGING GROUP : II

IMDG CODE:
PROPER SHIPPING NAME:..... CORROSIVE LIQUID, N.O.S. (ETHANOLAMINE, POTASSIUM HYDROXIDE)
HAZARD CLASS:..... 8
UN/NA NUMBER:..... UN 1760
PACKAGING GROUP :..... II

15 – REGULATIONS

California Proposition 65:..... ⚠ **WARNING:** This product can expose you to chemicals including Diethanolamine, which are known to the State of California to cause cancer, and Ethylene Oxide, which are known to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

INGREDIENT	C.A.S. NUMBER	Listed Date
Ethylene Oxide	100-41-4	07/01/1987 (Cancer) 08/07/2009 (Developmental Toxicity & Male Reproductive Toxicity) 02/27/1987 (Female Reproductive Toxicity)
Diethanolamine	111-42-2	06/22/2012 (Cancer)
Nitrilotriacetic Acid, Trisodium Salt Monohydrate	18662-53-8	04/01/1989 (Cancer)
Ethylbenzene	100-41-4	06/11/2004 (Cancer)

Contents of this SDS comply with the OSHA Hazard Communication Standard 29CFR 1910.1200

16 – OTHER INFORMATION

NFPA HEALTH:..... 3
NFPA FLAMMABILITY:..... 1
NFPA REACTIVITY:..... 1
NFPA OTHER:..... Alkali

ADDITIONAL:..... The information contained in this SDS is based on the data available to us from sources we believe to be reliable. No warranty or guaranty expressed or implied is made regarding the accuracy of this data or the results obtained from the reliance on this data. The manufacturer assumes no responsibility for injury from the use of this product. Be safe–read this product safety information and pass it on to all persons who may be exposed to this product. Federal law requires it. This product and/or all of its components are either included on or exempt from the TSCA Inventory of Chemical Substances.

REVISION DATE:..... 12/11/2023

Safety Data Sheet

1 – PRODUCT IDENTIFICATION

PRODUCT NAME: ..... Wet Look Plus
PRODUCT TYPE: ..... Liquid Acrylic Floor Finish
PRODUCT NUMBER: ..... CS0750XXX (Last 3 characters vary with the packaging)
CONTROL NUMBER: CS0750XXX
PRODUCT TYPE: ..... Liquid Acrylic Floor Finish

COMPANY: ..... **Simoniz USA, Inc.**
201 Boston Turnpike
Bolton, CT 06043
1-800-227-5536
www.simoniz.com
EMERGENCY PHONE: ..... (800) 255-3924 (CHEM-TEL)

2 – HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE/MIXTURE: ..... Skin Irritation (2) Eye Irritation (2B) Skin Sensitizer (1B)

SYMBOLS: .....



SIGNAL WORD: ..... WARNING!
HAZARD STATEMENT: ..... Causes skin irritation. Causes eye irritation. May cause an allergic skin reaction.
PRECAUTIONARY STATEMENTS:
PREVENTION: ..... Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapours/spray. Contaminated work clothing should not be allowed out of the workplace.
RESPONSE: ..... IF ON SKIN: Wash with plenty of water and soap. Specific treatment (see First AID Section on this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If skin irritation or a rash occurs: Get medical advice/attention.
STORAGE: ..... Store in a dry place. Store in a closed container.
DISPOSAL: ..... Dispose of container and contents in accordance with local regulations.

3 – COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	C.A.S. NUMBER
Water	7732-18-5
Acrylate Copolymer	Trade Secret
Diethylene Glycol Ethyl Ether	111-90-0
Tributoxy Ethyl Phosphate	78-51-3

Percentages of ingredients are being withheld as trade secret information. This information will be disclosed as necessary to authorized individuals

4 – FIRST-AID MEASURES

BREATHING (INHALATION): ... If victim shows signs of discomfort or irritation, remove to fresh air. If symptoms persist, get immediate medical attention.

SWALLOWING (INGESTION): . DO NOT INDUCE VOMITING! Drink a large quantity of water or milk. Do not attempt to give liquids to an unconscious person. Get immediate medical attention!

EYES: ..... Flush eyes with a large quantity of fresh water for at least 15 minutes. If irritation persists, consult a physician..

SKIN (DERMAL): ..... Flush from skin and clothing with large amounts of fresh water. If irritation persists, consult physician. Wash contaminated clothing before wearing.

5 – FIRE-FIGHTING MEASURES

FLASHPOINT:..... This product is non-flammable.

EXTINGUISHING MEDIA:..... This product is non-flammable. Use extinguishing media suitable for materials already burning.

SPECIAL FIRE FIGHTING PROCEDURES: .....Firefighters working in areas where this product is present should be equipped with an approved, fully enclosed SCBA.

UNUSUAL FIRE AND EXPLOSION HAZARDS:.....None known.

6 – ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES: ..... Dike to prevent spillage into streams or sewer systems. Consult local, state and federal authorities.

WASTE DISPOSAL: ..... As recommended by local, state and federal authorities.

7 – HANDLING and STORAGE

STORAGE:..... Store in a cool, well ventilated area. Avoid overheating or freezing.

HANDLING:..... Do not place this product in an unmarked container. Avoid eye contact. Spilled material is slippery.

8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION: Not usually needed. Vapors not normally harmful.
PROTECTIVE CLOTHING:..... Special protection not usually needed. Wear eye protection if product is likely to splash.
ADDITIONAL MEASURES: ..... Do not place this product in an unmarked container. Avoid eye contact. Spilled material is slippery.

INGREDIENT	C.A.S. NUMBER	PEL
Water	7732-18-5	No limits established
Acrylate Copolymer	Trade Secret	No limits established
Diethylene Glycol Ethyl Ether	111-90-0	No limits established
Tributoxy Ethyl Phosphate	78-51-3	0.5mg/m3 TWA

9 – PHYSICAL / CHEMICAL PROPERITES

APPEARANCE & ODOR: ..... White opaque liquid. No significant odor.
ODOR THRESHOLD: ..... N/A
pH:..... 8.0-9.0
MELTING POINT: ..... 210 degrees F.
FREEZING POINT: ..... N/A
BOILING POINT:..... 210 degrees F.
BOILING POINT RANGE:..... N/A
FLASHPOINT:..... This product is non-flammable.
EVAPORATION RATE:..... N/A
FLAMMABILITY (solid/gas):.... N/A
EXPLOSION LIMITS:..... N/A
VAPOR PRESSURE: ..... N/A
VAPOR DENSITY (AIR=1):..... Greater than 1.
SPECIFIC GRAVITY: 1.02
SOLUBILITY IN WATER: ..... Completely soluble.
PARTITION COEFFICIENT: ..... N/A
AUTO-IGNITION TEMPERATURE:.....N/A
DECOMPOSITION TEMPERATURE: .....N/A
VISCOSITY: ..... Water thin

10 – STABILITY and REACTIVITY

STABILITY:..... Stable under normal conditions.
HAZARDOUS DECOMP.:..... This product not known to polymerize.
INCOMPATIBILITY:..... Do not mix with other chemicals.

11 – TOXICOLOGICAL INFORMATION

ROUTE(S) OF ENTRY:..... Ingestion. Not likely to be inhaled in dangerous amounts.
LISTED CARCINOGEN: ..... None over 0.1%. Not listed by IARC, NTP or OSHA.
MEDICAL CONDITION AGGRAVATED:.....May aggravate pre-existing dermatitis.
INHALATION:..... Not likely to be inhaled in hazardous amounts. Maintain adequate ventilation in the work area.
INGESTION:..... This material can cause irritation to the stomach and esophagus if ingested.
EYES: ..... May cause eye irritation.
SKIN (DERMAL): ..... Not likely to irritate. Prolonged exposure to undiluted product may cause irritation.
ACUTE TOXICITY* (ORAL):..... .....>5000 mg/kg
ACUTE TOXICITY* (DERMAL):.. .....>5000 mg/kg
ACUTE TOXCITY* (INHALATION):.....>20,000 ppm V (Gas), >20 mg/l (Vapor), >5 mg/l (Dust)

*Determined using the additivity formula for mixtures (GHS Purple Book, 3.1.3.6)

12 – ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND DISTRIBUTION: N/A

13 –DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: ..... As recommended by local, state and federal authorities.

14 – TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:..... Not D.O.T. regulated.
HAZARD CLASS:.....
UN/NA NUMBER: .....
PACKAGING GROUP :.....

15 - REGULATIONS

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29CFR 1910.1200

16 – OTHER INFORMATION

NFPA HEALTH: 1
NFPA FLAMMABILITY:..... 0
NFPA REACTIVITY:..... 0
NFPA OTHER: ..... None

ADDITIONAL:..... The information contained in this SDS is based on the data available to us from sources we believe to be reliable. No warranty or guaranty expressed or implied is made regarding the accuracy of this data or the results obtained from the reliance on this data. The manufacturer assumes no responsibility for injury from the use of this product. Be safe- read this product safety information and pass it on to all persons who may be exposed to this product. Federal law requires it. This product and/or all of its components are either included on or exempt from the TSCA Inventory of Chemical Substances.

REVISION DATE:..... 07/01/2022

Diversey
A SOLENIS COMPANY

FINAL STEP® 512 Sanitizer

Revision: 2024-07-31

Version: 03.0

1. IDENTIFICATION

Product name: FINAL STEP® 512 Sanitizer
SDS #: MS0800593
Recommended use:
- Industrial/Institutional
- Sanitizer
- This product is intended to be diluted prior to use

Uses advised against: Uses other than those identified are not recommended

Manufacturer, importer, supplier:
US Headquarters
Diversey, Inc.
1300 Altura Rd., Suite 125
Fort Mill, SC 29708
Phone: 1-888-352-2249
SDS Internet Address: https://sds.diversey.com

Emergency telephone number: 1-800-851-7145; 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

Classification for the undiluted product
Skin corrosion, Category 1C
Serious eye damage, Category 1

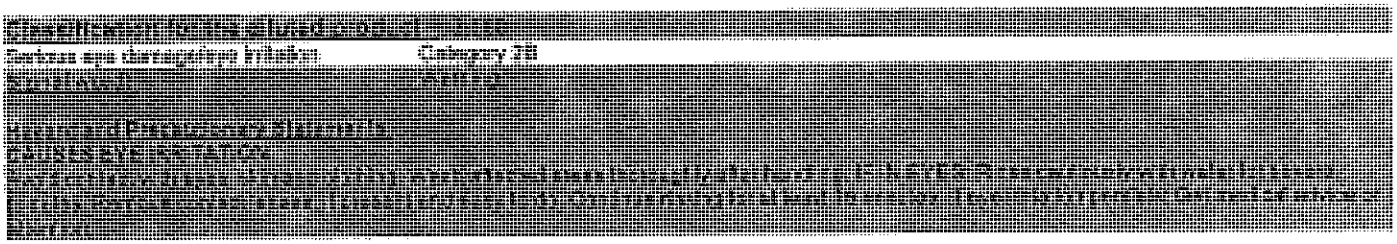


Signal word: Danger.

Hazard Statements
CAUSES SEVERE SKIN BURNS AND SERIOUS EYE DAMAGE.

Precautionary Statements
Causes burns/ serious damage to mouth, throat and stomach. Keep container tightly closed. Avoid contact with eyes, skin and clothing. Wash affected areas thoroughly after handling. Wear protective gloves, protective clothing and eye or face protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water for at least 15 minutes. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call a Poison Center (1-800-851-7145) or physician. Dispose of in accordance with all federal, state and local applicable regulations. SUPPLEMENTAL INFORMATION:. Mix only with water. DO NOT MIX WITH BLEACH OR ANY OTHER PRODUCT OR CHEMICAL. Can react to release chlorine gas.

Health hazards not otherwise classified (HHNOC) - Not applicable
Physical hazards not otherwise classified (PHNOC) - Not applicable



3. COMPOSITION/INFORMATION ON INGREDIENTS

Classified Ingredients

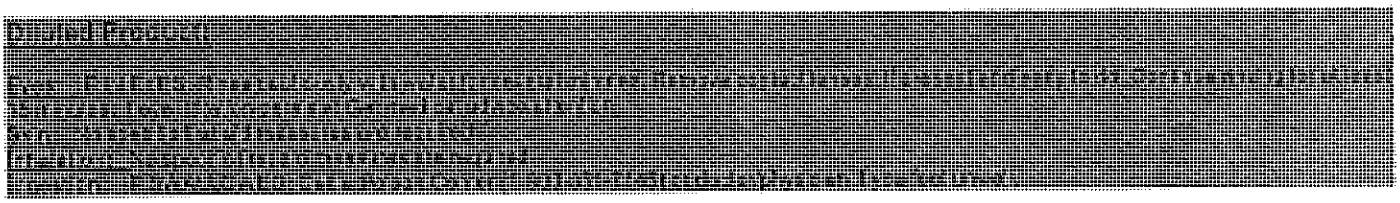
Ingredient(s)	CAS #	Weight %
n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride	68956-79-6	3 - 7%
n-Alkyl (60% C14, 30% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chloride	68391-01-5	3 - 7%
Ethyl alcohol	64-17-5	0.5 - 1.5%
Amines, C12-18-alkyldimethyl	68391-04-8	> 0.1 - < 1%

4. FIRST AID MEASURES

Undiluted Product:

Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes.
Skin: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water for at least 15 minutes. Wash with plenty of water for at least 15 minutes.
Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Ingestion: IF SWALLOWED: Rinse mouth. DO NOT induce vomiting unless directed to do so by medical personnel. Drink a cupful of milk or water.

Most Important Symptoms/Effects: No information available.
Immediate medical attention and special treatment needed Not applicable.
Aggravated Medical Conditions: Individuals with chronic respiratory disorders such as asthma, chronic bronchitis, emphysema, etc., may be more susceptible to irritating effects.



5. FIRE-FIGHTING MEASURES

Specific methods: No special methods required
Suitable extinguishing media: The product is not flammable. Extinguish fire using agent suitable for surrounding fire.
Specific hazards: Corrosive material (See sections 8 and 10).

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Extinguishing media which must not be used for safety reasons: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Put on appropriate personal protective equipment (see Section 8.).
Environmental precautions and clean-up methods: Clean-up methods - large spillage. Material is toxic to fish. Do not discharge into lakes, streams, ponds, or public water unless in accordance with an NPDES permit. Prevent product from entering drains. Water runoff can cause environmental damage. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Do not taste or swallow. Product residue may remain on/in empty containers. All precautions for handling the product must be used in handling the empty container and residue. Avoid breathing vapors or mists. Use only with adequate ventilation. Remove and wash contaminated clothing and footwear before re-use. Mix only with water. DO NOT MIX WITH BLEACH OR ANY OTHER PRODUCT OR CHEMICAL. Can react to release chlorine gas. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage: Keep tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

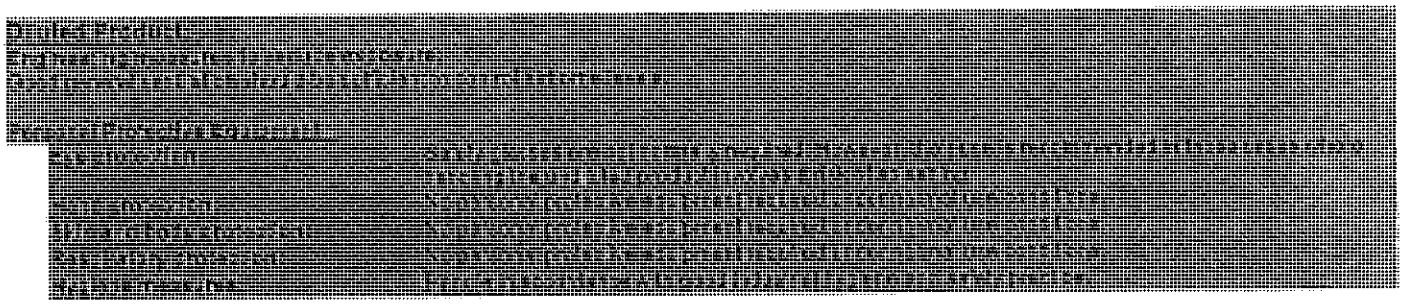
Ingredient(s)	ACGIH	OSHA
Ethyl alcohol	1000 ppm (STEL)	1000 ppm (TWA) 1900 mg/m³ (TWA)

Undiluted Product:

Engineering measures to reduce exposure:
Good general ventilation should be sufficient to control airborne levels.

Personal Protective Equipment
It is the responsibility of the employer to determine the potential risk of exposure to hazardous chemicals for employees in the workplace in order to determine the necessity, selection, and use of personal protective equipment.

Eye protection:	Chemical-splash goggles.
Hand protection:	Chemical-resistant gloves.
Skin and body protection:	Protective footwear. Wear suitable protective clothing.
Respiratory protection:	No special requirements under normal use conditions. If aerosols, mists, or vapors are not adequately controlled by ventilation, use appropriate respiratory protection to avoid over-exposure.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid
Evaporation Rate: No information available
Odor threshold: No information available.
Melting point/freezing point (°C): Not determined
Autoignition temperature: No information available
Solubility in other solvents: No information available
Density: 0.99 Kg/L
Bulk density: No information available
Flash point (°F): > 200 °F > 93 °C
Kinematic viscosity mPa.s
0
VOC: 1.3 % *
Flammability (Solid or Gas): Not applicable
Sustained combustion: The product does not sustain combustion
Explosion limits: - upper: Not determined **- lower:** Not determined

Color: Clear , Red
Odor: Quaternary
Boiling point/range: Not determined
Decomposition temperature: Not determined
Solubility: Completely Soluble
Relative Density (relative to water): 0.99
Vapor density: No information available
Vapor pressure: No information available.
Partition coefficient (n-octanol/water): No information available
Elemental Phosphorus: 0.00 % by wt.

pH: ≈ 7.9
Corrosion to metals: Not corrosive to metals

Dilution pH: ≈ 7
Dilution Flash Point (°F): > 200 °F > 93.4 °C
VOC % by wt. at use dilution: 0.008 %

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Reactivity:	Not Applicable
Stability:	The product is stable
Possibility of hazardous reactions:	None known
Hazardous decomposition products:	None reasonably foreseeable.
Materials to avoid:	Oxidizing agents. Anionic surfactant. Do not mix with chlorinated products (such as bleach).
Conditions to avoid:	None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
Skin contact, Inhalation, Ingestion, Eye contact

Delayed, immediate, or chronic effects and symptoms from short and long-term exposure
Skin contact: Corrosive. Causes severe burns. Symptoms may include burns, blisters, redness and pain (which may be delayed).
Eye contact: Corrosive. Causes serious eye damage. Symptoms may include pain, burning sensation, redness, watering, blurred vision or loss of vision.
Ingestion: Causes burns/ serious damage to mouth, throat and stomach. Symptoms may include stomach pain and nausea.
Inhalation: May cause irritation and corrosive effects to nose, throat and respiratory tract. Symptoms may include coughing and difficulty breathing.
Sensitization: No known effects.
Target Organs (SE): None known
Target Organs (RE):

Numerical measures of toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Persistence and Degradability: No information available.

Bioaccumulation: No information available.

Mobility: No information available.

Other adverse effects No other adverse effects known.

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food, or feed by storage or disposal.

Waste from residues / unused products (undiluted product):
This product, as sold, if discarded or disposed, is not a hazardous waste according to Federal regulations (40 CFR 261). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the waste solution meets RCRA criteria for hazardous waste. Dispose in compliance with all Federal, state, provincial, and local laws and regulations.

Pesticide Storage:
Refer to product label.

Pesticide Disposal:
Refer to product label.

Container Disposal:
Refer to product label.

RCRA Hazard Class (undiluted product): Not Regulated.
RCRA Hazard Class (diluted product): Not Regulated.

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: The information provided below is the full transportation classification for this product. This description does not account for the package size(s) of this product, that may fall under a quantity exception, according to the applicable transportation regulations. When shipping dangerous goods, please consult with your internal, certified hazardous materials specialist to determine if any exceptions can be applied to your shipment.

DOT (Ground) Bill of Lading Description: UN3267, CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., (quaternary ammonium compounds), 8, III

IMDG (Ocean) Bill of Lading Description: UN3267, CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., (quaternary ammonium compounds), 8, III

15. REGULATORY INFORMATION

International Inventories at CAS# Level

TSCA	All components are listed or otherwise exempt
DSL	All components are listed or otherwise exempt

EPA Reg. No. : 70627-63
This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

DANGER: CORROSIVE. Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through the skin. Do not get into eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves and protective clothing when handling. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse. PHYSICAL OR CHEMICAL HAZARDS: Do not use or store near heat or open flame. Do not mix with oxidizers, anionic soaps and detergents. ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic invertebrates. For Institutional Use.

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride	68956-79-6	3 - 7%			
n-Alkyl (60% C14, 30% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chloride	68391-01-5	3 - 7%			
Ethyl alcohol	64-17-5	0.5 - 1.5%			
Amines, C12-18-alkyldimethyl	68391-04-8	> 0.1 - < 1%			

Canadian Regulations

Ingredient(s)	CAS #	NPRI
Ethyl alcohol	64-17-5	X

16. OTHER INFORMATION

NFPA (National Fire Protection Association)
Rating Scale: (Low Hazard) 0 - 4 (Extreme Hazard)

Health 3
Flammability 0
Instability 0
Special Hazards -

[redacted]

Revision: 2024-07-31
Version: 03.0

Reason for revision:	Not applicable
Prepared by:	North American Regulatory Affairs
Additional advice:	• Does not contain an added fragrance

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Diversey
A SOLENIS COMPANY

Safety Data Sheet

According to Regulation (EC) No 1907/2006

Suma Calc D5

Revision: 2025-05-19 **Version:** 05.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Trade name: Suma Calc D5

UFI: 1YRK-219H-500X-YN78

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product use:	Descaling agent. For professional use only.
Uses advised against:	Uses other than those identified are not recommended.

SWED - Sector-specific worker exposure description :
AISE_SWED_PW_8a_1
AISE_SWED_PW_4_1
AISE_SWED_PW_10_1
AISE_SWED_PW_11_1
AISE_SWED_PW_19_1

1.3 Details of the supplier of the safety data sheet
Diversey Europe Operations BV, De Corridor 4, 3621ZB Breukelen (Maarssenbroeksedijk 2, 3542DN Utrecht), The Netherlands

Contact details
Diversey Ltd
Weston Favell Centre, Northampton NN3 8PD, United Kingdom
Tel: 01604 405311, Fax: 01604 406809
Regulatory Email: customerservice.uk@solenis.com

1.4 Emergency telephone number
Seek medical advice (show the label or safety data sheet where possible)
For medical or environmental emergency only:
call 0800 052 0185

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Skin corrosion, Category 1B (H314)
Serious eye damage, Category 1 (H318)
Corrosive to metals, Category 1 (H290)

2.2 Label elements



Signal word: Danger.

Contains phosphoric acid (Phosphoric Acid)

Hazard statements:
H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.

Precautionary statements:
P280 - Wear protective gloves, protective clothing and eye or face protection.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTRE, doctor or physician.

2.3 Other hazards
No other hazards known.

Regulated explosives precursor - Control of Poisons and Explosives Precursors Regulations 2015

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Ingredient(s)	EC number	CAS number	REACH number	Classification	Notes	Weight percent
phosphoric acid	231-633-2	7664-38-2	01-2119485924-24	Skin corrosion, Category 1B (H314) Acute toxicity - Oral, Category 4 (H302) Serious eye damage, Category 1 (H318) Corrosive to metals, Category 1 (H290)		30-50

Specific concentration limits
phosphoric acid:
- Serious eye damage, Category 1 (H318) >= 25% > Eye irritation, Category 2 (H319) >= 10%
- Skin corrosion, Category 1B (H314) >= 25% > Skin irritation, Category 2 (H315) >= 10%

Workplace exposure limit(s), if available, are listed in subsection 8.1.
ATE, if available, are listed in section 11.
[4] Exempted: polymer. See Article 2(9) of Regulation (EC) No 1907/2006.
For the full text of the H and EUH phrases mentioned in this Section, see Section 16..

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: If unconscious place in recovery position and seek medical advice. Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator.

Inhalation: Remove person to fresh air and keep comfortable for breathing. Get medical attention or advice if you feel unwell.

Skin contact: Wash skin with plenty of lukewarm, gently flowing water for at least 30 minutes. Take off immediately all contaminated clothing and wash it before reuse. Immediately call a POISON CENTRE, doctor or physician.

Eye contact: Hold eyelids apart and flush eyes with plenty of lukewarm water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE, doctor or physician.

Ingestion: Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Keep at rest. Immediately call a POISON CENTRE, doctor or physician.

Self-protection of first aider: Consider personal protective equipment as indicated in subsection 8.2.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: No known effects or symptoms in normal use.

Skin contact: Causes severe burns.

Eye contact: Causes severe or permanent damage.

Ingestion: Ingestion will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.

4.3 Indication of any immediate medical attention and special treatment needed
No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture
No special hazards known.

5.3 Advice for firefighters
As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear suitable protective clothing. Wear eye/face protection. Wear suitable gloves.

6.2 Environmental precautions
Dilute with plenty of water. Do not allow to enter drainage system, surface or ground water.

6.3 Methods and material for containment and cleaning up
Dyke to collect large liquid spills. Use neutralising agent. Absorb with liquid-binding material (sand, diatomite, universal binders). Do not place spilled materials back into the original container. Collect in closed and suitable containers for disposal.

6.4 Reference to other sections
For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Measures to prevent fire and explosions:
No special precautions required.
Measures required to protect the environment:
For environmental exposure controls see subsection 8.2.
Advice on general occupational hygiene:
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless advised by Diversey. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Avoid contact with skin and eyes. Do not breathe spray. Use only with adequate ventilation. See chapter 8.2, Exposure controls / Personal protection.

7.2 Conditions for safe storage, including any incompatibilities
Store in accordance with local and national regulations. Store in a closed container. Keep only in original packaging.
For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

7.3 Specific end use(s)
No specific advice for end use available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Workplace exposure limits

Air limit values, if available:

Ingredient(s)	UK - Long term value(s)	UK - Short term value(s)
phosphoric acid	1 mg/m³	2 mg/m³

Biological limit values, if available:

Recommended monitoring procedures, if available:

Additional exposure limits under the conditions of use, if available:

DNEL/DMEL and PNEC values
Human exposure
DNEL/DMEL oral exposure - Consumer (mg/kg bw)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
phosphoric acid	-	-	-	0.1

DNEL/DMEL dermal exposure - Worker

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
phosphoric acid	No data available	-	No data available	-

DNEL/DMEL dermal exposure - Consumer

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
phosphoric acid	No data available	-	No data available	-

DNEL/DMEL inhalatory exposure - Worker (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
phosphoric acid	-	-	2.92	1

DNEL/DMEL Inhalatory exposure - Consumer (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
phosphoric acid	-	-	0.73	-

Environmental exposure

Environmental exposure - PNEC

Ingredient(s)	Surface water, fresh (mg/l)	Surface water, marine (mg/l)	Intermittent (mg/l)	Sewage treatment plant (mg/l)
phosphoric acid	-	-	-	-

Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m³)
phosphoric acid	-	-	-	-

8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet.
If available, please refer to the product information sheet for application and handling instructions.
Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:

Appropriate engineering controls: If the product is diluted by using specific dosing systems with no risk of splashes or direct skin contact, the personal protection equipment as described in this section is not required.

Appropriate organisational controls: Avoid direct contact and/or splashes where possible. Train personnel.

REACH use scenarios considered for the undiluted product:

	SWED - Sector-specific worker exposure description	LCS	PROC	Duration (min)	ERC
Manual transfer and dilution	AISE_SWED_PW_8a_1	PW	PROC 8a	60	ERC8a

Personal protective equipment

Eye / face protection: Safety glasses or goggles (EN 16321). The use of a full-face shield or other full-face protection is strongly recommended when handling open containers or if splashes may occur.

Hand protection: Chemical-resistant protective gloves (EN 374). Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier. Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.
Suggested gloves for prolonged contact: Material: butyl rubber Penetration time: ≥ 480 min Material thickness: ≥ 0.7 mm
Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time: ≥ 30 min Material thickness: ≥ 0.4 mm
In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.

Body protection: Wear chemical-resistant clothing and boots in case direct dermal exposure and/or splashes may occur (EN 14605).

Respiratory protection: If exposure to liquid particles or splashes cannot be avoided use: half mask (EN 140) or full-face mask (EN 136) with particle filter P2 (EN 143) Consider specific local use conditions. In consultation with the supplier of respiratory protection equipment a different type providing similar protection may be chosen. Specific applications tools may be available to limit exposure. Please refer to the product information sheet for the possibilities. Apply technical measures to comply with the occupational exposure limits, if available.

Environmental exposure controls: Should not reach sewage water or drainage ditch undiluted or unneutralised.

Recommended safety measures for handling the diluted product:

Recommended maximum concentration (% w/w): 20

Appropriate engineering controls: Provide a good standard of general ventilation.

Appropriate organisational controls: Users are advised to consider national Occupational Exposure Limits or other equivalent values, if available.

REACH use scenarios considered for the diluted product:

	SWED	LCS	PROC	Duration (min)	ERC
Machine application Manual application by brushing, wiping or mopping	AISE_SWED_PW_10_1	PW	PROC 10	480	ERC8a
Spray application	AISE_SWED_PW_11_1	PW	PROC 11	60	ERC8a

Manual application	AISE_SWED_PW_19_1	PW	PROC 19	480	ERC8a
Automatic application in a dedicated system	AISE_SWED_PW_4_1	PW	PROC 4	480	ERC8a

Personal protective equipment
Eye / face protection: No special requirements under normal use conditions.
Hand protection: Rinse and dry hands after use. For prolonged contact protection for the skin may be necessary.
Body protection: No special requirements under normal use conditions.
Respiratory protection: Trigger spray bottle application: No special requirements under normal use conditions. Apply technical measures to comply with the occupational exposure limits, if available.

Environmental exposure controls: No special requirements under normal use conditions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
Information in this section refers to the product, unless it is specifically stated that substance data is listed

Method / remark

Physical state: Liquid
Colour: Clear , Colourless
Odour: Product specific
Odour threshold: Not applicable
Melting point/freezing point (°C): Not determined — Not relevant to classification of this product
Initial boiling point and boiling range (°C): Not determined — See substance data

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
phosphoric acid	158	Method not given	1013

Method / remark

Flammability (solid, gas): Not applicable to liquids
Flammability (liquid): Not flammable.
Flash point (°C): Not determined
Sustained combustion: Not applicable.
(UN Manual of Tests and Criteria, section 32, L.2)
Lower and upper explosion limit/flammability limit (%): Not determined

Substance data, flammability or explosive limits, if available:

Method / remark

Autoignition temperature: Not determined
Decomposition temperature: Not applicable.
pH: =< 2 (neat) — ISO 4316
Dilution pH: < 2 (20 %) — ISO 4316
Kinematic viscosity: Not determined
Solubility in / Miscibility with water: Fully miscible

Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
phosphoric acid	Soluble		

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

Method / remark

Vapour pressure: Not determined — See substance data

Substance data, vapour pressure

Ingredient(s)	Value (Pa)	Method	Temperature (°C)
phosphoric acid	4	Method not given	20

Method / remark

Relative density: ≈ 1.20 (20 °C) — OECD 109 (EU A.3)
Relative vapour density: No data available. — Not relevant to classification of this product
Particle characteristics: No data available. — Not applicable to liquids.

9.2 Other information
9.2.1 Information with regard to physical hazard classes
Explosive properties: Not explosive.
Oxidising properties: Not oxidising.

Corrosion to metals: Corrosive

9.2.2 Other safety characteristics
Acid reserve: ≈ -13.8 (g NaOH / 100g; pH=4)

SECTION 10: Stability and reactivity

10.1 Reactivity
No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability
Stable under normal storage and use conditions.

10.3 Possibility of hazardous reactions
No hazardous reactions known under normal storage and use conditions.

10.4 Conditions to avoid
None known under normal storage and use conditions.

10.5 Incompatible materials
May be corrosive to metals. Reacts with alkali. Keep away from products containing chlorine-based bleaching agents or sulphites.

10.6 Hazardous decomposition products
None known under normal storage and use conditions.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Mixture data: .

Relevant calculated ATE(s):
ATE - Oral (mg/kg): >2000

Substance data, where relevant and available, are listed below:.

Acute toxicity
Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE Oral (mg/kg)
phosphoric acid	LD_{50}	> 300-5000	Rat	OECD 423 (EU B.1 tris)		2600

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE Dermal (mg/kg)
phosphoric acid	LD_{50}	2740	Rabbit	Method not given		Not established

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
phosphoric acid	LC_{50}	850	Rat	Method not given	2

Acute inhalative toxicity, continued

Ingredient(s)	ATE - Inhalation, dust (mg/l)	ATE - Inhalation, mist (mg/l)	ATE - Inhalation, vapour (mg/l)	ATE - Inhalation, gas (mg/l)
phosphoric acid	Not established	Not established	Not established	Not established

Irritation and corrosivity
Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
phosphoric acid	Corrosive	Rabbit	OECD 404 (EU B.4)	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
phosphoric acid	Severe damage	Rabbit	Method not given	

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
phosphoric acid	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
phosphoric acid	Not sensitising	Human	Human experience	

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
phosphoric acid	No data available			

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
phosphoric acid	No evidence for mutagenicity, negative test results	OECD 471 (EU B.12/13) OECD 473 OECD 476 (Mouse lymphoma)	No data available	

Carcinogenicity

Ingredient(s)	Effect
phosphoric acid	No data available

Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
phosphoric acid	NOAEL	Developmental toxicity	410	Rat	OECD 422, oral	10 day(s)	No evidence for reproductive toxicity No evidence for developmental toxicity

Repeated dose toxicity

Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
phosphoric acid	NOAEL	250	Rat	OECD 422, oral		

Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
phosphoric acid		No data available				

Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
phosphoric acid		No data available				

Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
phosphoric acid			No data available					

STOT-single exposure

Ingredient(s)	Affected organ(s)
phosphoric acid	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
phosphoric acid	No data available

Aspiration hazard

Substances with an aspiration hazard (H304), if any, are listed in section 3.

Potential adverse health effects and symptoms
Effects and symptoms related to the product, if any, are listed in subsection 4.2.

11.2 Information on other hazards
11.2.1 Endocrine disrupting properties
Endocrine disrupting properties - Human data, if available:

11.2.2 Other information
No other relevant information available.

SECTION 12: Ecological information

12.1 Toxicity

No data is available on the mixture .

Substance data, where relevant and available, are listed below:

Aquatic short-term toxicity
Aquatic short-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
phosphoric acid	LC_{50}	138	*Gambusia affinis*	Method not given	96

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
phosphoric acid	EC_{50}	> 100	*Daphnia magna Straus*	OECD 202 (EU C.2)	48

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
phosphoric acid	EC_{50}	> 100	*Desmodesmus subspicatus*	OECD 201 (EU C.3)	72

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
phosphoric acid		No data available			

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
phosphoric acid	EC_{50}	270	*Activated sludge*	Method not given	

Aquatic long-term toxicity
Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
phosphoric acid		No data available				

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
phosphoric acid		No data available				

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw sediment)	Species	Method	Exposure time (days)	Effects observed
phosphoric acid		No data available				

Terrestrial toxicity
Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure	Effects observed

		(mg/kg dw soil)			time (days)	
phosphoric acid		No data available				

Terrestrial toxicity - plants, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
phosphoric acid		No data available				

Terrestrial toxicity - birds, if available:

Ingredient(s)	Endpoint	Value	Species	Method	Exposure time (days)	Effects observed
phosphoric acid		No data available				

Terrestrial toxicity - beneficial insects, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
phosphoric acid		No data available				

Terrestrial toxicity - soil bacteria, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw soil)	Species	Method	Exposure time (days)	Effects observed
phosphoric acid		No data available				

12.2 Persistence and degradability

Abiotic degradation

Abiotic degradation - photodegradation in air, if available:

Ingredient(s)	Half-life time	Method	Evaluation	Remark
phosphoric acid	No data available			

Abiotic degradation - hydrolysis, if available:

Ingredient(s)	Half-life time in fresh water	Method	Evaluation	Remark
phosphoric acid	No data available			

Abiotic degradation - other processes, if available:

Ingredient(s)	Type	Half-life time	Method	Evaluation	Remark
phosphoric acid		No data available			

Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT 50	Method	Evaluation
phosphoric acid					Not applicable (inorganic substance)

Ready biodegradability - anaerobic and marine conditions, if available:

Ingredient(s)	Medium & Type	Analytical method	DT 50	Method	Evaluation
phosphoric acid					No data available

Degradation in relevant environmental compartments, if available:

Ingredient(s)	Medium & Type	Analytical method	DT 50	Method	Evaluation
phosphoric acid					No data available

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
phosphoric acid	No data available		No bioaccumulation expected	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark

phosphoric acid	No data available			No bioaccumulation expected	

12.4 Mobility in soil
Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log Koc	Desorption coefficient Log Koc(des)	Method	Soil/sediment type	Evaluation
phosphoric acid	No data available				Potential for mobility in soil, soluble in water

12.5 Results of PBT and vPvB assessment
Substances that fulfill the criteria for PBT/vPvB, if any, are listed in section 3.

12.6 Endocrine disrupting properties
Endocrine disrupting properties - Environmental effects, if available:

12.7 Other adverse effects
No other adverse effects known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused products: The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

European Waste Catalogue: 20 01 14* - acids.

Empty packaging Recommendation: Dispose of observing national or local regulations.

Suitable cleaning agents: Water, if necessary with cleaning agent.

SECTION 14: Transport information



Land transport (ADR/RID), Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)

14.1 UN number or ID number: 1805

14.2 UN proper shipping name:
Phosphoric acid, solution

14.3 Transport hazard class(es):
Transport hazard class (and subsidiary risks): 8

14.4 Packing group: III

14.5 Environmental hazards:
Environmentally hazardous: No
Marine pollutant: No

14.6 Special precautions for user: None known.

14.7 Maritime transport in bulk according to IMO instruments: The product is not transported in bulk tankers.

Other relevant information:

ADR
Classification code: C1
Tunnel restriction code: (E)
Hazard identification number: 80

IMO/IMDG
EmS: F-A, S-B

The product has been classified, labelled and packaged in accordance with the requirements of ADR and the provisions of the IMDG Code
Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations :
- Control of Poisons and Explosives Precursors Regulations 2015
- Regulation (EC) 1907/2006 - REACH (UK amended)
- Regulation (EC) 1272/2008 - CLP (UK amended)
- Regulation (EC) 648/2004 - Detergents regulation (UK amended)
- Delegated Regulation (EU) 2017/2100 and Regulation (EU) 2018/605 (UK amended)
- Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- International Maritime Dangerous Goods (IMDG) Code

Authorisations or restrictions (Regulation (EC) No 1907/2006, Title VII respectively Title VIII): Not applicable.

Ingredients according to Detergents Regulation
non-ionic surfactants < 5 %

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) 648/2004 on detergents (UK amended). Data to support this assertion are held at the disposal of the competent authorities of the UK and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Comah - classification: Not classified

15.2 Chemical safety assessment
A chemical safety assessment has not been carried out on the mixture

SECTION 16: Other Information

The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract

SDS code: MSDS1826 **Version:** 05.0 **Revision:** 2025-05-19

Reason for revision:
This data sheet contains changes from the previous version in section(s):, 1, 9, 16

Classification procedure
The classification of the mixture is in general besed on calculation methods using substance data, as required by Regulation (EC) No 1272/2008. If for certain classifications data on the mixture is available or for example bridging principles or weight of evidence can be used for classification, this will be indicated in the relevant sections of the Safety Data Sheet. See section 9 for physical chemical properties, section 11 for toxicological information and section 12 for ecological information.

Abbreviations and acronyms:
- AISE - The International Association for Soaps, Detergents and Maintenance Products
- ATE - Acute Toxicity Estimate
- DNEL - Derived No Effect Limit
- EC50 - effective concentration, 50%
- ERC - Environmentel release categories
- EUH - CLP Specific hezard statement
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- LCS - Life cycle stage
- LD50 - Lethal Dose, 50% / Median Lethal dose
- NOAEL - No observed adverse effect level
- NOEL - No observed effect level
- OECD - Organisation for Economic Cooperation and Development
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- PROC - Process categories
- REACH number - REACH registration number, without supplier specific part
- vPvB - very Persistent and very Bioaccumulative
- H290 - May be corrosive to metals.
- H302 - Harmful if swallowed.
- H314 - Ceuses severe skin burns and eye damage.
- H318 - Causes serious eye damage.

End of Safety Data Sheet

Diversey
A SOLENIS COMPANY

Suma® Select
Rinse Aid

Revision: 2024-07-31

Version: 03.0

1. IDENTIFICATION

Product name: Suma® Select
Rinse Aid

SDS #: MS0800353

Recommended use:
- Industrial/Institutional
- Warewashing product
- This product is intended to be diluted prior to use

Uses advised against: Uses other than those identified are not recommended

Manufacturer, importer, supplier:
US Headquarters
Diversey, Inc.
1300 Altura Rd., Suite 125
Fort Mill, SC 29708
Phone: 1-888-352-2249
SDS Internet Address: https://sds.diversey.com

Canadian Headquarters
Diversey Canada, Inc.
6150 Kennedy Road Unit 3
Mississauga, Ontario L5T 2J4
Phone: 1-800-668-7171

Emergency telephone number: 1-800-851-7145; 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

Classification for the undiluted product
This product is not classified as hazardous according to OSHA 29CFR 1910.1200 (HazCom 2012-GHS) and Canadian Hazardous Products Regulations (HPR) (WHMIS 2015-GHS).
Not classified

Hazard Statements
None required.
Precautionary Statements
None required.

Health hazards not otherwise classified (HHNOC) - Not applicable
Physical hazards not otherwise classified (PHNOC) - Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Classified Ingredients

Ingredient(s)	CAS #	Weight %
Proprietary	Proprietary	3 - 7%
Alcohols, C6-C10, ethoxylated propoxylated	68987-81-5	3 - 7%
Sodium xylene sulfonate	1300-72-7	0.5 - 1.5%

4. FIRST AID MEASURES

Undiluted Product:

Eyes: Rinse with plenty of water. If irritation occurs and persists, get medical attention.
Skin: Rinse with plenty of water. Wash with plenty of water for at least 15 minutes.
Inhalation: No specific first aid measures are required.
Ingestion: IF SWALLOWED: Call a Poison Center (1-800-851-7145) or doctor/physician if you feel unwell.

Most Important Symptoms/Effects: No information available.
Immediate medical attention and special treatment needed Not applicable.

[redacted]

5. FIRE-FIGHTING MEASURES

Specific methods:	No special methods required
Suitable extinguishing media:	The product is not flammable. Extinguish fire using agent suitable for surrounding fire.
Specific hazards:	None known.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Extinguishing media which must not be used for safety reasons: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Put on appropriate personal protective equipment (see Section 8.).
Environmental precautions and clean-up methods:	Clean-up methods - large spillage. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage: Keep tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

Undiluted Product:

Engineering measures to reduce exposure:
Good general ventilation should be sufficient to control airborne levels.

Personal Protective Equipment
It is the responsibility of the employer to determine the potential risk of exposure to hazardous chemicals for employees in the workplace in order to determine the necessity, selection, and use of personal protective equipment.

Eye protection:	No personal protective equipment required under normal use conditions.
Hand protection:	No personal protective equipment required under normal use conditions.
Skin and body protection:	No personal protective equipment required under normal use conditions.
Respiratory protection:	No personal protective equipment required under normal use conditions. If aerosols, mists, or vapors are not adequately controlled by ventilation, use appropriate respiratory protection to avoid over-exposure.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.

[redacted]

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid
Evaporation Rate: No information available
Odor threshold: No information available.
Melting point/freezing point (°C): Not determined
Autoignition temperature: No information available
Solubility in other solvents: No information available
Density: 1.02 Kg/L
Bulk density: No information available
Flash point (°F): > 200.12 °F > 93.4 °C
Kinematic viscosity No information available
VOC: 0 % *
Flammability (Solid or Gas): Not applicable
Sustained combustion: Not applicable
Explosion limits: - upper: Not determined **- lower:** Not determined

Color: Clear , Blue
Odor: Surfactant
Boiling point/range: Not determined
Decomposition temperature: Not determined
Solubility: Completely Soluble
Relative Density (relative to water): 1.02
Vapor density: No information available
Vapor pressure: No information available.
Partition coefficient (n-octanol/water): No information available
Elemental Phosphorus: 0.00 % by wt.
pH: ≈ 8
Corrosion to metals: Not corrosive to metals

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products; Sections 94508

10. STABILITY AND REACTIVITY

Reactivity:	Not Applicable
Stability:	The product is stable
Possibility of hazardous reactions:	None known
Hazardous decomposition products:	None reasonably foreseeable.
Materials to avoid:	Do not mix with any other product or chemical unless specified in the use directions.
Conditions to avoid:	None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
Skin contact, Inhalation, Eye contact

Delayed, immediate, or chronic effects and symptoms from short and long-term exposure
Skin contact: May be mildly irritating to skin. Symptoms may include redness and/or transient discomfort.
Eye contact: May be mildly irritating to eyes.
Ingestion: No information available.
Inhalation: No information available.
Sensitization: No known effects.
Target Organs (SE): None known
Target Organs (RE):

Numerical measures of toxicity

ATE - Oral (mg/kg):	>2000
ATE - Dermal (mg/kg):	>2000
ATE - Inhalatory, gases (mg/l):	>20000
ATE - Inhalatory, mists (mg/l):	>5
ATE - Inhalatory, vapors (mg/l):	>20

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Persistence and Degradability: No information available.

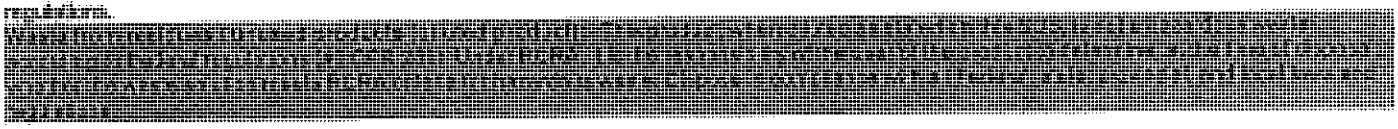
Bioaccumulation: No information available.

Mobility: No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products (undiluted product): This product, as sold, if discarded or disposed, is not a hazardous waste according to Federal regulations (40 CFR 261). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the waste solution meets RCRA criteria for hazardous waste. Dispose in compliance with all Federal, state, provincial, and local laws and regulations.



RCRA Hazard Class (undiluted product): Not Regulated
RCRA Hazard Class (diluted product): Not Regulated
Contaminated Packaging: Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: This product is not regulated for transport.

DOT (Ground) Bill of Lading Description: NOT REGULATED

IMDG (Ocean) Bill of Lading Description: NOT REGULATED

15. REGULATORY INFORMATION

International Inventories at CAS# Level

TSCA	All components are listed or otherwise exempt
DSL	All components are listed or otherwise exempt

WARNING: This product can expose you to chemicals including Ethylene oxide which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

US RIGHT TO KNOW (RTK)

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Water	7732-18-5	-	-	-	-
Polyalkylene glycol	9003-11-6	-	-	-	-
Proprietary	Proprietary	-	-	-	-
Alcohols, C6-C10, ethoxylated propoxylated	68987-81-5	-	-	-	-
Sodium xylene sulfonate	1300-72-7	-	-	-	-

CERCLA/ SARA

Canadian Regulations

16. OTHER INFORMATION

NFPA (National Fire Protection Association)
Rating Scale: (Low Hazard) 0 - 4 (Extreme Hazard)

Health 1
Flammability 0
Instability 0
Special Hazards -

Revision: 2024-07-31
Version: 03.0

Reason for revision:	Not applicable
Prepared by:	North American Regulatory Affairs
Additional advice:	• Does not contain an added fragrance

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Diversey
A SOLENIS COMPANY

Suma® Nova
Mechanical Dish Detergent

Revision: 2024-08-05 **Version:** 02.0

1. IDENTIFICATION

Product name: Suma® Nova
Mechanical Dish Detergent

SDS #: MS0801038

Recommended use:
- Dishmachine Detergent
- This product is intended to be diluted prior to use
- Industrial/Institutional

Uses advised against: Uses other than those identified are not recommended

Manufacturer, Importer, supplier:
US Headquarters
Diversey, Inc.
1300 Altura Rd., Suite 125
Fort Mill, SC 29708
Phone: 1-888-352-2249
SDS Internet Address: https://sds.diversey.com

Canadian Headquarters
Diversey Canada, Inc.
6150 Kennedy Road Unit 3
Mississauga, Ontario L5T 2J4
Phone: 1-800-668-7171

Emergency telephone number: 1-800-851-7145; 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

Classification for the undiluted product
Skin corrosion, Category 1B
Serious eye damage, Category 1
Corrosive to metals, Category 1



Signal word: **Danger.**

Hazard Statements
CAUSES SEVERE SKIN BURNS AND SERIOUS EYE DAMAGE. MAY BE CORROSIVE TO METALS.

Precautionary Statements
Causes burns/ serious damage to mouth, throat and stomach. Keep container tightly closed. Keep only in original container. Avoid contact with eyes, skin and clothing. Wash affected areas thoroughly after handling. Wear protective gloves, protective clothing and eye or face protection. IF SWALLOWED: Rinse mouth. DO NOT induce vomiting unless directed to do so by medical personnel. Drink a cupful of milk or water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water for at least 15 minutes. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call a Poison Center (1-800-851-7145) or physician. Absorb spillage to prevent material damage. Store locked up. Store in corrosive-resistant container with a resistant inner liner. Dispose of in accordance with all federal, state and local applicable regulations. SUPPLEMENTAL INFORMATION:. DO NOT MIX WITH AMMONIA, BLEACH OR OTHER CHLORINATED COMPOUNDS. Mix only with water. Can react to release hazardous gases. May vigorously react with strong alkaline products resulting in spattering and excessive heat.

Health hazards not otherwise classified (HHNOC) - Not applicable
Physical hazards not otherwise classified (PHNOC) - Not applicable

Classification for the diluted product 1:400
This product, when diluted as stated on the label, is not classified as hazardous according to OSHA 29CFR 1910.1200 (HazCom 2012-GHS) and Canadian Hazardous Products Regulations (HPR) (WHMIS 2015-GHS).

Hazard and Precautionary Statements
None required.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Classified Ingredients

Ingredient(s)	CAS #	Weight %
Sodium hydroxide	1310-73-2	7 - 13%
Sodium polyacrylate	9003-04-7	1 - 5%
Trisodium citrate	68-04-2	1 - 5%

4. FIRST AID MEASURES

Undiluted Product:

Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes.
Skin: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water for at least 15 minutes. Wash with plenty of water for at least 15 minutes.
Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Ingestion: IF SWALLOWED: Rinse mouth. DO NOT induce vomiting unless directed to do so by medical personnel. Drink a cupful of milk or water.

Most Important Symptoms/Effects: No information available.
Immediate medical attention and special treatment needed Not applicable.

Diluted Product:

5. FIRE-FIGHTING MEASURES

Specific methods: No special methods required
Suitable extinguishing media: The product is not flammable. Extinguish fire using agent suitable for surrounding fire.
Specific hazards: Corrosive material (See sections 8 and 10).

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Extinguishing media which must not be used for safety reasons: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Put on appropriate personal protective equipment (see Section 8.).
Environmental precautions and clean-up methods: Clean-up methods - large spillage. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling: Can react to release hazardous gases. May vigorously react with acids resulting in spattering and excessive heat. Do not mix with other products or chemicals except as directed on the label. Mix only with water. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Do not taste or swallow. Product residue may remain on/in empty containers. All precautions for handling the product must be used in handling the empty container and residue. Avoid breathing vapors or mists. Use only with adequate ventilation. Remove and wash contaminated clothing and footwear before re-use. Absorb spillage to prevent material damage. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage: Store in corrosive-resistant container with a resistant inner liner.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

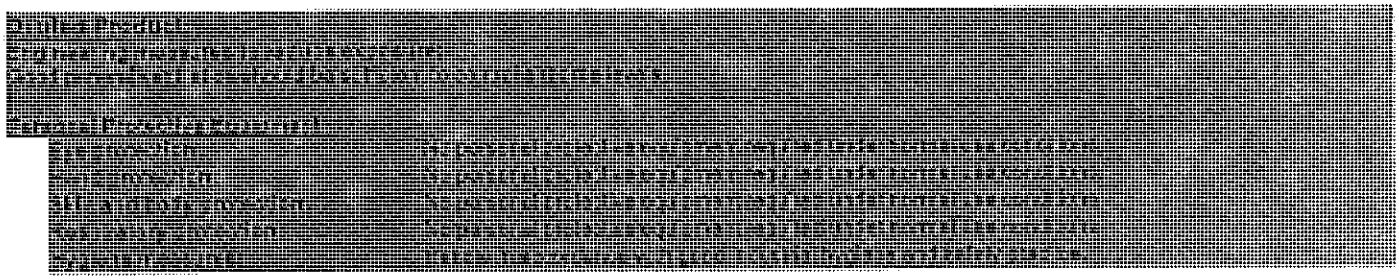
Ingredient(s)	ACGIH	OSHA
Sodium hydroxide	2 mg/m³ (Ceiling)	2 mg/m³ (TWA)

Undiluted Product:

Engineering measures to reduce exposure:
Good general ventilation should be sufficient to control airborne levels.

Personal Protective Equipment
It is the responsibility of the employer to determine the potential risk of exposure to hazardous chemicals for employees in the workplace in order to determine the necessity, selection, and use of personal protective equipment.

Eye protection:	Chemical-splash goggles.
Hand protection:	Chemical-resistant gloves.
Skin and body protection:	Protective footwear. Wear suitable protective clothing.
Respiratory protection:	No personal protective equipment required under normal use conditions. If aerosols, mists, or vapors are not adequately controlled by ventilation, use appropriate respiratory protection to avoid over-exposure.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid
Evaporation Rate: No information available
Odor threshold: No information available.
Melting point/freezing point (°C): Not determined
Autoignition temperature: No information available
Solubility in other solvents: No information available
Density: 1.237 Kg/L
Bulk density: No information available
Flash point (°F): > 200.1 °F > 93.4 °C
Kinematic viscosity mPa.s
10
VOC: 0 % *
Flammability (Solid or Gas): Not applicable
Sustained combustion: Not applicable
Explosion limits: - upper: Not determined **- lower:** Not determined

Color: Clear , Red
Odor: Product specific
Boiling point/range: Not determined
Decomposition temperature: Not determined
Solubility: Completely Soluble
Relative Density (relative to water): 1.24
Vapor density: No information available
Vapor pressure: No information available.
Partition coefficient (n-octanol/water): No information available
Elemental Phosphorus: 0.00 % by wt.

pH: 13.9
Corrosion to metals: Metal corrosive

Dilution pH: 11.5
Dilution Flash Point (°F): > 200.1 °F > 93.4 °C
VOC % by wt. at use dilution: 0 %

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Reactivity:	Not Applicable
Stability:	The product is stable
Possibility of hazardous reactions:	May vigorously react with acids resulting in spattering and excessive heat.
Hazardous decomposition products:	None reasonably foreseeable.
Materials to avoid:	Acids. Strong acids. Do not mix with any other product or chemical unless specified in the use directions.
Conditions to avoid:	None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
Skin contact, Inhalation, Ingestion, Eye contact

Delayed, immediate, or chronic effects and symptoms from short and long-term exposure
Skin contact: Corrosive. Causes severe burns. Symptoms may include burns, blisters, redness and pain (which may be delayed).
Eye contact: Corrosive. Causes serious eye damage. Symptoms may include pain, burning sensation, redness, watering, blurred vision or loss of vision.
Ingestion: Causes burns/ serious damage to mouth, throat and stomach. Symptoms may include stomach pain and nausea.
Inhalation: May cause irritation and corrosive effects to nose, throat and respiratory tract. Symptoms may include coughing and difficulty breathing.
Sensitization: No known effects.
Target Organs (SE): None known
Target Organs (RE):

Numerical measures of toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Persistence and Degradability: No information available.

Bioaccumulation: No information available.

Mobility: No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products (undiluted product): This product, as sold, if discarded or disposed, is a hazardous waste according to Federal regulations (40 CFR 261). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the waste solution meets RCRA criteria for hazardous waste. Dispose in compliance with all Federal, state, provincial, and local laws and



RCRA Hazard Class (undiluted product): D002 Corrosive Waste
RCRA Hazard Class (diluted product): Not Regulated
Contaminated Packaging: Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: The information provided below is the full transportation classification for this product. This description does not account for the package size(s) of this product, that may fall under a quantity exception, according to the applicable transportation regulations. When shipping dangerous goods, please consult with your internal, certified hazardous materials specialist to determine if any exceptions can be applied to your shipment.

DOT (Ground) Bill of Lading Description: UN1824, SODIUM HYDROXIDE SOLUTION, 8, II

IMDG (Ocean) Bill of Lading Description: UN1824, SODIUM HYDROXIDE SOLUTION, 8, II

15. REGULATORY INFORMATION

International Inventories at CAS# Level

TSCA	All components are listed or otherwise exempt
DSL	All components are listed or otherwise exempt

US RIGHT TO KNOW (RTK)

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Water	7732-18-5	-	-	-	-
Sodium hydroxide	1310-73-2	X	X	X	X
Alanine, N,N-bis(carboxymethyl)-, trisodium salt	164462-16-2	-	-	-	-
Sodium polyacrylate	9003-04-7	-	-	-	-
Trisodium citrate	68-04-2	-	-	-	-
2(3H)-benzothiazolethione	149-30-4	-	X	-	-

CERCLA/ SARA

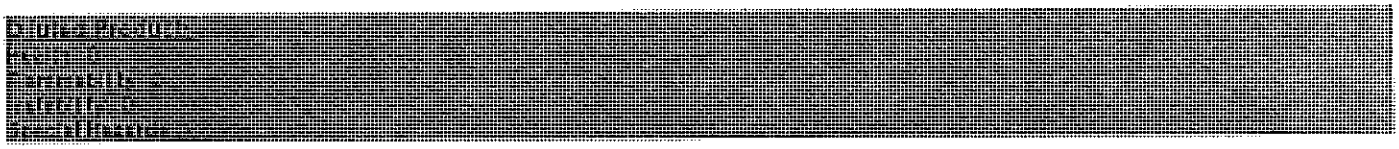
Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Sodium hydroxide	1310-73-2	7 - 13%	1000		

Canadian Regulations

16. OTHER INFORMATION

NFPA (National Fire Protection Association)
Rating Scale: (Low Hazard) 0 - 4 (Extreme Hazard)

Health 3
Flammability 0
Instability 0
Special Hazards -



Revision: 2024-08-05
Version: 02.0

Reason for revision: Not applicable
Prepared by: North American Regulatory Affairs

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Diversey
A SOLENIS COMPANY

Liqu-A-Klor™/MC
Liquid-Bactericide and Sanitizer

Revision: 2024-12-09 **Version:** 06.1

1. IDENTIFICATION

Product name: Liqu-A-Klor™/MC
Liquid-Bactericide and Sanitizer

SDS #: MS0800350

Recommended use:
- Industrial/Institutional
- Chlorine Sanitizer
- This product is intended to be diluted prior to use

Uses advised against: Uses other than those identified are not recommended

Manufacturer, importer, supplier:
US Headquarters
Diversey, Inc.
1300 Altura Rd., Suite 125
Fort Mill, SC 29708
Phone: 1-888-352-2249
SDS Internet Address: https://sds.diversey.com

Canadian Headquarters
Diversey Canada, Inc.
6150 Kennedy Road Unit 3
Mississauga, Ontario L5T 2J4
Phone: 1-800-668-7171

Emergency telephone number: 1-800-851-7145; 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

Classification for the undiluted product
Skin corrosion, Category 1C
Serious eye damage, Category 1
Corrosive to metals, Category 1



Signal word: **Danger.**

Hazard Statements
CAUSES SEVERE SKIN BURNS AND SERIOUS EYE DAMAGE. MAY BE CORROSIVE TO METALS.

Precautionary Statements
Causes burns/ serious damage to mouth, throat and stomach. Keep container tightly closed. Keep only in original container. Do not breathe vapors. Avoid contact with eyes, skin and clothing. Wash affected areas thoroughly after handling. Wear protective gloves, protective clothing and eye or face protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water for at least 15 minutes. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call e Poison Center (1-800-851-7145) or physician. Absorb spillage to prevent material damage. Store in corrosive-resistant container with a resistant inner liner. Dispose of in accordance with all federal, state and local applicable regulations. SUPPLEMENTAL INFORMATION:. DO NOT MIX WITH AMMONIA, BLEACH OR OTHER CHLORINATED COMPOUNDS. Mix only with water. Can react to release hazardous gases. May vigorously react with strong alkaline products resulting in spattering and excessive heat. DO NOT MIX WITH ACIDS, TOILET BOWL CLEANER, AMMONIA OR ANY OTHER CHEMICAL.

Health hazards not otherwise classified (HHNOC) - Not applicable
Physical hazards not otherwise classified (PHNOC) - Not applicable

Classification for the diluted product 1:256
This product, when diluted as stated on the label, is not classified as hazardous according to OSHA 29CFR 1910.1200 (HazCom 2012-GHS) and Canadian Hazardous Products Regulations (HPR) (WHMIS 2015-GHS).

Hazard and Precautionary Statements
None required

3. COMPOSITION/INFORMATION ON INGREDIENTS

Classified Ingredients

Ingredient(s)	CAS #	Weight %
Sodium hypochlorite	7681-52-9	3 - 7%
Sodium chloride	7647-14-5	3 - 7%
Sodium hydroxide	1310-73-2	> 0.1 - < 1%

4. FIRST AID MEASURES

Undiluted Product:

Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes.
Skin: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water for at least 15 minutes. Wash with plenty of water for at least 15 minutes.
Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Ingestion: IF SWALLOWED: Rinse mouth. DO NOT induce vomiting unless directed to do so by medical personnel. Drink a cupful of milk or water.
Notes to physician: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

Most Important Symptoms/Effects: No information available.
Immediate medical attention and special treatment needed Not applicable.
Aggravated Medical Conditions: Individuals with chronic respiratory disorders such as asthma, chronic bronchitis, emphysema, etc., may be more susceptible to irritating effects.

[redacted]

5. FIRE-FIGHTING MEASURES

Specific methods: No special methods required
Suitable extinguishing media: The product is not flammable. Extinguish fire using agent suitable for surrounding fire.
Specific hazards: Corrosive material (See sections 8 and 10).

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Extinguishing media which must not be used for safety reasons: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Put on appropriate personal protective equipment (see Section 8.).
Environmental precautions and clean-up methods: Clean-up methods - large spillage. Material is toxic to fish. Do not discharge into lakes, streams, ponds, or public water unless in accordance with an NPDES permit. Prevent product from entering drains. Water runoff can cause environmental damage. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling: Can react to release hazardous gases. May vigorously react with acids resulting in spattering and excessive heat. Do not mix with other products or chemicals except as directed on the label. Mix only with water. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Do not taste or swallow. Product residue may remain on/in empty containers. All precautions for handling the product must be used in handling the empty container and residue. Avoid breathing vapors or mists. Use only with adequate ventilation. Remove and wash contaminated clothing and footwear before re-use. Absorb spillage to prevent material damage. DO NOT MIX WITH ACIDS, TOILET BOWL CLEANERS,

AMMONIA, OR ANY OTHER CHEMICAL. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage: Store in corrosive-resistant container with a resistant inner liner.
Aerosol Level (if applicable) : Not applicable.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

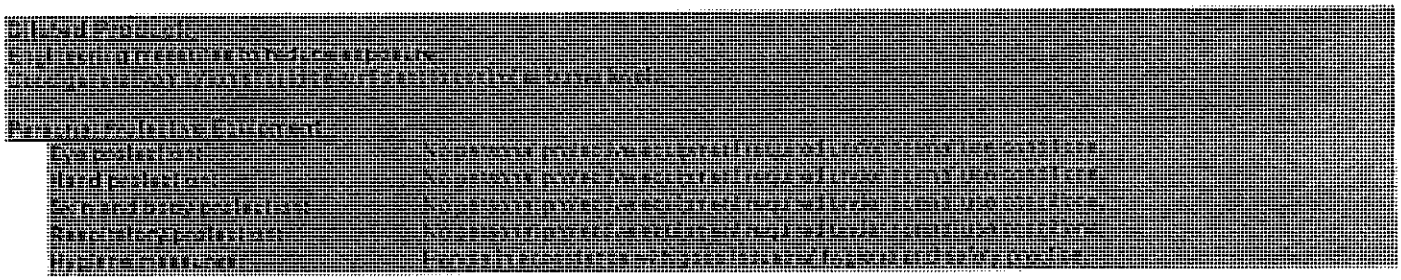
Exposure Guidelines:

Ingredient(s)	ACGIH	OSHA
Sodium hydroxide	2 mg/m³ (Ceiling)	2 mg/m³ (TWA)

Undiluted Product:
Engineering measures to reduce exposure:
Good general ventilation should be sufficient to control airborne levels.

Personal Protective Equipment
It is the responsibility of the employer to determine the potential risk of exposure to hazardous chemicals for employees in the workplace in order to determine the necessity, selection, and use of personal protective equipment.

Eye protection:	Chemical-splash goggles.
Hand protection:	Chemical-resistant gloves.
Skin and body protection:	Protective footwear. Wear suitable protective clothing.
Respiratory protection:	No personal protective equipment required under normal use conditions. If aerosols, mists, or vapors are not adequately controlled by ventilation, use appropriate respiratory protection to avoid over-exposure.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid
Evaporation Rate: No information available
Odor threshold: No information available.
Melting point/freezing point (°C): Not determined
Autoignition temperature: No information available
Solubility in other solvents: No information available
Density: 1.08 Kg/L
Bulk density: No information available
Flash point (°F): > 200.12 °F > 93.4 °C
Kinematic viscosity No information available
VOC: 0 % *
Flammability (Solid or Gas): Not applicable
Sustained combustion: Not applicable
Explosion limits: - upper: Not determined **- lower:** Not determined

Color: Clear , from Yellow to Green
Odor: Chlorine
Boiling point/range: Not determined
Decomposition temperature: Not determined Not applicable
Solubility: Completely Soluble
Relative Density (relative to water): 1.08
Vapor density: No information available
Vapor pressure: No information available.
Partition coefficient (n-octanol/water): No information available
Elemental Phosphorus: 0.00 % by wt.
pH: 12.20
Corrosion to metals: Metal corrosive

Dilution pH: 11.20
Dilution Flash Point (°F): > 200.12 °F > 93.4 °C
VOC % by wt. at use dilution: 0 %

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Reactivity: Not Applicable

Stability:	The product is stable
Possibility of hazardous reactions:	May vigorously react with acids resulting in spattering and excessive heat.
Hazardous decomposition products:	None reasonably foreseeable.
Materials to avoid:	Acids. Strong acids. Do not mix with any other product or chemical unless specified in the use directions. Ammonia.
Conditions to avoid:	None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
Skin contact, Inhalation, Ingestion, Eye contact

Delayed, immediate, or chronic effects and symptoms from short and long-term exposure
Skin contact: Corrosive. Causes severe burns. Symptoms may include burns, blisters, redness and pain (which may be delayed).
Eye contact: Corrosive. Causes serious eye damage. Symptoms may include pain, burning sensation, redness, watering, blurred vision or loss of vision.
Ingestion: Causes burns/ serious damage to mouth, throat and stomach. Symptoms may include stomach pain and nausea.
Inhalation: May cause irritation and corrosive effects to nose, throat and respiratory tract. Symptoms may include coughing and difficulty breathing.
Sensitization: No known effects.
Target Organs (SE): None known
Target Organs (RE):

Numerical measures of toxicity
ATE - Oral (mg/kg): >5000

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Persistence and Degradability: No information available.

Bioaccumulation: No information available.

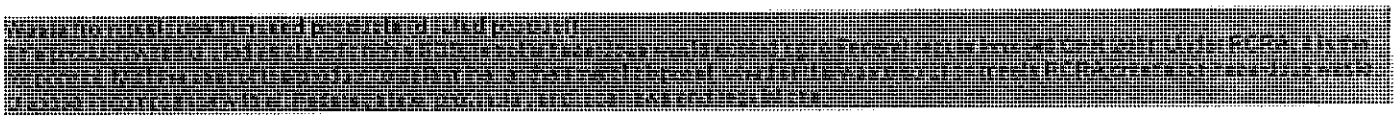
Mobility: No information available.

Other adverse effects No other adverse effects known.

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food, or feed by storage or disposal.

Waste from residues / unused products (undiluted product):
This product, as sold, if discarded or disposed, is a hazardous waste according to Federal regulations (40 CFR 261). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the waste solution meets RCRA criteria for hazardous waste. Dispose in compliance with all Federal, state, provincial, and local laws and regulations.



Pesticide Storage:
Refer to product label.

Pesticide Disposal:
Refer to product label.

Container Disposal:
Refer to product label.

RCRA Hazard Class (undiluted product): D002 Corrosive Waste.
RCRA Hazard Class (diluted product): Not Regulated.

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: The information provided below is the full transportation classification for this product. This description does not account for the package size(s) of this product, that may fall under a quantity exception, according to the applicable transportation regulations. When shipping dangerous goods, please consult with your internal, certified hazardous materials specialist to determine if any exceptions can be applied to your shipment.

DOT (Ground) Bill of Lading Description: UN1791, HYPOCHLORITE SOLUTION, 8, III

IMDG (Ocean) Bill of Lading Description: UN1791, HYPOCHLORITE SOLUTION, 8, III, MARINE POLLUTANT

15. REGULATORY INFORMATION

International Inventories at CAS# Level

TSCA	All components are listed or otherwise exempt
DSL	All components are listed or otherwise exempt

EPA Reg. No. : 875-190
This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

DANGER: CORROSIVE. May cause severe skin and eye irritation or chemical burns to broken skin. Causes eye damage. Do not get in eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves when handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until odors have dissipated. PHYSICAL AND CHEMICAL HAZARDS: STRONG OXIDIZING AGENT. Mix only with water according to label directions. Mixing this product with gross filth such as feces, urine, etc., or with ammonia, acids, detergents or other chemicals may release hazardous gases, which are irritating to eyes, lungs and mucous membranes. ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms.

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Sodium hypochlorite	7681-52-9	3 - 7%	100		
Sodium chloride	7647-14-5	3 - 7%			
Sodium hydroxide	1310-73-2	> 0.1 - < 1%	1000		

Canadian Regulations

16. OTHER INFORMATION

NFPA (National Fire Protection Association)
Rating Scale: (Low Hazard) 0 - 4 (Extreme Hazard)

Health 3
Flammability 0
Instability 0
Special Hazards -

[redacted]

Revision: 2024-12-09
Version: 06.1

Reason for revision:	Not applicable
Prepared by:	North American Regulatory Affairs

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

APPENDIX B

PHOTOGRAPH LOG



The entryway to the Manchester Memorial Elementary School (MMES).



The northern exterior of the MMES, as observed facing east.



An interior hallway of MMES.



An interior hallway of MMES.



An interior hallway of MMES.



Playground observed north of the MMES building.



Storm drain observed at the subject property.



Storm water discharge area observed on the subject property.



The northwestern exterior of the MMES.



MMES as observed from the west adjacent property.



A drainage area observed on the western boundary of the subject property.



The southern exterior of MMES.



The southern exterior of MMES.



A backup generator observed to the south of MMES.



Pad-mounter transformer observed to the south of MMES.



A stormwater drainage area observed on the southern portion of the subject property.



Solid waste receptacles observed on the southern portion of the subject property.



A small shed observed near the Summer Street exit at the subject property. Inside was landscaping equipment.



The eastern exterior of MMES.



The tennis courts located on the eastern portion of the subject property.



An older transformer observed near the basketball courts on the subject property.

APPENDIX C

ENVIRONMENTAL SITE ASSESSMENT OWNER QUESTIONNAIRE

Environmental Questionnaire

This questionnaire is to be completed by the site owner or representative with direct knowledge of the property.

Site name:	**Manchester Memorial Elementary School**
Street	43 Lincoln Street
City, State, Zip	Manchester Ma 01944

This questionnaire was completed by:

Name:	Steve Hunt
Title:	Maintenance Supervisor
Organization:	Manchester Essex Regional School District
Address:	36 Lincoln Street Manchester Ma
Telephone:	9783251110
Email:	Hunts@mersd.org
Date completed:	9/24/25
Relationship to site:	Maintenance Supervisor for the school district

	QUESTION	RESPONSE
1.	Is the *property* or any *adjoining property* used for an industrial use?	Yes _____ No x Unknown ____ Explanation:
2.	To the best of your knowledge, has the *property* or any *adjoining property* been used for an industrial use in the past?	Yes _____ No x Unknown ____ Explanation:
3.	Is the *property* or any *adjoining property* used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard, or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	Yes _____ No x Unknown ____ Explanation:
4.	To the best of your knowledge has the *property* or any *adjoining property* been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	Yes _____ No x Unknown ____ Explanation:
5.	Are there currently, or to the best of your knowledge have there been previously, any damaged or discarded automobile or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gal (19 L) in volume or 50 gal (190 L) in the aggregate, stored on or used at the *property* or at the facility?	Yes _____ No x Unknown ____ Explanation:
6.	Are there currently, or to the best of your knowledge have there been previously, any industrial *drums* (typically 55 gal [208 L]) or sacks of chemicals located on the property or at the facility?	Yes _____ No x Unknown ____ Explanation:

	QUESTION	RESPONSE
7.	Has *fill dirt* been brought onto the property that originated from a contaminated site or that is of an unknown origin?	Yes _____ No x Unknown ____ Explanation:
8.	Are there currently, or to the best of your knowledge have there been previously, any *pits, ponds, or lagoons* located on the *property* in connection with waste treatment or waste disposal?	Yes _____ No x Unknown ____ Explanation:
9.	Is there currently, or to the best of your knowledge have there been previously, any stained soil on the *property*?	Yes _____ No x Unknown ____ Explanation:
10.	Are there currently, or to the best of your knowledge have there been previously, any registered or unregistered storage tanks (above or underground) located on the *property*?	Yes _____ No x Unknown ____ Explanation:
11.	Are there currently, or to the best of your knowledge have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *property* adjacent to any structure located on the *property*?	Yes _____ No x Unknown ____ Explanation:
12.	Are there currently, or to the best of your knowledge have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors?	Yes _____ No x Unknown ____ Explanation:
13.	If the *property* is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated contaminated by any government environmental/health agency?	Yes _____ No x Unknown ____ Explanation:
14.	Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user, (a.) Do you know the past uses of the property? (b.) Do you know of other chemical releases that have taken place at the property? (d.) Do you know of any environmental cleanups that have taken place at the property?	Yes x No _____ Unknown ____ Explanation: a.) New memorial school is located within the same property boundaries as the previous elementary school. b, d.) I am unaware of any chemical releases or environmental cleanups that have taken place on the property.
15.	Does the *owner* or *occupant* of the *property* have any knowledge of *environmental liens* or governmental notification relating to the past or recurrent violations of environmental laws with respect to the *property* or any facility located on the *property*?	Yes _____ No x Unknown ____ Explanation:
16.	Has the *owner* or *occupant* of the *property* been informed of the past or current existence of *hazardous substances* or petroleum	Yes _____ No x Unknown ____

	QUESTION	RESPONSE
	products or environmental violations with respect to the *property* or any facility located on the *property*?	Explanation:
17.	Does the *owner* or *occupant* of the property have any knowledge of any environmental site assessment of the *property* or facility that indicated the presence of *hazardous substances* or *petroleum products* on, or contamination of, the *property* or recommended further assessment of the *property*?	Yes _____ No x Unknown ____ Explanation:
18.	Does the *owner* or *occupant* of the *property* know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *property* by any owner or occupant of the *property*?	Yes _____ No x Unknown ____ Explanation:
19.	Does the *property* discharge wastewater on or adjacent to the *property* other than stormwater into a sanitary sewer system?	Yes _____ No x Unknown ____ Explanation:
20.	To the best of your knowledge, have any *hazardous substances* or *petroleum products*, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the *property*?	Yes _____ No x Unknown ____ Explanation:
21.	Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of PCBs on the *property*?	Yes _____ No x Unknown ____ Explanation:
22.	Are there any activity and use limitations, such as engineering controls, land use restrictions, or institutional controls in place at the site and/or have they been filed or recorded in a registry under federal, tribal, state, or local law?	Yes x No Unknown ____ Explanation: Unused/Unlandscaped Wetland area located behind school building and drinking water protection area adjacent to school parking lot.
23.	As part of this study, can you provide any of the following? • Previous environmental site assessment reports • Environmental compliance audit reports • Environmental permits (including but not limited to solid waste disposal, hazardous waste disposal, NPDES, underground injection permits) • Registrations for aboveground and underground storage tanks • Registrations for underground injection systems • Material safety data sheets (MSDS) • Community right-to-know plan • Safety plans, preparedness and prevention plans, spill prevention, countermeasure and control plans • Reports regarding hydraulic conditions at the property and surrounding area	If yes, please highlight which and provide Mabbett with a copy of said report. Will attach copies of MSDS with survey.

	QUESTION	RESPONSE
	• Hazardous waste generator notices or reports • Geotechnical studies • Risk assessments • Reports regarding any self-directed or other cleanup activities conducted at the property	

Preparer represents that to the best of the preparer's knowledge the above statements and facts are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

Signature: _____ _____

Date: _____9/24/25_____

APPENDIX D

DATABASE SEARCH REPORT: EDR Radius Map™ Report with GeoCheck®

Manchester Memorial Elementary School
43 Lincoln St
Manchester, MA 01944

Inquiry Number: 8116131.2s
September 22, 2025

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	206
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-15
Physical Setting Source Map Findings	A-17
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. **NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA) INFORMATION PROVIDED IN THIS REPORT.** Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2025 by Environmental Data Resources, LLC. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, LLC, or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

43 LINCOLN ST
MANCHESTER, MA 01944

COORDINATES

Latitude (North):	42.5792560 - 42° 34' 45.32''
Longitude (West):	70.7642750 - 70° 45' 51.39''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	355213.5
UTM Y (Meters):	4715387.5
Elevation:	32 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	19019793 MARBLEHEAD NORTH, MA
Version Date:	2021
East Map:	19019789 GLOUCESTER, MA
Version Date:	2021

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20230705
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
43 LINCOLN ST
MANCHESTER, MA 01944

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	MANCHESTER MEMORIAL	43 LINCOLN STREET	ASBESTOS		TP
A2	MANCHESTER MEMORIAL	43 LINCOLN STREET	FINDS, ECHO		TP
B3	TEXACO STATION FMR	76 SUMMER ST	UST FINDER RELEASE	Higher	49, 0.009, South
B4	TEXACO STATION FMR	76 SUMMER ST	LUST, RELEASE, ENF	Higher	54, 0.010, South
C5	MANCHESTER GAS AND S	96 SUMMER ST	UST FINDER	Higher	165, 0.031, East
C6	BAILEY GUY	96 SUMMER ST	EDR Hist Auto	Higher	165, 0.031, East
C7	MANCHESTER GAS AND S	96 SUMMER ST	UST	Higher	165, 0.031, East
C8	BAILEY'S SERVICE STA	96 SUMMER STREET	RCRA NonGen / NLR, E MANIFEST	Higher	165, 0.031, East
9	FMR TEXACO	74 TO 76 SUMMER ST	LUST, RELEASE	Higher	257, 0.049, South
10	AT SUMMER ST	50 BROOK ST	SHWS, RELEASE	Lower	421, 0.080, WSW
D11	VERIZON MASSACHUSETT	52 SUMMER ST	UST FINDER	Higher	659, 0.125, SSW
D12	VERIZON MASSACHUSETT	52 SUMMER ST	LUST, UST, AST, RELEASE, TIER 2	Higher	659, 0.125, SSW
E13	MANCHESTER ESSEX REG	36 LINCON ST	E MANIFEST	Higher	742, 0.141, NNW
E14	MANCHESTER ESSEX REG	36 LINCOLN ST	HW GEN	Higher	742, 0.141, NNW
D15	PRIVATE PROPERTY	50 SUMMER STREET	SHWS, LUST, RELEASE, HW GEN, TIER 2	Higher	807, 0.153, SSW
D16	CRICKET PRESS	50 SUMMER STREET	PFAS ECHO	Higher	807, 0.153, SSW
D17	L.A.D. COMPANIES INC	50 SUMMER ST.	RCRA NonGen / NLR, US AIRS, FINDS, ECHO, E...	Higher	807, 0.153, SSW
F18	MASSACHUSETTS ELECTR	20 DESMOND AVE	E MANIFEST	Higher	1101, 0.209, WSW
G19	MASSACHUSETTS ELECTR	CORNER OF SCHOOL & V	E MANIFEST	Higher	1131, 0.214, West
G20	SACRED HEART CHURCH	62 SCHOOL ST	LUST, RELEASE, SPILLS, ASBESTOS	Higher	1254, 0.237, West
F21	MASSACHUSETTS ELECTR	12 DESMOND AVE	E MANIFEST	Lower	1261, 0.239, WSW
22	MASSACHUSETTS ELECTR	170 44 SCHOOL STREET	E MANIFEST	Lower	1266, 0.240, WSW
23	MANCHESTER NUMBER 23	23 SUMMER ST	SHWS, RELEASE	Lower	1582, 0.300, SSW
H24	SEABREEZE VARIETY	8 BEACH ST	UST FINDER, UST FINDER RELEASE	Lower	1842, 0.349, SW
H25	SEABREEZE VARIETY	8 BEACH ST	SHWS, LUST, RELEASE	Lower	1842, 0.349, SW
26	RESIDENCE	24 FOREST ST	LAST, RELEASE	Higher	2024, 0.383, ENE
27	PROPERTY	1-3 POWDER HOUSE LA	LUST, RELEASE	Lower	2113, 0.400, WSW
I28	NO LOCATION AID	6 ELM STREET	UST FINDER RELEASE	Lower	2279, 0.432, WSW
I29	NO LOCATION AID	6 ELM STREET	SHWS, LUST, RELEASE	Lower	2295, 0.435, WSW
I30	FORMER CROSS TOWING	6 ELM STREET	SHWS, RELEASE	Lower	2295, 0.435, WSW
I31	FORMER CROSS TOWING	6 ELM STREET	SHWS, RELEASE	Lower	2295, 0.435, WSW
J32	TOWN HALL PARKING LO	10 CENTRAL STREET	SHWS, RELEASE	Lower	2391, 0.453, SW
J33	MANCHESTER HARBOR AT	10 CENTRAL STREET	SHWS, RELEASE, ASBESTOS	Lower	2391, 0.453, SW
I34	NO LOCATION AID	9 MORSE CT	UST FINDER RELEASE	Lower	2402, 0.455, WSW
I35	9 MORSE COURT	9 MORSE COURT	SHWS, RELEASE	Lower	2460, 0.466, WSW
I36	NO LOCATION AID	9 MORSE CT	SHWS, LUST, RELEASE	Lower	2460, 0.466, WSW
K37	BASEMENT OF RESIDENC	1 PINE STREET	SHWS, LAST, RELEASE	Higher	2840, 0.538, WSW
K38	PHILLIPS 66 STATION	2 PINE ST	SHWS, RELEASE	Higher	2967, 0.562, WSW
K39	GULF FACILITY	2 PINE ST	SHWS, RELEASE	Higher	2967, 0.562, WSW

MAPPED SITES SUMMARY

Target Property Address:
43 LINCOLN ST
MANCHESTER, MA 01944

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
K40	BENNETT ST	2 PINE ST	SHWS, INST CONTROL, RELEASE	Higher	2967, 0.562, WSW
K41	RTE 127 GIBBS GAS ST	PINE ST	SHWS, RELEASE	Higher	2971, 0.563, WSW
K42	GASOLINE STATION	PINE AT CENTRAL ST	SHWS, RELEASE	Lower	2988, 0.566, WSW
43	RESIDENCE	3 CURRIER RD	SHWS, RELEASE	Higher	3078, 0.583, WNW
44	MANCHESTER MARINE	ASHLAND AVE	SHWS, RELEASE	Lower	3377, 0.640, SW
45	RESIDENTIAL PROPERTY	195 SUMMER STEET	SHWS, LUST, RELEASE	Higher	3428, 0.649, ESE
46	RESIDENTIAL PROPERTY	112 PINE STREET	SHWS, RELEASE	Higher	3837, 0.727, West

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
MANCHESTER MEMORIAL 43 LINCOLN STREET MANCHESTER, MA	ASBESTOS	N/A
MANCHESTER MEMORIAL 43 LINCOLN STREET MANCHESTER, MA 01944	FINDS Registry ID:: 110055260952 ECHO Registry ID: 110055260952	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

EXECUTIVE SUMMARY

Lists of Federal RCRA generators

RCRA-LQG ..... RCRA - Large Quantity Generators
RCRA-SQG ..... RCRA - Small Quantity Generators
RCRA-VSQG ..... RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ..... Land Use Control Information System
US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROLS ..... Institutional Controls Sites List

Federal ERNS list

ERNS ..... Emergency Response Notification System

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF ..... Solid Waste Facility Database/Transfer Stations

Lists of state and tribal leaking storage tanks

INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

Lists of state and tribal registered storage tanks

FEMA UST ..... Underground Storage Tank Listing
INDIAN UST ..... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

INST CONTROL ..... Sites With Activity and Use Limitation

Lists of state and tribal voluntary cleanup sites

INDIAN VCP ..... Voluntary Cleanup Priority Listing

Lists of state and tribal brownfield sites

BROWNFIELDS ..... Completed Brownfields Covenants Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands
ODI ..... Open Dump Inventory
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations

IHS OPEN DUMPS---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL---------- Delisted National Clandestine Laboratory Register
US CDL---------- National Clandestine Laboratory Register

Local Land Records

LIENS---------- Liens Information Listing
LIENS 2---------- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS---------- Hazardous Materials Information Reporting System
RELEASE---------- Reportable Releases Database
SPILLS---------- Historical Spill List
SPILLS 90---------- SPILLS 90 data from FirstSearch
SPILLS 80---------- SPILLS 80 data from FirstSearch

Other Ascertainable Records

FUDS---------- Formerly Used Defense Sites
DOD---------- Department of Defense Sites
SCRD DRYCLEANERS---------- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR---------- Financial Assurance Information
EPA WATCH LIST---------- EPA WATCH LIST
2020 COR ACTION---------- 2020 Corrective Action Program List
TSCA---------- Toxic Substances Control Act
TRIS---------- Toxic Chemical Release Inventory System
SSTS---------- Section 7 Tracking Systems
ROD---------- Records Of Decision
RMP---------- Risk Management Plans
RAATS---------- RCRA Administrative Action Tracking System
PRP---------- Potentially Responsible Parties
PADS---------- PCB Activity Database System
ICIS---------- Integrated Compliance Information System
FTTS---------- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS---------- Material Licensing Tracking System
COAL ASH DOE---------- Steam-Electric Plant Operation Data
COAL ASH EPA---------- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER---------- PCB Transformer Registration Database
RADINFO---------- Radiation Information Database
HIST FTTS---------- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS---------- Incident and Accident Data
CONSENT---------- Superfund (CERCLA) Consent Decrees
INDIAN RESERV---------- Indian Reservations
FUSRAP---------- Formerly Utilized Sites Remedial Action Program
UMTRA---------- Uranium Mill Tailings Sites
LEAD SMELTERS---------- Lead Smelter Sites
US AIRS---------- Aerometric Information Retrieval System Facility Subsystem
US MINES---------- Mines Master Index File
ABANDONED MINES---------- Abandoned Mines
MINES MRDS---------- Mineral Resources Data System

EXECUTIVE SUMMARY

DOCKET HWC - Hazardous Waste Compliance Docket Listing
UXO - Unexploded Ordnance Sites
FUELS PROGRAM - EPA Fuels Program Registered Listing
PFAS NPL - Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES - Federal Sites PFAS Information
PFAS TSCA - PFAS Manufacture and Imports Information
PFAS TRIS - List of PFAS Added to the TRI
PFAS RCRA MANIFEST - PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR - PFAS Contamination Site Location Listing
PFAS WQP - Ambient Environmental Sampling for PFAS
PFAS PROJECT - NORTHEASTERN UNIVERSITY PFAS PROJECT
PFAS NPDES - Clean Water Act Discharge Monitoring Information
PFAS ECHO FIRE TRAIN - Facilities in Industries that May Be Handling PFAS Listing
PFAS PT 139 AIRPORT - All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC - Aqueous Foam Related Incidents Listing
BIOSOLIDS - ICIS-NPDES Biosolids Facility Data
PFAS - PFAS Contaminated Sites Listing
AIRS - Permitted Facilities Listing
DRYCLEANERS - Regulated Drycleaning Facilities
ENF - Enforcement Action Cases
Financial Assurance - Financial Assurance Information Listing
GWDP - Ground Water Discharge Permits
MERCURY - Mercury Product Recyling Drop-Off Locations Listing
NPDES - NPDES Permit Listing
TIER 2 - Tier 2 Information Listing
TSD - TSD Facility
UIC - Underground Injection Control Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP - EDR Proprietary Manufactured Gas Plants
EDR Hist Cleaner - EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS - Recovered Government Archive State Hazardous Waste Facilities List
RGA LUST - Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Lists of state- and tribal hazardous waste facilities

SHWS: Contains information on releases of oil and hazardous materials that have been reported to DEP.

A review of the SHWS list, as provided by EDR, and dated 06/30/2025 has revealed that there are 21 SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PRIVATE PROPERTY Current Status: PSNC Release Tracking Number: 3-0036319	***50 SUMMER STREET***	***SSW 1/8 - 1/4 (0.153 mi.)***	***D15***	***92***
BASEMENT OF RESIDENC Current Status: PSNC Release Tracking Number: 3-0036076	***1 PINE STREET***	***WSW 1/2 - 1 (0.538 mi.)***	***K37***	***173***
PHILLIPS 66 STATION Current Status: RAO Release Tracking Number: 3-0028523	***2 PINE ST***	***WSW 1/2 - 1 (0.562 mi.)***	***K38***	***180***
GULF FACILITY Current Status: RTNCLOSED Release Tracking Number: 3-0026154	***2 PINE ST***	***WSW 1/2 - 1 (0.562 mi.)***	***K39***	***182***
BENNETT ST Current Status: PSC Release Tracking Number: 3-0022977	***2 PINE ST***	***WSW 1/2 - 1 (0.562 mi.)***	***K40***	***187***
RTE 127 GIBBS GAS ST Current Status: RAO Release Tracking Number: 3-0027354	***PINE ST***	***WSW 1/2 - 1 (0.563 mi.)***	***K41***	***191***
RESIDENCE Current Status: RAO Release Tracking Number: 3-0031336	***3 CURRIER RD***	***WNW 1/2 - 1 (0.583 mi.)***	***43***	***195***
RESIDENTIAL PROPERTY Current Status: PSNC Release Tracking Number: 3-0036881	***195 SUMMER STEET***	***ESE 1/2 - 1 (0.649 mi.)***	***45***	***197***
RESIDENTIAL PROPERTY Current Status: PSNC Release Tracking Number: 3-0036358	***112 PINE STREET***	***W 1/2 - 1 (0.727 mi.)***	***46***	***203***

Lower Elevation	Address	Direction / Distance	Map ID	Page
AT SUMMER ST Current Status: DPS Release Tracking Number: 3-0014131	***50 BROOK ST***	***WSW 0 - 1/8 (0.080 mi.)***	***10***	***51***
MANCHESTER NUMBER 23 Current Status: PSC Release Tracking Number: 3-0031289	***23 SUMMER ST***	***SSW 1/4 - 1/2 (0.300 mi.)***	***23***	***128***
SEABREEZE VARIETY Current Status: RAO	***8 BEACH ST***	***SW 1/4 - 1/2 (0.349 mi.)***	***H25***	***133***

Release Tracking Number: 3-0028168

NO LOCATION AID	***6 ELM STREET***	***WSW 1/4 - 1/2 (0.435 mi.)***	***I29***	***148***
Current Status: PSNC Release Tracking Number: 3-0031969				
FORMER CROSS TOWING	***6 ELM STREET***	***WSW 1/4 - 1/2 (0.435 mi.)***	***I30***	***154***
Current Status: PSNC Release Tracking Number: 3-0032090				
FORMER CROSS TOWING	***6 ELM STREET***	***WSW 1/4 - 1/2 (0.435 mi.)***	***I31***	***156***
Current Status: PSNC Release Tracking Number: 3-0032404				
TOWN HALL PARKING LO	***10 CENTRAL STREET***	***SW 1/4 - 1/2 (0.453 mi.)***	***J32***	***158***
Current Status: PSC Release Tracking Number: 3-0033184				
MANCHESTER HARBOR AT	***10 CENTRAL STREET***	***SW 1/4 - 1/2 (0.453 mi.)***	***J33***	***161***
Current Status: PSNC Release Tracking Number: 3-0034951				
9 MORSE COURT	***9 MORSE COURT***	***WSW 1/4 - 1/2 (0.466 mi.)***	***I35***	***165***
Current Status: PSNC Release Tracking Number: 3-0033011				
NO LOCATION AID	***9 MORSE CT***	***WSW 1/4 - 1/2 (0.466 mi.)***	***I36***	***170***
Current Status: RAO Release Tracking Number: 3-0019810				
GASOLINE STATION	***PINE AT CENTRAL ST***	***WSW 1/2 - 1 (0.566 mi.)***	***K42***	***193***
Current Status: RAO Release Tracking Number: 3-0028313				
MANCHESTER MARINE	***ASHLAND AVE***	***SW 1/2 - 1 (0.640 mi.)***	***44***	***196***
Current Status: WSCPRM Release Tracking Number: 3-0003657				

Lists of state and tribal leaking storage tanks

LAST: The Leaking Aboveground Storage Tanks database

A review of the LAST list, as provided by EDR, and dated 06/30/2025 has revealed that there is 1 LAST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RESIDENCE	***24 FOREST ST***	***ENE 1/4 - 1/2 (0.383 mi.)***	***26***	***140***
Release Tracking Number / Current Status: 3-0029448 / RAO				

LUST: Sites within the Releases Database that have a UST listed as its source.

A review of the LUST list, as provided by EDR, and dated 06/30/2025 has revealed that there are 9 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TEXACO STATION FMR	***76 SUMMER ST***	***S 0 - 1/8 (0.010 mi.)***	***B4***	***20***

Release Tracking Number / Current Status: 3-0002657 / RAO

FMR TEXACO	***74 TO 76 SUMMER ST***	***S 0 - 1/8 (0.049 mi.)***	***9***	***48***
Release Tracking Number / Current Status: 3-0021362 / RTNCLOSED				
VERIZON MASSACHUSETT	***52 SUMMER ST***	***SSW 0 - 1/8 (0.125 mi.)***	***D12***	***53***
Release Tracking Number / Current Status: 3-0011714 / RAO				
PRIVATE PROPERTY	***50 SUMMER STREET***	***SSW 1/8 - 1/4 (0.153 mi.)***	***D15***	***92***
Release Tracking Number / Current Status: 3-0036319 / PSNC				
SACRED HEART CHURCH	***62 SCHOOL ST***	***W 1/8 - 1/4 (0.237 mi.)***	***G20***	***118***
Release Tracking Number / Current Status: 3-0004415 / RAO				

Lower Elevation	Address	Direction / Distance	Map ID	Page
SEABREEZE VARIETY	***8 BEACH ST***	***SW 1/4 - 1/2 (0.349 mi.)***	***H25***	***133***
Release Tracking Number / Current Status: 3-0028168 / RAO				
PROPERTY	***1-3 POWDER HOUSE LA***	***WSW 1/4 - 1/2 (0.400 mi.)***	***27***	***145***
Release Tracking Number / Current Status: 3-0004233 / RAO				
NO LOCATION AID	***6 ELM STREET***	***WSW 1/4 - 1/2 (0.435 mi.)***	***I29***	***148***
Release Tracking Number / Current Status: 3-0031969 / PSNC				
NO LOCATION AID	***9 MORSE CT***	***WSW 1/4 - 1/2 (0.466 mi.)***	***I36***	***170***
Release Tracking Number / Current Status: 3-0019810 / RAO				

Lists of state and tribal registered storage tanks

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Protection's Summary Listing of all the Tanks Registered in the State of Massachusetts.

A review of the UST list, as provided by EDR, and dated 02/26/2025 has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MANCHESTER GAS AND S	96 SUMMER ST	E 0 - 1/8 (0.031 mi.)	C7	32
Tank Status: In Use Tank Status: Tank Removed Facility Id: 5491				
VERIZON MASSACHUSETT	***52 SUMMER ST***	***SSW 0 - 1/8 (0.125 mi.)***	***D12***	***53***
Tank Status: Tank Removed Facility Id: 5487				

AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Protection's Summary Listing of all the Tanks Registered in the State of Massachusetts.

A review of the AST list, as provided by EDR, has revealed that there is 1 AST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
VERIZON MASSACHUSETT	***52 SUMMER ST***	***SSW 0 - 1/8 (0.125 mi.)***	***D12***	***53***
Database: AST, Date of Government Version: 03/15/2025				

EXECUTIVE SUMMARY

Release Tracking Number: 5487

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 06/02/2025 has revealed that there are 2 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BAILEY'S SERVICE STA EPA ID:: MAD981894629	***96 SUMMER STREET***	***E 0 - 1/8 (0.031 mi.)***	***C8***	***36***
L.A.D. COMPANIES INC EPA ID:: MAR000007039	***50 SUMMER ST.***	***SSW 1/8 - 1/4 (0.153 mi.)***	***D17***	***98***

PFAS ECHO: Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

A review of the PFAS ECHO list, as provided by EDR, and dated 06/23/2025 has revealed that there is 1 PFAS ECHO site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CRICKET PRESS	50 SUMMER STREET	SSW 1/8 - 1/4 (0.153 mi.)	D16	96

UST FINDER: EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

A review of the UST FINDER list, as provided by EDR, and dated 06/08/2023 has revealed that there are 2 UST FINDER sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MANCHESTER GAS AND S	96 SUMMER ST	E 0 - 1/8 (0.031 mi.)	C5	30
VERIZON MASSACHUSETT	52 SUMMER ST	SSW 0 - 1/8 (0.125 mi.)	D11	52

EXECUTIVE SUMMARY

UST FINDER RELEASE: US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

A review of the UST FINDER RELEASE list, as provided by EDR, and dated 06/08/2023 has revealed that there are 4 UST FINDER RELEASE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TEXACO STATION FMR	76 SUMMER ST	S 0 - 1/8 (0.009 mi.)	B3	19
Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
SEABREEZE VARIETY	***8 BEACH ST***	***SW 1/4 - 1/2 (0.349 mi.)***	***H24***	***131***
NO LOCATION AID	6 ELM STREET	WSW 1/4 - 1/2 (0.432 mi.)	I28	147
NO LOCATION AID	9 MORSE CT	WSW 1/4 - 1/2 (0.455 mi.)	I34	164

E MANIFEST: EPA established a national system for tracking hazardous waste shipments electronically. This system, known as ?e-Manifest,? will modernize the nation?s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

A review of the E MANIFEST list, as provided by EDR, and dated 06/02/2025 has revealed that there are 7 E MANIFEST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BAILEY'S SERVICE STA	***96 SUMMER STREET***	***E 0 - 1/8 (0.031 mi.)***	***C8***	***36***
MANCHESTER ESSEX REG	36 LINCON ST	NNW 1/8 - 1/4 (0.141 mi.)	E13	81
L.A.D. COMPANIES INC	***50 SUMMER ST.***	***SSW 1/8 - 1/4 (0.153 mi.)***	***D17***	***98***
MASSACHUSETTS ELECTR	20 DESMOND AVE	WSW 1/8 - 1/4 (0.209 mi.)	F18	114
MASSACHUSETTS ELECTR	CORNER OF SCHOOL & V	W 1/8 - 1/4 (0.214 mi.)	G19	116
Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
MASSACHUSETTS ELECTR	12 DESMOND AVE	WSW 1/8 - 1/4 (0.239 mi.)	F21	125
MASSACHUSETTS ELECTR	170 44 SCHOOL STREET	WSW 1/8 - 1/4 (0.240 mi.)	22	127

HW GEN: Permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities.

A review of the HW GEN list, as provided by EDR, and dated 06/04/2025 has revealed that there are 2 HW GEN sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MANCHESTER ESSEX REG EPA Id: MV9785262055	36 LINCOLN ST	NNW 1/8 - 1/4 (0.141 mi.)	E14	92
PRIVATE PROPERTY State Generator Status: SQG-MA EPA Id: MAR000007039	***50 SUMMER STREET***	***SSW 1/8 - 1/4 (0.153 mi.)***	***D15***	***92***

EXECUTIVE SUMMARY

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there is 1 EDR Hist Auto site within approximately 0.125 miles of the target property.

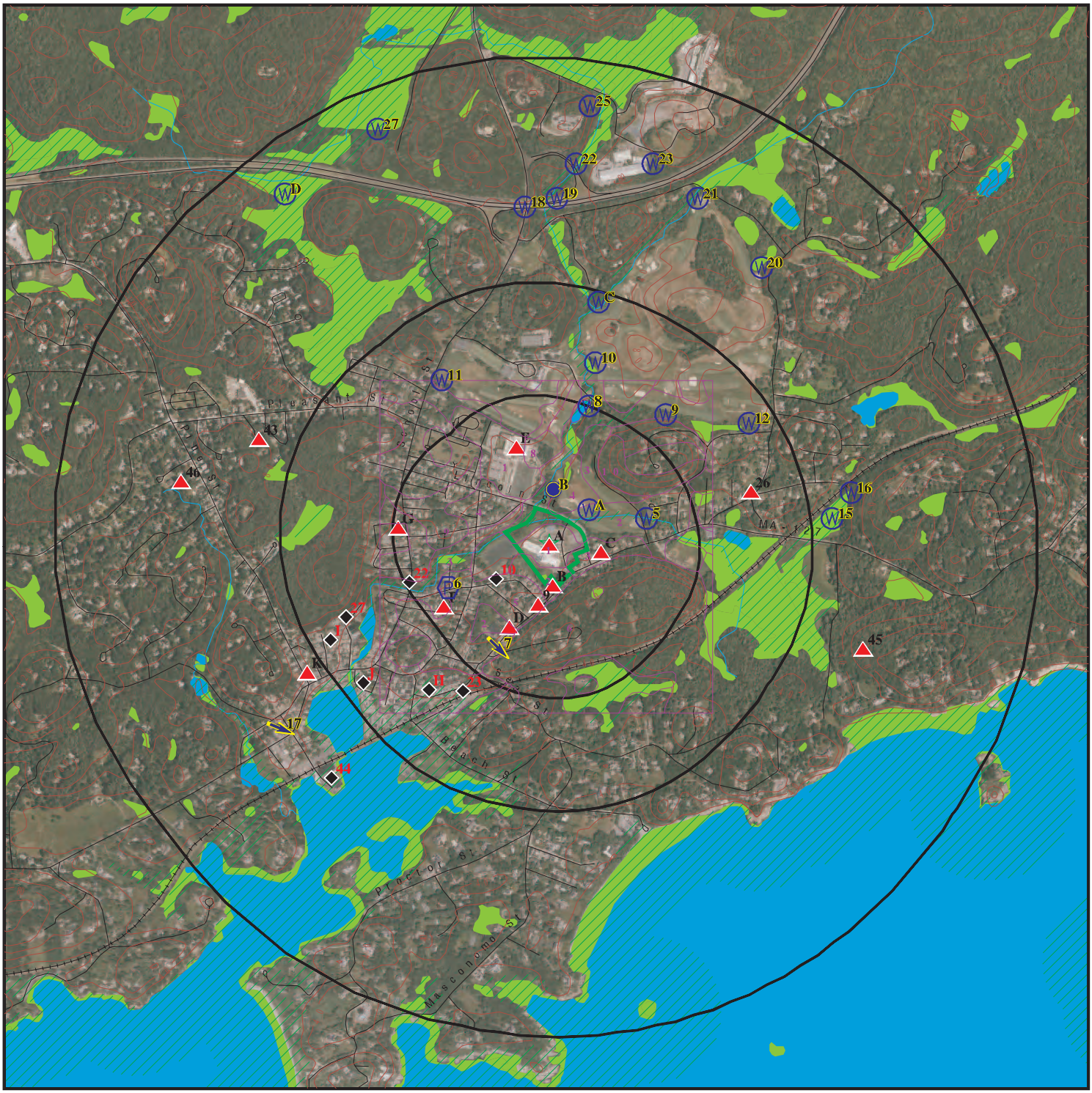
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BAILEY GUY	96 SUMMER ST	E 0 - 1/8 (0.031 mi.)	C6	32

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 5 records.

Site Name	Database(s)
NO LOCATION AID	SHWS, RELEASE
NO LOCATION AID	SHWS, RELEASE
RAILROAD TRACKS	SHWS, RELEASE
NO LOCATION AID	SHWS, RELEASE
UTILITY POLE NO 1	SHWS, RELEASE

OVERVIEW MAP - 8116131.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Areas of Critical Environmental Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Manchester Memorial Elementary School	CLIENT:	Mabbett & Assoc.
ADDRESS:	43 Lincoln St Manchester MA 01944	CONTACT:	Cassidy Way
		INQUIRY #:	8116131.2s
LAT/LONG:	42.579256 / 70.764275	DATE:	September 22, 2025 1:46 pm

Copyright © 2025 EDR, Inc. © 2015 TomTom Rel. 2015.

DETAIL MAP - 8116131.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Critical Environmental Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Manchester Memorial Elementary School	CLIENT:	Mabbett & Assoc.
ADDRESS:	43 Lincoln St Manchester MA 01944	CONTACT:	Cassidy Way
		INQUIRY #:	8116131.2s
LAT/LONG:	42.579256 / 70.764275	DATE:	September 22, 2025 1:47 pm

Copyright © 2025 EDR, Inc. © 2015 TomTom Rel. 2015.

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
SHWS	1.000		1	1	9	10	NR	21
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0
Lists of state and tribal leaking storage tanks								
LAST	0.500		0	0	1	NR	NR	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LUST	0.500		3	2	4	NR	NR	9
INDIAN LUST	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		2	0	NR	NR	NR	2
AST	0.250		1	0	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	0	0	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
RELEASE	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
SPILLS 80	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	1	NR	NR	NR	2
FUDS	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
FINDS	TP	1	NR	NR	NR	NR	NR	1
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP	1	NR	NR	NR	NR	NR	1
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS PROJECT	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	1	NR	NR	NR	1
PFAS ECHO FIRE TRAIN	0.250		0	0	NR	NR	NR	0
PFAS PT 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	TP		NR	NR	NR	NR	NR	0
UST FINDER	0.250		2	0	NR	NR	NR	2

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST FINDER RELEASE	0.500		1	0	3	NR	NR	4
E MANIFEST	0.250		1	6	NR	NR	NR	7
PFAS	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
ASBESTOS	TP	1	NR	NR	NR	NR	NR	1
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
GWDP	TP		NR	NR	NR	NR	NR	0
HW GEN	0.250		0	2	NR	NR	NR	2
MERCURY	0.500		0	0	0	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
TIER 2	TP		NR	NR	NR	NR	NR	0
TSD	0.500		0	0	0	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		1	NR	NR	NR	NR	1
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		3	13	13	17	10	0	56

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **MANCHESTER MEMORIAL ELEMENTARY SCHOOL** **ASBESTOS** **S122934938**
Target **43 LINCOLN STREET** **N/A**
Property **MANCHESTER, MA**

Site 1 of 2 in cluster A

Actual: **32 ft.**

ASBESTOS:

Name:	MANCHESTER MEMORIAL ELEMENTARY SCHOOL
Address:	43 LINCOLN STREET
City,State,Zip:	MANCHESTER, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	07/26/2021
End Date:	08/06/2021
Date Entered:	Not reported
Entry Date:	07/26/2021
Quantity Materical Removed SF:	2000
Quantity Material Removed LF:	Not reported
Project Description:	OTHER BULK LOAD MATERIALS-CY
AR Tracking ID:	369471
Super Lic Number:	AS072692
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000161
Year:	2021
Sticker Number:	100350101
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	9785264919
Sub Town:	Not reported
Worksite:	AUDITORIUM- BULK LOAD
Occupied:	0
Contractor:	AC000639
Contract Type:	WRITTEN
Hours:	7AM-5:30PM
Project Type:	Dem
Abatement Process:	oth:NTWP PROCEDURES
Location:	OUTDOORS
Decon Process:	3 STAGE DECONTAMINATION UNIT ADJACENT TO THE WORK AREA
Disposal Methods:	DOUBLE BAGGING IN 10-MIL BLADDER BAGS
Facility Usage:	ELEMENTARY SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	NAW2107086
DLWD Waiver Number:	32490-2021
Small Owner Occ:	0
Owner Name:	MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT
Owner Address:	73 LINCOLN STREET
Owner City:	MANCHESTER-BY-THE-SEA
Owner State:	MA
On Site Manager Name:	JOHN DEBETTENCOURT
On Site Manager Phone:	6174676010
Ins Comp:	STATE NATIONAL INSURANCE CO.
Policy Number:	NFA0824093
EXP Date:	3/29/2022
Facility Size:	5000
Transporter Name:	AMERICAN ENVIRONMENTAL, INC.
Transporter Address:	18 CANAL STREET
Transporter City:	HOLYOKE
Transporter State:	MA

MANCHESTER MEMORIAL ELEMENTARY SCHOOL (Continued) **S122934938**

Final Site:	Not reported
Certified Name:	CHARLES HUGHES
Cert Sign Date:	07/26/2021
Certified Company:	AMERICAN ENVIRONMENTAL, INC.
Certified Phone:	4133227190
Entered_by:	METROREMEDIATOR
Name:	MEMORIAL ELEMENTARY
Address:	43 LINCOLN STREET
City,State,Zip:	MANCHESTER, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	07/28/2017
End Date:	07/28/2017
Date Entered:	Not reported
Entry Date:	07/14/2017
Quantity Materical Removed SF:	.00
Quantity Material Removed LF:	100.00
Project Description:	PIPEINSUL
AR Tracking ID:	272143
Super Lic Number:	AS053031
Monitor Lic Number:	AM060275
Lab Lic Number:	AA000122
Year:	2017
Sticker Number:	100268809
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	6172933670
Sub Town:	Not reported
Worksite:	BASEMENT
Occupied:	-1
Contractor:	AC000133
Contract Type:	WRITTEN
Hours:	7-5
Project Type:	Renv
Abatement Process:	Encp
Location:	INDOORS
Decon Process:	N/A
Disposal Methods:	ALL ACMTO BE DOUBLED BAGGED IN 6 MIL LABELLED ASBESTOS REMOVAL BAGS
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	-1
Owner Name:	MEMORIAL ELEMENTARY SCHOOL
Owner Address:	43 LINCOLN STREET
Owner City:	MANCHESTER
Owner State:	MA
On Site Manager Name:	JAY PAGLIARULO
On Site Manager Phone:	6172933670
Ins Comp:	TRAVELERS INSURANCE
Policy Number:	9753N602
EXP Date:	5/13/2018
Facility Size:	5000
Transporter Name:	ASBESTOS FREE, INC.
Transporter Address:	42 BROADWAY

MANCHESTER MEMORIAL ELEMENTARY SCHOOL (Continued) **S122934938**

Transporter City:	WAKEFIELD
Transporter State:	MA
Final Site:	Not reported
Certified Name:	FRANK ARSENAULT
Cert Sign Date:	07/14/2017
Certified Company:	ASBESTOS FREE, INC.
Certified Phone:	7812454403
Entered_by:	MARGARET
Name:	MANCHESTER MEMORIAL ELEMENTARY SCHOOL
Address:	43 LINCOLN STREET
City,State,Zip:	MANCHESTER, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	04/17/2021
End Date:	04/25/2021
Date Entered:	Not reported
Entry Date:	04/05/2021
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	4300
Project Description:	PIPEINSUL INSCEMENT
AR Tracking ID:	361926
Super Lic Number:	AS072692
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000161
Year:	2021
Sticker Number:	100343668
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	9785264919
Sub Town:	Not reported
Worksite:	PHASE 3-CRAWLSPACE
Occupied:	0
Contractor:	AC000639
Contract Type:	WRITTEN
Hours:	7AM- 11PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain
Location:	INDOORS
Decon Process:	3 STAGE DECONTAMINATION UNIT ADJACENT TO THE WORK AREA AND REMOTE DECONTAMINATION UNIT ADJACENT TO THE WORK AREA
Disposal Methods:	DOUBLE BAGGING IN 6-MIL LABELED BAGS
Facility Usage:	ELEMENTARY SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT
Owner Address:	73 LINCOLN STREET
Owner City:	MANCHESTER
Owner State:	MA
On Site Manager Name:	STEVE BUCKLEY
On Site Manager Phone:	6174676010
Ins Comp:	STATE NATIONAL INSURANCE CO.
Policy Number:	NFA0824093
EXP Date:	3/29/2022

MANCHESTER MEMORIAL ELEMENTARY SCHOOL (Continued) **S122934938**

Facility Size:	70000
Transporter Name:	AMERICAN ENVIRONMENTAL, INC.
Transporter Address:	18 CANAL STREET
Transporter City:	HOLYOKE
Transporter State:	MA
Final Site:	Not reported
Certified Name:	CHARLES HUGHES
Cert Sign Date:	04/05/2021
Certified Company:	AMERICAN ENVIRONMENTAL INC.
Certified Phone:	4133227190
Entered_by:	METROREMEDIATOR
Name:	MANCHESTER MEMORIAL ELEMENTARY SCHOOL
Address:	43 LINCOLN STREET
City,State,Zip:	MANCHESTER, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/28/2021
End Date:	08/06/2021
Date Entered:	Not reported
Entry Date:	06/24/2021
Quantity Materical Removed SF:	5000
Quantity Material Removed LF:	Not reported
Project Description:	OTHER DAMPROOFING/MASTIC
AR Tracking ID:	367354
Super Lic Number:	AS072692
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000161
Year:	2021
Sticker Number:	100348380
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	9785264919
Sub Town:	Not reported
Worksite:	PHASE 3-THROUGHOUT
Occupied:	0
Contractor:	AC000639
Contract Type:	WRITTEN
Hours:	7AM-5:30PM
Project Type:	Dem
Abatement Process:	oth:NTWP PROCEDURES
Location:	OUTDOORS
Decon Process:	3 STAGE REMOTE DECONTAMINATION UNIT ADJACENT TO THE WORK AREA
Disposal Methods:	DOUBLE BAGGING IN 10-MIL FORM FITTING BLADDER BAGS
Facility Usage:	ELEMENTARY SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	NAW2105130
DLWD Waiver Number:	32273-2021
Small Owner Occ:	0
Owner Name:	MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT
Owner Address:	73 LINCOLN STREET
Owner City:	MANCHESTER BY THE SEA
Owner State:	MA
On Site Manager Name:	JOHN DEBETTENCOURT
On Site Manager Phone:	6174676010
Ins Comp:	STATE NATIONAL INSURANCE CO.

MANCHESTER MEMORIAL ELEMENTARY SCHOOL (Continued) **S122934938**

Policy Number:	NFA0824093
EXP Date:	3/29/2022
Facility Size:	50000
Transporter Name:	AMERICAN ENVIRONMENTAL, INC.
Transporter Address:	18 CANAL STREET
Transporter City:	HOLYOKE
Transporter State:	MA
Final Site:	Not reported
Certified Name:	CHARLES HUGHES
Cert Sign Date:	06/24/2021
Certified Company:	AMERICAN ENVIRONMENTAL INC.
Certified Phone:	4133227190
Entered_by:	METROREMEDIATOR
Name:	MANCHESTER MEMORIAL ELEMENTARY SCHOOL
Address:	43 LINCOLN STREET
City,State,Zip:	MANCHESTER, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/21/2021
End Date:	07/30/2021
Date Entered:	Not reported
Entry Date:	06/11/2021
Quantity Materical Removed SF:	35120
Quantity Material Removed LF:	6850
Project Description:	BOILER PIPEINSUL INSCEMENT OTHER SEE BELOW FOR MATERIALS
AR Tracking ID:	366495
Super Lic Number:	AS072692
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000161
Year:	2021
Sticker Number:	100347674
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	9785264919
Sub Town:	Not reported
Worksite:	PHASE 3-THROUGHOUT
Occupied:	0
Contractor:	AC000639
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Dem
Abatement Process:	Glv,Fcontain, oth:SAFE WORK PRACTICES
Location:	INOUTDOORS
Decon Process:	3 STAGE DECONTAMINATION UNIT ADJACENT TO THE WORK AREA AND 3 STAGE REMOTE DECONTAMINATION UNIT ADJACENT TO THE WORK AREA ABOVE MATERIALS: FLOOR TILE, MASTIC, 1X1 CT, SINKS, FIRE DOORS, CAULKING, GLAZING, GLUE DAUBS, GLUE, INTERIOR BOILER, ROOFING
Disposal Methods:	DOUBLE BAGGING IN 6-MIL LABELED BAGS, DRUMS AND BOXES. LARGE COMPONENTS WRAPPED IN 2 LAYERS OF 6-MIL POLY SHEETING
Facility Usage:	ELEMENTARY SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT

MANCHESTER MEMORIAL ELEMENTARY SCHOOL (Continued) **S122934938**

Owner Address:	73 LINCOLN STREET
Owner City:	MANCHESTER-BY-THE-SEA
Owner State:	MA
On Site Manager Name:	JOHN DEBETTENCOURT
On Site Manager Phone:	6174676010
Ins Comp:	STATE NATIONAL INSURANCE CO.
Policy Number:	NFA0824093
EXP Date:	3/29/2022
Facility Size:	50000
Transporter Name:	MINERVA ENTERPRISES
Transporter Address:	9000 MINERVA ROAD
Transporter City:	WAYNESBURG
Transporter State:	OH
Final Site:	Not reported
Certified Name:	CHARLES HUGHES
Cert Sign Date:	06/11/2021
Certified Company:	AMERICAN ENVIRONMENTAL, INC.
Certified Phone:	4133227190
Entered_by:	METROREMEDIATOR

Name:	MANCHESTER MEMORIAL ELEMENTARY SCHOOL
Address:	43 LINCOLN STREET
City,State,Zip:	MANCHESTER, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	03/31/2020
End Date:	04/24/2020
Date Entered:	Not reported
Entry Date:	03/19/2020
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	4000
Project Description:	PIPEINSUL
AR Tracking ID:	340751
Super Lic Number:	AS072692
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000161
Year:	2020
Sticker Number:	100325993
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	9785264919
Sub Town:	Not reported
Worksite:	PHASE 2-CRAWLSPACE
Occupied:	0
Contractor:	AC000639
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Dem
Abatement Process:	Glv,Fcontain
Location:	INDOORS
Decon Process:	3 STAGE DECONTAMINATION UNIT WITH SHOWER
Disposal Methods:	DOUBLE BAGGING IN 6-MIL LABELED BAGS OR DRUMS.
Facility Usage:	ELEMENTARY SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported

MANCHESTER MEMORIAL ELEMENTARY SCHOOL (Continued) **S122934938**

Small Owner Occ:	0
Owner Name:	MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT
Owner Address:	73 LINCOLN STREET
Owner City:	MANCHESTER-BY-THE-SEA
Owner State:	MA
On Site Manager Name:	STEVE BUCKLEY
On Site Manager Phone:	6174676010
Ins Comp:	STATE NATIONAL INSURANCE CO.
Policy Number:	NFA 08424093
EXP Date:	3/29/2020
Facility Size:	60000
Transporter Name:	AMERICAN ENVIRONMENTAL, INC.
Transporter Address:	18 CANAL STREET
Transporter City:	HOLYOKE
Transporter State:	MA
Final Site:	Not reported
Certified Name:	CHARLES HUGHES
Cert Sign Date:	03/19/2020
Certified Company:	AMERICAN ENVIRONMENTAL, INC
Certified Phone:	4133227190
Entered_by:	METROREMEDIATOR
Name:	MANCHESTER MEMORIAL ELEMENTARY SCHOOL
Address:	43 LINCOLN STREET
City,State,Zip:	MANCHESTER, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/01/2020
End Date:	06/26/2020
Date Entered:	Not reported
Entry Date:	05/15/2020
Quantity Materical Removed SF:	20000
Quantity Material Removed LF:	4600
Project Description:	PIPEINSUL INSCEMENT OTHER SEE BELOW FOR MATERIALS
AR Tracking ID:	343282
Super Lic Number:	AS072692
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000161
Year:	2020
Sticker Number:	100327934
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	9785264919
Sub Town:	Not reported
Worksite:	PHASE 2-A AND B WING
Occupied:	0
Contractor:	AC000639
Contract Type:	WRITTEN
Hours:	7AM-5:30PM
Project Type:	Dem
Abatement Process:	Glv,Fcontain, oth:SAFE WORK PRACTICES
Location:	INOUTDOORS
Decon Process:	3 STAGE DECONTAMINATION UNIT WITH SHOWER AND 3-STAGE REMOTE DECONTAMINATION UNIT ADJACENT TO THE WORK AREA OTHER MATERIALS FOR ABOVE: FLOOR TILE, (9X9 AND 12X12), SINKS, CAULKING, INTERIOR GLAZING, GLUE DAUBS

MANCHESTER MEMORIAL ELEMENTARY SCHOOL (Continued) **S122934938**

Disposal Methods:	DOUBLE BAGGING IN 6-MIL LABELED BAGS, DRUMS AND BOXES. LARGE COMPONENTS WRAPPED IN 2 LAYERS OF 6-MIL POLY SHEETING
Facility Usage:	ELEMENTARY SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT
Owner Address:	73 LINCOLN STREET
Owner City:	MANCHESTER-BY-THE-SEA
Owner State:	MA
On Site Manager Name:	JOHN DEBETTENCOURT
On Site Manager Phone:	6174676010
Ins Comp:	STATE NATIONAL INSURANCE CO.
Policy Number:	NFA0824093
EXP Date:	3/29/2021
Facility Size:	60000
Transporter Name:	MINERVA ENTERPRISES
Transporter Address:	9000 MINERVA ROAD
Transporter City:	WAYNESBURG
Transporter State:	OH
Final Site:	Not reported
Certified Name:	CHARLES HUGHES
Cert Sign Date:	05/15/2020
Certified Company:	AMERICAN ENVIRONMENTAL INC.
Certified Phone:	4133227190
Entered_by:	METROREMEDIATOR
Name:	MANCHESTER MEMORIAL ELEMENTARY SCHOOL
Address:	43 LINCOLN STREET
City,State,Zip:	MANCHESTER, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/01/2020
End Date:	07/31/2020
Date Entered:	Not reported
Entry Date:	06/26/2020
Quantity Materical Removed SF:	20000
Quantity Material Removed LF:	4600
Project Description:	PIPEINSUL INSCEMENT OTHER SEE BELOW FOR MATERIALS
AR Tracking ID:	345425
Super Lic Number:	AS072692
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000161
Year:	2020
Sticker Number:	100327934R
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	9785264919
Sub Town:	Not reported
Worksite:	PHASE 2-A AND B WING
Occupied:	0
Contractor:	AC000639
Contract Type:	WRITTEN
Hours:	7AM-5:30PM
Project Type:	Dem

MANCHESTER MEMORIAL ELEMENTARY SCHOOL (Continued) **S122934938**

Abatement Process:	Glv,Fcontain, oth:SAFE WORK PRACTICES
Location:	INOUTDOORS
Decon Process:	3 STAGE DECONTAMINATION UNIT WITH SHOWER AND 3-STAGE REMOTE DECONTAMINATION UNIT ADJACENT TO THE WORK AREA OTHER MATERIALS FOR ABOVE: FLOOR TILE, (9X9 AND 12X12), SINKS, CAULKING, INTERIOR GLAZING, GLUE DAUBS
Disposal Methods:	DOUBLE BAGGING IN 6-MIL LABELED BAGS, DRUMS AND BOXES. LARGE COMPONENTS WRAPPED IN 2 LAYERS OF 6-MIL POLY SHEETING
Facility Usage:	ELEMENTARY SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT
Owner Address:	73 LINCOLN STREET
Owner City:	MANCHESTER-BY-THE-SEA
Owner State:	MA
On Site Manager Name:	JOHN DEBETTENCOURT
On Site Manager Phone:	6174676010
Ins Comp:	STATE NATIONAL INSURANCE CO.
Policy Number:	NFA0824093
EXP Date:	3/29/2021
Facility Size:	60000
Transporter Name:	MINERVA ENTERPRISES
Transporter Address:	9000 MINERVA ROAD
Transporter City:	WAYNESBURG
Transporter State:	OH
Final Site:	Not reported
Certified Name:	CHARLES HUGHES
Cert Sign Date:	06/26/2020
Certified Company:	AMERICAN ENVIRONMENTAL, INC.
Certified Phone:	4133227190
Entered_by:	METROREMEDIATOR
Name:	MANCHESTER MEMORIAL ELEMENTARY SCHOOL
Address:	43 LINCOLN STREET
City,State,Zip:	MANCHESTER, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/17/2019
End Date:	07/19/2019
Date Entered:	Not reported
Entry Date:	05/15/2019
Quantity Materical Removed SF:	30000
Quantity Material Removed LF:	5475
Project Description:	TRANSPIPE PIPEINSUL CLOTHS INSCEMENT OTHER SEE BE
AR Tracking ID:	319679
Super Lic Number:	AS071733
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000161
Year:	2019
Sticker Number:	100308431
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	9785264919
Sub Town:	Not reported

MANCHESTER MEMORIAL ELEMENTARY SCHOOL (Continued) **S122934938**

Worksite:	PHASE 1-THROUGHOUT
Occupied:	-1
Contractor:	AC000639
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Dem
Abatement Process:	Glv,Fcontain, oth:SAFE WORK PRACTICES
Location:	INOUTDOORS
Decon Process:	3 STAGE DECONTAMINATION UNIT WITH SHOWER AND REMOTE DECONTAMINATION UNIT ADJACENT TO THE WORK AREA OTHERS FROM ABOVE:COVE BASE AND MASTIC, FLOOR TILE AND MASTIC, SINKS, CEILING TILES, FIRE DOORS, CAULKING, GLAZING, GASKETS
Disposal Methods:	DOUBLE BAGGING IN 6-MIL LABELED BAGS, DRUMS AND/OR BOXES. LARGE COMPONENTS TO BE DOUBLE BAGGED WITH 2 LAYERS OF 6-MIL POLY SHEETING.
Facility Usage:	ELEMENTARY SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT
Owner Address:	73 LINCOLN STREET
Owner City:	MANCHESTER-BY-THE-SEA
Owner State:	MA
On Site Manager Name:	MICHAEL ST. GERMAIN
On Site Manager Phone:	6174676010
Ins Comp:	STATE NATIONAL INSURANCE CO.
Policy Number:	NFA0824093
EXP Date:	3/29/2020
Facility Size:	60000
Transporter Name:	RED TECHNOLOGIES, LLC
Transporter Address:	10 NORTHWOOD DRIVE
Transporter City:	BLOOMFIELD
Transporter State:	CT
Final Site:	Not reported
Certified Name:	CHARLES HUGHES
Cert Sign Date:	05/15/2019
Certified Company:	AMERICAN ENVIRONMENTAL INC.
Certified Phone:	4133227190
Entered_by:	METROREMEDIATOR
Name:	MANCHESTER MEMORIAL ELEMENTARY SCHOOL
Address:	43 LINCOLN STREET
City,State,Zip:	MANCHESTER, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/17/2019
End Date:	07/19/2019
Date Entered:	Not reported
Entry Date:	07/12/2019
Quantity Materical Removed SF:	30000
Quantity Material Removed LF:	5475
Project Description:	TRANSPIPE PIPEINSUL CLOTHS INSCEMENT OTHER SEE BE
AR Tracking ID:	323962
Super Lic Number:	AS071733
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000161

MANCHESTER MEMORIAL ELEMENTARY SCHOOL (Continued) **S122934938**

Year:	2019
Sticker Number:	100308431R
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	9785264919
Sub Town:	Not reported
Worksite:	PHASE 1-THROUGHOUT
Occupied:	-1
Contractor:	AC000639
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Dem
Abatement Process:	Glv,Fcontain, oth:SAFE WORK PRACTICES
Location:	INOUTDOORS
Decon Process:	3 STAGE DECONTAMINATION UNIT WITH SHOWER AND REMOTE DECONTAMINATION UNIT ADJACENT TO THE WORK AREA OTHERS FROM ABOVE:COVE BASE AND MASTIC, FLOOR TILE AND MASTIC, SINKS, CEILING TILES, FIRE DOORS, CAULKING, GLAZING, GASKETS
Disposal Methods:	DOUBLE BAGGING IN 6-MIL LABELED BAGS, DRUMS AND/OR BOXES. LARGE COMPONENTS TO BE DOUBLE BAGGED WITH 2 LAYERS OF 6-MIL POLY SHEETING.
Facility Usage:	ELEMENTARY SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT
Owner Address:	73 LINCOLN STREET
Owner City:	MANCHESTER-BY-THE-SEA
Owner State:	MA
On Site Manager Name:	MICHAEL ST. GERMAIN
On Site Manager Phone:	6174676010
Ins Comp:	STATE NATIONAL INSURANCE CO.
Policy Number:	NFA0824093
EXP Date:	3/29/2020
Facility Size:	60000
Transporter Name:	RED TECHNOLOGIES, LLC
Transporter Address:	10 NORTHWOOD DRIVE
Transporter City:	BLOOMFIELD
Transporter State:	CT
Final Site:	Not reported
Certified Name:	CHARLES HUGHES
Cert Sign Date:	07/12/2019
Certified Company:	AMERICAN ENVIRONMENTAL, INC
Certified Phone:	4133227190
Entered_by:	METROREMEDIATOR

A2
Target
Property

MANCHESTER MEMORIAL ELEMENTARY SCHOOL
43 LINCOLN STREET
MANCHESTER, MA 01944

FINDS **1016392394**
ECHO **N/A**

Site 2 of 2 in cluster A

Actual:
32 ft.

FINDS:
Registry ID: 110055260952

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:

MANCHESTER MEMORIAL ELEMENTARY SCHOOL (Continued) **1016392394**

The Integrated Compliance Information System (ICIS) provides a database that, when complete, will contain integrated enforcement and compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained in ICIS by EPA in the Regional offices and it at Headquarters. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.
The National Pollutant Discharge Elimination System (NPDES) module of the Integrated Compliance Information System (ICIS). Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1016392394
Registry ID:	110055260952

DFR URL:

Name:	MANCHESTER MEMORIAL ELEMENTARY SCHOOL
Address:	43 Lincoln Street
City,State,Zip:	MANCHESTER, MA 01944

B3 **TEXACO STATION FMR** **UST FINDER RELEASE** **1029116218**
South **76 SUMMER ST** **N/A**
< 1/8 **MANCHESTER, MA 19440**
0.009 mi.
49 ft. **Site 1 of 2 in cluster B**

Relative:
Higher

Actual:
38 ft.

UST FINDER RELEASE:

Object ID:	199754
Facility ID:	Not reported
Lust ID:	MA3-0002657
Name:	TEXACO STATION FMR
Address:	76 SUMMER ST
City,State,Zip:	MANCHESTER, MA 19440000
Address Match Type:	PointAddress
Reported Date:	1990/01/02 15:59:59+00
Status:	No Further Action
Substance:	Not reported
Population within 1500ft:	590
Domestic Wells within 1500ft:	2
Land Use:	Developed, Low Intensity
Within SPA:	No
SPA PWS Facility ID:	Not reported
SPA Water Type:	Not reported

TEXACO STATION FMR (Continued) **1029116218**

SPA Facility Type:	Not reported
SPA HUC12:	Not reported
Within WHPA:	Yes
WHPA PWS Facility ID:	MA3166000_1
WHPA Water Type:	GW - Ground water
WHPA Facility Type:	WL - Well
WHPA HUC12:	010900010301
Within 100yr Floodplain:	No
Tribe:	Not reported
EPA Region:	1
NFA Letter 1:	Not reported
NFA Letter 2:	Not reported
NFA Letter 3:	Not reported
NFA Letter 4:	Not reported
Closed With Residual Contaminate:	Not reported
Coordinate Source:	Geocode
X Coord:	-70.76389283
Y Coord:	42.5778365400001
Latitude:	42.57783654
Longitude:	-70.76389283

B4 **TEXACO STATION FMR** **LUST** **S110526339**
South **76 SUMMER ST** **RELEASE** **N/A**
< 1/8 **MANCHESTER, MA 01944** **ENF**
0.010 mi.
54 ft. **Site 2 of 2 in cluster B**

Relative: Higher

Actual: 38 ft.

LUST:

Facility:

Name:	TEXACO STATION FMR
Address:	76 SUMMER ST
City,State,Zip:	MANCHESTER, MA 019440000
Current Status:	**Response Action Outcome**
Release Tracking Number/Current Status:	3-0002657 / RAO
Status Date:	06/05/2003
Source Type:	UST
Release Town:	MANCHESTER
Notification Date:	01/02/1990
Category:	NONE
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Not reported
Location Type:	COMMERCIAL
Location Type:	FORMER
Location Type:	GASSTATION
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	GASOLINE
Quantity:	Not reported

TEXACO STATION FMR (Continued) **S110526339**

Actions:

Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	1/18/2002
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/2/1990
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	1/2/1990
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	Submittal Retracted
Action Date:	1/4/2001
Response Action Outcome:	Not reported
Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	1/7/1997
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	10/27/1995
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	11/16/1995
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	11/16/1995
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Permit Effective Date
Action Date:	11/2/1994
Response Action Outcome:	Not reported
Action Type:	TREGS
Action Status:	BWSC04
Action Date:	11/2/1994
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	11/26/1996
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action

TEXACO STATION FMR (Continued) **S110526339**

Action Status:	Written Approval of Plan
Action Date:	11/7/1994
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	ACO
Action Date:	12/18/1996
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	12/18/1996
Response Action Outcome:	Not reported
Action Type:	Phase 2
Action Status:	Tier 1A or Priority Submittal Approved
Action Date:	12/19/1991
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	12/4/2000
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	12/8/2022
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	12/8/2022
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Modified Revised or Updated Plan Received
Action Date:	2/12/2001
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Permit Extension Received
Action Date:	2/13/2001
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	2/22/1996
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	2/26/2001
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	2/26/2001

TEXACO STATION FMR (Continued) **S110526339**

Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 2/27/1997
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/15/2002
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 3/17/2003
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 3/17/2003
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 3/20/2008
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 4/12/2023
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 4/19/2005
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 4/3/2002
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 4/7/1997
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 4/9/2001
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 5/27/1997
Response Action Outcome: Not reported

TEXACO STATION FMR (Continued) **S110526339**

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 5/31/2002
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/31/2002
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 6/22/2001
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: NORA
Action Date: 6/23/1995
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 1A Classification
Action Date: 6/30/1994
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/30/1994
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 6/5/2003
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/5/2003
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 6/7/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 7/17/2001
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 8/13/2001
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued

TEXACO STATION FMR (Continued) **S110526339**

Action Date: 9/7/1994
Response Action Outcome: Not reported

Action Type: BWS20
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: Not reported

Release:
Name: TEXACO STATION FMR
Address: 76 SUMMER ST
City,State,Zip: MANCHESTER, MA 019440000
Release Tracking Number/Current Status: 3-0002657 / RAO
Primary ID: Not reported
Official City: MANCHESTER
Notification: 01/02/1990
Category: NONE
Status Date: 06/05/2003
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 1/18/2002
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/2/1990
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/2/1990
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Submittal Retracted
Action Date: 1/4/2001
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 1/7/1997
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 10/27/1995
Response Action Outcome: Not reported

TEXACO STATION FMR (Continued) **S110526339**

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 11/16/1995
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 11/16/1995
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 11/2/1994
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: BWSC04
Action Date: 11/2/1994
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 11/26/1996
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 11/7/1994
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 12/18/1996
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 12/18/1996
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Tier 1A or Priority Submittal Approved
Action Date: 12/19/1991
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 12/4/2000
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/8/2022
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued

TEXACO STATION FMR (Continued) **S110526339**

Action Date: 12/8/2022
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 2/12/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Extension Received
Action Date: 2/13/2001
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 2/22/1996
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 2/26/2001
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 2/26/2001
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 2/27/1997
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/15/2002
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 3/17/2003
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 3/17/2003
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 3/20/2008
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 4/12/2023
Response Action Outcome: Not reported

TEXACO STATION FMR (Continued) **S110526339**

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 4/19/2005
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 4/3/2002
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 4/7/1997
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 4/9/2001
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 5/27/1997
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 5/31/2002
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/31/2002
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 6/22/2001
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: NORA
Action Date: 6/23/1995
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 1A Classification
Action Date: 6/30/1994
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/30/1994
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received

TEXACO STATION FMR (Continued) **S110526339**

Action Date: 6/5/2003
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/5/2003
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 6/7/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 7/17/2001
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 8/13/2001
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 9/7/1994
Response Action Outcome: Not reported

Action Type: BWS20
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: Not reported

Chemicals:
Chemical: GASOLINE
Quantity: Not reported
Location Type: COMMERCIAL
Location Type: FORMER
Location Type: GASSTATION
Source: UST

ENFORCEMENT:
Name: PAUL J. MURRAY REVOCABLE TRUST
Address: 76 SUMMER ST
City,State,Zip: MANCHESTER, MA 019440000
Region: NERO
DEP Region: NERO
DEP Program: 3a
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0002657
High Or Low Level Enforcement: LLE
FMF #: Not reported
Town Where Violation Occurred: MANCHESTER
Date Executed: 12/08/2022
ENF #: 00014265

TEXACO STATION FMR (Continued) **S110526339**

Document Type:	NON
AG Ref (Y/N):	NO
Doc Archived (Y/N):	YES
EJ Community (Y/N):	NO
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	T

C5 **MANCHESTER GAS AND SERVICE** **UST FINDER** **1028399829**
East **96 SUMMER ST** **N/A**
< 1/8 **MANCHESTER-BY-THE-SEA, MA 1944**
0.031 mi.
165 ft. **Site 1 of 4 in cluster C**

Relative: **Higher**

Actual: **37 ft.**

UST FINDER:

Object ID:	653664
Facility ID:	MA5491
Name:	MANCHESTER GAS AND SERVICE
Address:	96 SUMMER ST
City,State,Zip:	MANCHESTER-BY-THE-SEA, MA 1944
Address Match Type:	PointAddress
Open USTs:	2
Closed USTs:	4
TOS USTs:	0
Population 1500ft:	335
Private Wells 1500ft:	2
Within 100yr Floodplain:	No
Land Use:	Developed, Medium Intensity
Within SPA:	No
SPA PWS Facility ID:	Not reported
SPA Water Type:	Not reported
SPA Facility Type:	Not reported
SPA HUC12:	Not reported
Within WHPA:	Yes
WHPA PWS Facility ID:	MA3166000_1
WHPA Water Type:	GW - Ground water
WHPA Facility Type:	WL - Well
WHPA HUC12:	010900010301
Facility Status:	Open UST(s)
Date of Last Inspection:	Not reported
EPA Region:	1
Tribe:	Not reported
Coordinate Source:	Geocode
X Coord:	-70.761991
Y Coord:	42.578759
Latitude:	42.578759
Longitude:	-70.761991

UST FINDER:

Object ID:	756867

MANCHESTER GAS AND SERVICE (Continued) **1028399829**

Facility ID:	MA5491
Tank ID:	MA5491_1
Tank Status:	Closed
Installation Date:	1970/05/27 16:00:00+00
Removal Date:	1993/04/16 15:59:59+00
Tank Capacity:	8000
Substances:	Gasoline
Tank Wall Type:	Not reported

Object ID:	771984
Facility ID:	MA5491
Tank ID:	MA5491_6
Tank Status:	Open
Installation Date:	1997/10/27 15:59:59+00
Removal Date:	Not reported
Tank Capacity:	1000
Substances:	Gasoline
Tank Wall Type:	Double

Object ID:	771985
Facility ID:	MA5491
Tank ID:	MA5491_5
Tank Status:	Open
Installation Date:	1997/10/27 15:59:59+00
Removal Date:	Not reported
Tank Capacity:	8000
Substances:	Gasoline
Tank Wall Type:	Double

Object ID:	749557
Facility ID:	MA5491
Tank ID:	MA5491_4
Tank Status:	Closed
Installation Date:	1970/05/27 16:00:00+00
Removal Date:	1998/12/09 15:59:59+00
Tank Capacity:	10000
Substances:	Waste Oil
Tank Wall Type:	Not reported

Object ID:	751513
Facility ID:	MA5491
Tank ID:	MA5491_2
Tank Status:	Closed
Installation Date:	1970/04/01 16:00:00+00
Removal Date:	1997/10/13 15:59:59+00
Tank Capacity:	6000
Substances:	Gasoline
Tank Wall Type:	Single

Object ID:	751514
Facility ID:	MA5491
Tank ID:	MA5491_3
Tank Status:	Closed
Installation Date:	1970/04/01 16:00:00+00
Removal Date:	1997/10/13 15:59:59+00
Tank Capacity:	500
Substances:	Gasoline

MANCHESTER GAS AND SERVICE (Continued) **1028399829**

Tank Wall Type: Single

C6 **BAILEY GUY** **EDR Hist Auto** **1021548618**
East **96 SUMMER ST** **N/A**
< 1/8 **MANCHESTER, MA 01944**
0.031 mi.
165 ft. **Site 2 of 4 in cluster C**

Relative: EDR Hist Auto
Higher

Actual:
37 ft.

Year:	Name:	Type:
1971	BAILEY GUY	Gasoline Service Stations
1972	BAILEY GUY	Gasoline Service Stations
1973	BAILEY GUY	Gasoline Service Stations
1974	BAILEY GUY	Gasoline Service Stations
1975	BAILEY GUY	Gasoline Service Stations
1976	BAILEY GUY	Gasoline Service Stations
1995	BAILEY SERVICE STATION	Gasoline Service Stations
1996	BAILEY SERVICE STATION	Gasoline Service Stations
1997	BAILEY SERVICE STATION	Gasoline Service Stations
2011	SECOND SUMMER NINETY SIX	Automotive Repair Shops, NEC
2012	SECOND SUMMER NINETY SIX	Automotive Repair Shops, NEC
2013	SECOND SUMMER NINETY SIX	Automotive Repair Shops, NEC
2014	SECOND SUMMER NINETY SIX	Automotive Repair Shops, NEC

C7 **MANCHESTER GAS AND SERVICE** **UST** **1000283572**
East **96 SUMMER ST** **N/A**
< 1/8 **MANCHESTER-BY-THE-SEA, MA 01944**
0.031 mi.
165 ft. **Site 3 of 4 in cluster C**

Relative: UST:
Higher

Actual:
37 ft.

Facility ID:	5491
Name:	MANCHESTER GAS AND SERVICE
Address:	96 SUMMER ST
Address 2:	Not reported
City,State,Zip:	MANCHESTER-BY-THE-SEA, MA 01944
Owner ID:	1025611
Owner:	96 summer st manchester LLC
Owner Address:	96 SUMMER ST
Owner Address 2:	Not reported
Owner City,State,Zip:	MANCHESTER, MA 01944
Telephone:	9785268300
Description:	Retail Motor Vehicle Fuel Dispensing
Contact Name:	carla chalhoub
Contact Address:	151 MAIN ST
Contact Address 2:	Not reported
Contact City,State,Zip:	MEDFORD, MA 02155
Contact Email:	carlac444@aol.com
Update:	2025-01-15 00:00:00
Update By:	Karen Staple
Facility Status:	OPEN
Longitude:	-70.76215
Latitude:	42.57895

MANCHESTER GAS AND SERVICE (Continued) **1000283572**

URL:

UST:

Facility ID:	5491
Tank ID:	5
Capacity:	10000.00000
Substance:	Gasoline
Tank Construct:	Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Tank Usage:	Motor Vehicle
Pipe Construct:	Double-walled non-corrodible material (No corrosion protection required)
Pipe Type:	Pressurized piping system with mechanical automatic line leak detection
Latitude:	42.57895
Longitude:	-70.76228
Date Installed:	10/27/1997
Number of Compartment:	Not reported
Pipe Install Date:	10/27/1997
Pipe Leak Install Date:	10/27/1997
Submersible Sump:	Y
Submersible Sump Install Date:	10/27/1997
Turbine Sump:	Y
Turbine Sump Sensor:	Y
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	10/27/1997
Spill Bucket Sensor:	N
Tank Status:	In Use
Status Date:	Not reported
Overfill Protect Install:	10/27/1997
Overfill Protect Type:	Ball Float
Automatic Line Leak Detect:	10/27/1997
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Continuous Interstitial Monitoring
Pipe Leak Detection:	Continuous Interstitial Space Monitoring

Facility ID:	5491
Tank ID:	6
Capacity:	8000.00000
Substance:	Gasoline
Tank Construct:	Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Tank Usage:	Motor Vehicle
Pipe Construct:	Double-walled non-corrodible material (No corrosion protection required)
Pipe Type:	Pressurized piping system with mechanical automatic line leak detection
Latitude:	42.57894
Longitude:	-70.76224
Date Installed:	10/27/1997
Number of Compartment:	Not reported
Pipe Install Date:	10/27/1997
Pipe Leak Install Date:	10/27/1997
Submersible Sump:	Y
Submersible Sump Install Date:	10/27/1997

MANCHESTER GAS AND SERVICE (Continued) **1000283572**

Turbine Sump:	Y
Turbine Sump Sensor:	Y
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	10/27/1997
Spill Bucket Sensor:	N
Tank Status:	In Use
Status Date:	Not reported
Overfill Protect Install:	10/27/1997
Overfill Protect Type:	Ball Float
Automatic Line Leak Detect:	10/27/1997
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Continuous Interstitial Monitoring
Pipe Leak Detection:	Continuous Interstitial Space Monitoring

Facility ID:	5491
Tank ID:	3
Capacity:	6000.00000
Substance:	Gasoline
Tank Construct:	Single-walled metal tank (cathodic protection required)
Tank Usage:	Motor Vehicle
Pipe Construct:	Single-walled metal (Corrosion protection required)
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	04/01/1970
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	10/13/1997
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Annual Automatic Line Leak Detection Test

Facility ID:	5491
Tank ID:	1
Capacity:	12000.00000
Substance:	Gasoline
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported

MANCHESTER GAS AND SERVICE (Continued) **1000283572**

Longitude:	Not reported
Date Installed:	05/27/1970
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	04/16/1993
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

Facility ID:	5491
Tank ID:	2
Capacity:	8000.00000
Substance:	Gasoline
Tank Construct:	Single-walled metal tank (cathodic protection required)
Tank Usage:	Motor Vehicle
Pipe Construct:	Single-walled metal (Corrosion protection required)
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	04/01/1970
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	10/13/1997
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Annual Automatic Line Leak Detection Test

Facility ID:	5491
Tank ID:	4

MANCHESTER GAS AND SERVICE (Continued) **1000283572**

Capacity:	500.00000
Substance:	Waste Oil
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	05/27/1970
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	12/09/1998
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

C8 **BAILEY'S SERVICE STATION, INC.** **RCRA NonGen / NLR** **1004717098**
East **96 SUMMER STREET** **E MANIFEST** **MAD981894629**
< 1/8 **MANCHESTER, MA 01944**
0.031 mi.
165 ft. **Site 4 of 4 in cluster C**

Relative: **Higher**
Actual: **37 ft.**

RCRA Listings:

Date Form Received by Agency:	20071231
Handler Name:	Baileys Service Sta Inc
Handler Address:	96 Summer St
Handler City,State,Zip:	MANCHESTER, MA 01944
EPA ID:	MAD981894629
Contact Name:	GUY BAILEY
Contact Address:	96 SUMMER ST
Contact City,State,Zip:	MANCHESTER, MA 01944-0000
Contact Telephone:	508-526-4561
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	01
Land Type:	Private
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Ma

BAILEY'S SERVICE STATION, INC. (Continued) **1004717098**

State District:		N
Mailing Address:		96 SUMMER ST
Mailing City,State,Zip:		MANCHESTER, MA 01944-0000
Owner Name:	Baileys Service Station Inc	
Owner Type:		Private
Operator Name:	Baileys Service Station Inc	
Operator Type:		Private
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		No
Universal Waste Destination Facility:		No
Federal Universal Waste:		No
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		N
Sub-Part K Indicator:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
202 GPRA Corrective Action Baseline:		No
Subject to Corrective Action Universe:		No
Non-TSDFs Where RCRA CA has Been Imposed Universe:		No
Corrective Action Priority Ranking:		No NCAPS ranking
Environmental Control Indicator:		No
Institutional Control Indicator:		No
Human Exposure Controls Indicator:		N/A
Groundwater Controls Indicator:		N/A
Significant Non-Complier Universe:		No
Unaddressed Significant Non-Complier Universe:		No
Addressed Significant Non-Complier Universe:		No
Significant Non-Complier With a Compliance Schedule Universe:		No
Financial Assurance Required:		Not reported
Handler Date of Last Change:		20171020
Recognized Trader-Importer:		No
Recognized Trader-Exporter:		No
Importer of Spent Lead Acid Batteries:		No
Exporter of Spent Lead Acid Batteries:		No
Recycler Activity Without Storage:		No
Manifest Broker:		No
Sub-Part P Indicator:		No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	Ignitable Waste

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name:	BAILEYS SERVICE STATION INC

BAILEY'S SERVICE STATION, INC. (Continued) **1004717098**

Legal Status: Private
Date Became Current: 19911209
Date Ended Current: Not reported
Owner/Operator Address: 96 SUMMER ST
Owner/Operator City,State,Zip: MANCHESTER, MA 01944-0000
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: BAILEYS SERVICE STATION INC
Legal Status: Private
Date Became Current: 19911209
Date Ended Current: Not reported
Owner/Operator Address: 96 SUMMER ST
Owner/Operator City,State,Zip: MANCHESTER, MA 01944
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: GUY BALLEY
Legal Status: Private
Date Became Current: 20041016
Date Ended Current: Not reported
Owner/Operator Address: 96 SUMMER ST
Owner/Operator City,State,Zip: MANCHESTER, MA 01944
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: BAILEYS SERVICE STATION INC
Legal Status: Private
Date Became Current: 19911209
Date Ended Current: Not reported
Owner/Operator Address: 96 SUMMER ST
Owner/Operator City,State,Zip: MANCHESTER, MA 01944-0000
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 20071231
Handler Name: BAILEYS SERVICE STA INC
Federal Waste Generator Description: Not a generator, verified
State District Owner: Ma
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes

BAILEY'S SERVICE STATION, INC. (Continued) **1004717098**

Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 19861114
Handler Name: BAILEYS SERVICE STA INC
Federal Waste Generator Description: Very Small Quantity Generator (formerly Conditionally-Exempt Small Quantity Generator
State District Owner: Ma
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 811111
NAICS Description: General Automotive Repair

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

E MANIFEST:
Manifest Tracking Number: 025617732JJK
Last Updated Date: 20240313
Shipped Date: 20240308
Received Date: 20240308
Manifest Status: Signed
Submission Type: DataImage5Copy
Origin Type: Service
Generator EPA ID: MV7814258223
Generator Name: Manchester Gas & Service
Generator Location Street Number: Not reported
Generator Location Street 1: 96 SUMMER STREET
Generator Location Street 2: Not reported
Generator Location City: MANCHESTER
Generator Location State: MA
Generator Location Zip: 01944
Generator Mail Street Number: Not reported
Generator Mail Street 1: 96 SUMMER STREET
Generator Mail Street 2: Not reported
Generator Mail City: MANCHESTER
Generator Mail Zip: 01944
Generator Mail State: MA
Generator Contact Company Name: Not reported
Designated Facility EPA ID: RIR000500025
Designated Facility Name: Western Oil Inc
Designated Facility Mail Street Number: Not reported
Designated Facility Mail Street 1: Not reported

BAILEY'S SERVICE STATION, INC. (Continued) **1004717098**

Designated Facility Mail Street 2:	PO BOX 518
Designated Facility Mail City:	LINCOLN
Designated Facility Mail Zip:	02865
Designated Facility Mail State:	RI
Designated Facility Location Street Number:	1
Designated Facility Location Street 1:	DUCHESS WAY
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	LINCOLN
Designated Facility Location Zip:	02865
Designated Facility Location State:	RI
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	025619213JJK
Last Updated Date:	20240917
Shipped Date:	20240916
Received Date:	20240916
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MV7814258223
Generator Name:	Manchester Gas & Service
Generator Location Street Number:	Not reported
Generator Location Street 1:	96 SUMMER STREET
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	96 SUMMER STREET
Generator Mail Street 2:	Not reported
Generator Mail City:	MANCHESTER
Generator Mail Zip:	01944
Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	RIR000500025
Designated Facility Name:	Western Oil Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	PO BOX 518
Designated Facility Mail City:	LINCOLN
Designated Facility Mail Zip:	02865
Designated Facility Mail State:	RI
Designated Facility Location Street Number:	1
Designated Facility Location Street 1:	DUCHESS WAY
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	LINCOLN
Designated Facility Location Zip:	02865
Designated Facility Location State:	RI
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	025619828JJK
Last Updated Date:	20240515
Shipped Date:	20240514

BAILEY'S SERVICE STATION, INC. (Continued) **1004717098**

Received Date:	20240514
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MV7814258223
Generator Name:	Manchester Gas & Service
Generator Location Street Number:	Not reported
Generator Location Street 1:	96 SUMMER STREET
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	96 SUMMER STREET
Generator Mail Street 2:	Not reported
Generator Mail City:	MANCHESTER
Generator Mail Zip:	01944
Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	RIR000500025
Designated Facility Name:	Western Oil Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	PO BOX 518
Designated Facility Mail City:	LINCOLN
Designated Facility Mail Zip:	02865
Designated Facility Mail State:	RI
Designated Facility Location Street Number:	1
Designated Facility Location Street 1:	DUCHESS WAY
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	LINCOLN
Designated Facility Location Zip:	02865
Designated Facility Location State:	RI
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	022579304JJK
Last Updated Date:	20210405
Shipped Date:	20210329
Received Date:	20210329
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MV7814258223
Generator Name:	Manchester Gas & Service
Generator Location Street Number:	Not reported
Generator Location Street 1:	96 SUMMER STREET
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	96 SUMMER STREET
Generator Mail Street 2:	Not reported
Generator Mail City:	MANCHESTER
Generator Mail Zip:	01944

BAILEY'S SERVICE STATION, INC. (Continued) **1004717098**

Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	RIR000500025
Designated Facility Name:	Western Oil Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	PO BOX 518
Designated Facility Mail City:	LINCOLN
Designated Facility Mail Zip:	02865
Designated Facility Mail State:	RI
Designated Facility Location Street Number:	1
Designated Facility Location Street 1:	DUCHESS WAY
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	LINCOLN
Designated Facility Location Zip:	02865
Designated Facility Location State:	RI
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	022581714JJK
Last Updated Date:	20210611
Shipped Date:	20210610
Received Date:	20210610
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MV7814258223
Generator Name:	Manchester Gas & Service
Generator Location Street Number:	Not reported
Generator Location Street 1:	96 SUMMER STREET
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	96 SUMMER STREET
Generator Mail Street 2:	Not reported
Generator Mail City:	MANCHESTER
Generator Mail Zip:	01944
Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	RIR000500025
Designated Facility Name:	Western Oil Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	PO BOX 518
Designated Facility Mail City:	LINCOLN
Designated Facility Mail Zip:	02865
Designated Facility Mail State:	RI
Designated Facility Location Street Number:	1
Designated Facility Location Street 1:	DUCHESS WAY
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	LINCOLN
Designated Facility Location Zip:	02865
Designated Facility Location State:	RI
Designated Facility Contact Company Name:	Not reported

BAILEY'S SERVICE STATION, INC. (Continued) **1004717098**

Manifest Residue Indicator:	N
Rejection Indicator:	N
Manifest Tracking Number:	024584674JJK
Last Updated Date:	20230418
Shipped Date:	20230413
Received Date:	20230413
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MV7814258223
Generator Name:	Manchester Gas & Service
Generator Location Street Number:	Not reported
Generator Location Street 1:	96 SUMMER STREET
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	96 SUMMER STREET
Generator Mail Street 2:	Not reported
Generator Mail City:	MANCHESTER
Generator Mail Zip:	01944
Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	RIR000500025
Designated Facility Name:	Western Oil Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	PO BOX 518
Designated Facility Mail City:	LINCOLN
Designated Facility Mail Zip:	02865
Designated Facility Mail State:	RI
Designated Facility Location Street Number:	1
Designated Facility Location Street 1:	DUCHESS WAY
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	LINCOLN
Designated Facility Location Zip:	02865
Designated Facility Location State:	RI
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N
Manifest Tracking Number:	024586171JJK
Last Updated Date:	20230622
Shipped Date:	20230621
Received Date:	20230621
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MV7814258223
Generator Name:	Manchester Gas & Service
Generator Location Street Number:	Not reported
Generator Location Street 1:	96 SUMMER STREET
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA

BAILEY'S SERVICE STATION, INC. (Continued) **1004717098**

Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	96 SUMMER STREET
Generator Mail Street 2:	Not reported
Generator Mail City:	MANCHESTER
Generator Mail Zip:	01944
Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	RIR000500025
Designated Facility Name:	Western Oil Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	PO BOX 518
Designated Facility Mail City:	LINCOLN
Designated Facility Mail Zip:	02865
Designated Facility Mail State:	RI
Designated Facility Location Street Number:	1
Designated Facility Location Street 1:	DUCHESS WAY
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	LINCOLN
Designated Facility Location Zip:	02865
Designated Facility Location State:	RI
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	024588140JJK
Last Updated Date:	20220819
Shipped Date:	20220810
Received Date:	20220810
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MV7814258223
Generator Name:	Manchester Gas & Service
Generator Location Street Number:	Not reported
Generator Location Street 1:	96 SUMMER STREET
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	96 SUMMER STREET
Generator Mail Street 2:	Not reported
Generator Mail City:	MANCHESTER
Generator Mail Zip:	01944
Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	RIR000500025
Designated Facility Name:	Western Oil Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	PO BOX 518
Designated Facility Mail City:	LINCOLN
Designated Facility Mail Zip:	02865
Designated Facility Mail State:	RI
Designated Facility Location Street Number:	1

BAILEY'S SERVICE STATION, INC. (Continued) **1004717098**

Designated Facility Location Street 1:	DUCHESS WAY
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	LINCOLN
Designated Facility Location Zip:	02865
Designated Facility Location State:	RI
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	024589166JJK
Last Updated Date:	20240104
Shipped Date:	20240103
Received Date:	20240103
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MV7814258223
Generator Name:	Manchester Gas & Service
Generator Location Street Number:	Not reported
Generator Location Street 1:	96 SUMMER STREET
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	96 SUMMER STREET
Generator Mail Street 2:	Not reported
Generator Mail City:	MANCHESTER
Generator Mail Zip:	01944
Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	RIR000500025
Designated Facility Name:	Western Oil Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	PO BOX 518
Designated Facility Mail City:	LINCOLN
Designated Facility Mail Zip:	02865
Designated Facility Mail State:	RI
Designated Facility Location Street Number:	1
Designated Facility Location Street 1:	DUCHESS WAY
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	LINCOLN
Designated Facility Location Zip:	02865
Designated Facility Location State:	RI
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	024590310JJK
Last Updated Date:	20230118
Shipped Date:	20230116
Received Date:	20230116
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MV7814258223

BAILEY'S SERVICE STATION, INC. (Continued) **1004717098**

Generator Name:	Manchester Gas & Service
Generator Location Street Number:	Not reported
Generator Location Street 1:	96 SUMMER STREET
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	96 SUMMER STREET
Generator Mail Street 2:	Not reported
Generator Mail City:	MANCHESTER
Generator Mail Zip:	01944
Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	RIR000500025
Designated Facility Name:	Western Oil Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	PO BOX 518
Designated Facility Mail City:	LINCOLN
Designated Facility Mail Zip:	02865
Designated Facility Mail State:	RI
Designated Facility Location Street Number:	1
Designated Facility Location Street 1:	DUCHESS WAY
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	LINCOLN
Designated Facility Location Zip:	02865
Designated Facility Location State:	RI
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	006819966SKS
Last Updated Date:	20190823
Shipped Date:	20190122
Received Date:	20190122
Manifest Status:	Corrected
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAD981894629
Generator Name:	Manchester Gas
Generator Location Street Number:	Not reported
Generator Location Street 1:	96 SUMMER STREET
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	96 Summer Street
Generator Mail Street 2:	Not reported
Generator Mail City:	Manchester
Generator Mail Zip:	01944
Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	MAD082303777
Designated Facility Name:	Cyn Oil Corporation
Designated Facility Mail Street Number:	Not reported

BAILEY'S SERVICE STATION, INC. (Continued) **1004717098**

Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	1771 Washington St
Designated Facility Mail City:	Stoughton
Designated Facility Mail Zip:	02072
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	1771 Washington St
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	Stoughton
Designated Facility Location Zip:	02072
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Transporter:

Manifest Tracking Number:	023355681JJK
Transporter Line Number:	1
Transporter EPA ID:	RIR000500025
Transporter Name:	Western Oil Inc

Waste Line:

Manifest Tracking Number:	023355681JJK
Waste Line Number:	1
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	NA1993
U.S. DOT Description:	Na1993, Combustible Liquid, N.O.S. (Petroleum Oils) Comb Liq., Pgiii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	TT
Container Type Description:	Cargo tanks (tank trucks)
Waste Quantity:	275
Quantity Unit of Measure Code:	G
Quantity Unit of Measure Description:	Gallons
Waste Quantity, in Tons:	1.146789
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	1.146789
Waste Quantity, in Kilograms:	1040.172
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	1040.172
Management Method Code:	Not reported
Management Method Description:	Not reported
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N

BAILEY'S SERVICE STATION, INC. (Continued) **1004717098**

Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	1040.172
Quantity Non Haz Tons:	1.146789
State Waste Codes:	MA-MA98, RI-R014

Click this hyperlink while viewing on your computer to access
25 additional US EManifest: record(s) in the EDR Site Report.

9
South
< 1/8
0.049 mi.
257 ft.

FMR TEXACO **LUST** **S110526183**
74 TO 76 SUMMER ST **RELEASE** **N/A**
MANCHESTER, MA 01944

Relative:
Higher

Actual:
44 ft.

LUST:

Facility:

Name:	FMR TEXACO
Address:	74 TO 76 SUMMER ST
City,State,Zip:	MANCHESTER, MA 019440000
Current Status:	**RTNCLOSED**
Release Tracking Number/Current Status:	3-0021362 / RTNCLOSED
Status Date:	05/31/2002
Source Type:	UST
Release Town:	MANCHESTER
Notification Date:	12/28/2001
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Not reported
Location Type:	RESIDNTIAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	OIL
Quantity:	Not reported
Chemical:	GASOLINE
Quantity:	5 milligrams per liter

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/15/2002
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	1/15/2002
Response Action Outcome:	Not reported

FMR TEXACO (Continued) **S110526183**

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	12/28/2001
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/13/2002
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	3/15/2002
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	4/3/2002
Response Action Outcome:	Not reported
Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	5/31/2002
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	5/31/2002
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Imminent Hazard Evaluation Received
Action Date:	5/31/2002
Response Action Outcome:	Not reported
Action Type:	Partial RAO for this RTN
Action Status:	RAO Statement Received
Action Date:	6/5/2003
Response Action Outcome:	Not reported

Release:

Name:	FMR TEXACO
Address:	74 TO 76 SUMMER ST
City,State,Zip:	MANCHESTER, MA 019440000
Release Tracking Number/Current Status:	3-0021362 / RTNCLOSED
Primary ID:	Not reported
Official City:	MANCHESTER
Notification:	12/28/2001
Category:	72 HR
Status Date:	05/31/2002
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Not reported

FMR TEXACO (Continued) **S110526183**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/15/2002
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	1/15/2002
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	12/28/2001
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/13/2002
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	3/15/2002
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	4/3/2002
Response Action Outcome:	Not reported
Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	5/31/2002
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	5/31/2002
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Imminent Hazard Evaluation Received
Action Date:	5/31/2002
Response Action Outcome:	Not reported
Action Type:	Partial RAO for this RTN
Action Status:	RAO Statement Received
Action Date:	6/5/2003
Response Action Outcome:	Not reported

Chemicals:

Chemical:	OIL
Quantity:	Not reported

FMR TEXACO (Continued) **S110526183**

Chemical: GASOLINE
Quantity: 5 milligrams per liter
Location Type: RESIDNTIAL
Source: UST

10
WSW
< 1/8
0.080 mi.
421 ft.

AT SUMMER ST **SHWS** **S110526137**
50 BROOK ST **RELEASE** **N/A**
MANCHESTER, MA 01944

Relative:
Lower

Actual:
30 ft.

SHWS:
Name: AT SUMMER ST
Address: 50 BROOK ST
City,State,Zip: MANCHESTER, MA 019440000
Facility ID: 3-0014131
Source Type: Not reported
Release Town: MANCHESTER
Notification Date: 11/07/1996
Category: 120 DY
Associated ID: Not reported
Current Status: DPS
Status Date: 08/27/1996
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Hazardous Material

Release:
Name: AT SUMMER ST
Address: 50 BROOK ST
City,State,Zip: MANCHESTER, MA 019440000
Release Tracking Number/Current Status: 3-0014131 / DPS
Primary ID: Not reported
Official City: MANCHESTER
Notification: 11/07/1996
Category: 120 DY
Status Date: 08/27/1996
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/7/1996
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/7/1996
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/27/1996

AT SUMMER ST (Continued) **S110526137**

Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Fee Received - FMCRA Use Only
Action Date: 8/28/1996
Response Action Outcome: Not reported

Chemicals:
Chemical: XYLENES
Quantity: 28 milligrams per liter
Chemical: TOTAL PETROLEUM HYDROCARBONS (TPH)
Quantity: 0.026 milligrams per liter
Chemical: TOLUENE
Quantity: 9.5 milligrams per liter
Chemical: BENZENE
Quantity: 19 milligrams per kilogram
Chemical: ETHYLBENZENE
Quantity: 54 milligrams per kilogram
Chemical: ETHYLBENZENE
Quantity: 5.5 milligrams per liter
Chemical: TOLUENE
Quantity: 21 milligrams per kilogram
Chemical: XYLENES
Quantity: 320 milligrams per kilogram
Chemical: CHLOROBENZENE
Quantity: 3.6 milligrams per kilogram
Chemical: BENZENE
Quantity: 2 milligrams per liter
Chemical: TOTAL PETROLEUM HYDROCARBONS (TPH)
Quantity: 1.2 milligrams per kilogram

D11 **VERIZON MASSACHUSETTS #593407** **UST FINDER** **1028399824**
SSW **52 SUMMER ST** **N/A**
< 1/8 **MANCHESTER-BY-THE-SEA, MA 1944**
0.125 mi.
659 ft. **Site 1 of 5 in cluster D**

Relative: **Higher**
Actual: **39 ft.**

UST FINDER:
Object ID: 653647
Facility ID: MA5487
Name: VERIZON MASSACHUSETTS #593407
Address: 52 SUMMER ST
City,State,Zip: MANCHESTER-BY-THE-SEA, MA 1944
Address Match Type: Not reported
Open USTs: 0
Closed USTs: 2
TOS USTs: 0
Population 1500ft: 903
Private Wells 1500ft: 2
Within 100yr Floodplain: No
Land Use: Developed, Medium Intensity
Within SPA: No
SPA PWS Facility ID: Not reported
SPA Water Type: Not reported
SPA Facility Type: Not reported
SPA HUC12: Not reported
Within WHPA: Yes

VERIZON MASSACHUSETTS #593407 (Continued) **1028399824**

WHPA PWS Facility ID:	MA3166000_1
WHPA Water Type:	GW - Ground water
WHPA Facility Type:	WL - Well
WHPA HUC12:	010900010301
Facility Status:	Closed UST(s)
Date of Last Inspection:	Not reported
EPA Region:	1
Tribe:	Not reported
Coordinate Source:	State
X Coord:	-70.7660299999999
Y Coord:	42.5766400000001
Latitude:	42.57664
Longitude:	-70.76603

UST FINDER:

Object ID:	755244
Facility ID:	MA5487
Tank ID:	MA5487_1
Tank Status:	Closed
Installation Date:	1966/01/01 16:00:01+00
Removal Date:	1994/10/11 15:59:59+00
Tank Capacity:	1000
Substances:	Diesel
Tank Wall Type:	Not reported

Object ID:	758877
Facility ID:	MA5487
Tank ID:	MA5487_2
Tank Status:	Closed
Installation Date:	1966/01/01 16:00:01+00
Removal Date:	1991/11/07 15:59:59+00
Tank Capacity:	3000
Substances:	Bulk Heating or Fuel Oil (#2,#4,#6)
Tank Wall Type:	Not reported

D12 **VERIZON MASSACHUSETTS #593407** **LUST** **U003654523**
SSW **52 SUMMER ST** **UST** **N/A**
< 1/8 **MANCHESTER-BY-THE-SEA, MA 01944** **AST**
0.125 mi. **RELEASE**
659 ft. **Site 2 of 5 in cluster D** **TIER 2**

Relative: Higher

Actual: 39 ft.

LUST:

Facility:

Name:	NO LOCATION AID
Address:	52 SUMMER ST
City,State,Zip:	MANCHESTER, MA 01944
Current Status:	**Response Action Outcome**
Release Tracking Number/Current Status:	3-0011714 / RAO
Status Date:	01/03/1995
Source Type:	UST
Release Town:	MANCHESTER
Notification Date:	10/11/1994
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Oil Or Haz Material: Not reported

Location Type: COMMERCIAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: DIESEL FUEL
Quantity: 1900 parts per million
Chemical: FUEL OIL #2
Quantity: 50 parts per million

Actions:
Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 1/3/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/3/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 1/3/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/11/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/11/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/25/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/15/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

UST:

Facility ID:	5487
Name:	VERIZON MASSACHUSETTS #593407
Address:	52 SUMMER ST
Address 2:	Not reported
City,State,Zip:	MANCHESTER-BY-THE-SEA, MA 01944
Owner ID:	6309
Owner:	VERIZON NEW ENGLAND INC
Owner Address:	51 Alder St
Owner Address 2:	Not reported
Owner City,State,Zip:	MEDWAY, MA 02053
Telephone:	Not reported
Description:	Utilities
Contact Name:	Andrew Ford
Contact Address:	51 Alder St
Contact Address 2:	Not reported
Contact City,State,Zip:	Medway, MA 02053
Contact Email:	Andrew.ford@verizonwireless.com
Update:	2009-05-12 00:00:00
Update By:	Not reported
Facility Status:	CLOSED
Longitude:	-70.76603
Latitude:	42.57664

URL:

UST:

Facility ID:	5487
Tank ID:	2
Capacity:	1000.00000
Substance:	Bulk Heating or Fuel Oil (#2,#4,#6)
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	01/01/1966
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	11/07/1991
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Pipe Leak Detection:	Not reported
Facility ID:	5487
Tank ID:	1
Capacity:	1000.00000
Substance:	Diesel
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	01/01/1966
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	10/11/1994
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

Facility ID:	5487
Name:	VERIZON MASSACHUSETTS #593407
Address:	52 SUMMER ST
Address 2:	Not reported
City,State,Zip:	MANCHESTER-BY-THE-SEA, MA 01944
Owner ID:	6309
Owner:	VERIZON NEW ENGLAND INC
Owner Address:	51 Alder St
Owner Address 2:	Not reported
Owner City,State,Zip:	MEDWAY, MA 02053
Telephone:	Not reported
Description:	Utilities
Contact Name:	Andrew Ford
Contact Address:	51 Alder St
Contact Address 2:	Not reported
Contact City,State,Zip:	Medway, MA 02053
Contact Email:	Andrew.ford@verizonwireless.com
Update:	2009-05-12 00:00:00
Update By:	Not reported
Facility Status:	CLOSED
Longitude:	-70.76603
Latitude:	42.57664

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

URL:

UST:

Facility ID:	5487
Tank ID:	2
Capacity:	1000.00000
Substance:	Bulk Heating or Fuel Oil (#2,#4,#6)
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	01/01/1966
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	11/07/1991
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

Facility ID:	5487
Tank ID:	1
Capacity:	1000.00000
Substance:	Diesel
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	01/01/1966
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Tank Status:	Tank Removed
Status Date:	10/11/1994
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

AST:

Facility ID:	5487
Name:	VERIZON MASSACHUSETTS #593407
Address:	52 SUMMER ST
City,State,Zip:	MANCHESTER-BY-THE-SEA, MA 01944
Owner ID:	9144
Owner Address:	185 FRANKLIN ST
Owner City:	BOSTON
Owner State:	MA
Owner Zip:	02110
Owner Name:	VERIZON MASSACHUSETTS
Tank Type:	Not reported
Class:	Not reported
Stage I Type:	Not reported
CARB # or System Type:	Not reported
Test Cycle:	Not reported
Date Form Mailed:	Not reported
Test Date:	Not reported
Postmark Date:	Not reported
Due Date:	Not reported
Product Type:	Not reported
Vapor Type:	Not reported
Form:	Not reported
Form Rcvd and Complete:	Not reported
Description:	Utilities
Telephone:	(617) 743-3408
Fire Department:	9166
Date of Inspection:	Not reported
Inspector:	Not reported
Overfill Prevention:	Not reported
Tank ID:	3
Serial Number:	Not reported
Spill Prevention:	Not reported
Tank Status:	In Use
Capacity:	660
Contents:	Diesel
Tank Use:	Other
Tank Material:	Steel
Tank Construction:	1 Wall
Tank Leak Detection:	Not reported
Pipe Material:	Steel
Pipe Construction:	1 Wall
Pipe Leak Detection:	Suction: Check Valve at Tank Only
Aboveground:	Y

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Release:

Name:	NO LOCATION AID
Address:	52 SUMMER ST
City,State,Zip:	MANCHESTER, MA 01944
Release Tracking Number/Current Status:	3-0011714 / RAO
Primary ID:	Not reported
Official City:	MANCHESTER
Notification:	10/11/1994
Category:	72 HR
Status Date:	01/03/1995
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	1/3/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	1/3/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	1/3/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/11/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	10/11/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	10/25/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Action Date:	11/15/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	1900 parts per million
Chemical:	FUEL OIL #2
Quantity:	50 parts per million
Location Type:	COMMERCIAL
Source:	UST

TIER 2:

Facility ID:	FATR2018000000038202
Name:	VERIZON MANCHESTER CO (VZ- MA593407)
Address:	52 SUMMER ST
City,State,Zip:	MANCHESTER, MA 01944
Country:	Not reported
Mailing Address:	One Verizon Way, MC: 33E040F
Mailing City,State,Zip:	Basking Ridge, NJ 07920-1097
Mailing Country:	Not reported
Report Year:	2018
All Chemicals Same As Last Year:	Not reported
Longitude:	-70.766400
Date Signed:	2019-01-25
Notes:	Not reported
Dike Or Other Safeguard:	Not reported
Latitude:	42.576900
Facility Dept:	Not reported
Failed Validation:	Not reported
Date Modified:	01/25/2019
Fees Total:	Not reported
Number of Employees:	0
Site Coord Abbreviated?:	false
Site Map:	Not reported
State Label Code:	Not reported
Submitted By:	Not reported
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
LEPC Name:	Not reported
Facility Status:	Not reported
Latest Report:	Not reported
EHS Above TPQ:	Not reported

TIER 2:

Record Key:	FDTR2018000000020793
ID:	Not reported
Type:	RMP
Description:	Not reported
Last Modified:	Not reported

Record Key:	FDTR2018000000020794
ID:	Not reported
Type:	State ID
Description:	Not reported

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Last Modified: Not reported

Record Key: FDTR2018000000020795
ID: Not reported
Type: TRI
Description: Not reported
Last Modified: Not reported

Record Key: FDTR2018000000020796
ID: Not reported
Type: DUN & BradStreet
Description: Not reported
Last Modified: Not reported

Record Key: FDTR2018000000020797
ID: Not reported
Type: EIN
Description: Not reported
Last Modified: Not reported

Record Key: FDTR2018000000020798
ID: Not reported
Type: SIC
Description: Not reported
Last Modified: Not reported

Record Key: FDTR2018000000020799
ID: Not reported
Type: NAICS
Description: Not reported
Last Modified: Not reported

Record Key: FDTR2018000000020800
ID: Not reported
Type: T2M Facility ID
Description: Not reported
Last Modified: Not reported

Chemcials:
Acute: Not reported
Average Amount: Not reported
Average Amount Code: Not reported
Chem Inv Record ID: CVTR2018000000142220
Chem Same As Last Year: true
Chronic: Not reported
CICAS: Not reported
CI EHS Chemical: false
CI Last Modified: 2018-01-09
Days On Site: 365
Entered Chemical Name: Lead Acid Batteries
Fire: Not reported
Gas: false
Liquid: true
Max Amount: 1.459
Max Amount Code: 6
Max Amount Container: 304
Mixture: true

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Pressure:	Not reported
Pure:	false
Reactive:	Not reported
Solid:	true
State01 Checkbox:	Not reported
State01 Number:	Not reported
State01 Text:	Not reported
State02 Checkbox:	Not reported
State02 Number:	Not reported
State02 Text:	Not reported
State03 Checkbox:	Not reported
State03 Number:	Not reported
State03 Text:	Not reported
State04 Checkbox:	Not reported
State04 Number:	Not reported
State04 Text:	Not reported
State05 Checkbox:	Not reported
State05 Text:	Not reported
State06 Checkbox:	Not reported
State06 Text:	Not reported
State07 Checkbox:	Not reported
State07 Text:	Not reported
State Label Code:	Not reported
Trade Secret:	false

Chemical Mixture:

Mix Chemicals:	SULFURIC ACID
Mix CAS:	7664939
Percentage:	Not reported
Weight Vol:	weight
Mix EHS:	true
Mix Last Modified Date:	2018-01-09

Location:

Type Code:	Battery
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Inside Main Building-Floor 1
Amount:	0
Amount Unit:	lbs

TIER 2:

Contact:

Contact Record ID:	CTTR2018353030P38202
Title:	Manager, Verizon EHS Department
Contact Name:	Irwin
Contact Email:	b.irwin@verizon.com
Contact Mail Address:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Tier II Information Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1900-01-01

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Contact:
Contact Record ID: CTTR2018142220P38202
Title: Not reported
Contact Name: Every 10 years
Contact Email: Not reported
Contact Mail Address: infrequent
Contact Mail Country: Not reported
Contact1 Type: Carrier Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1900-01-01

Contact:
Contact Record ID: CTTR2018353031P38202
Title: Property Manager
Contact Name: Corbett
Contact Email: james.j.corbett@verizon.com
Contact Mail Address: Not reported
Contact Mail Country: Not reported
Contact1 Type: Fac. Emergency Coordinator
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1900-01-01

Contact:
Contact Record ID: CTTR2018353025P38202
Title: Not reported
Contact Name: Not reported
Contact Email: Not reported
Contact Mail Address: Not reported
Contact Mail Country: US
Contact1 Type: Parent Company
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1900-01-01

Contact:
Contact Record ID: CTTR2018353032P38202
Title: Property Manager
Contact Name: Corbett
Contact Email: james.j.corbett@verizon.com
Contact Mail Address: Not reported
Contact Mail Country: Not reported
Contact1 Type: Emergency Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1900-01-01

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Contact:

Contact Record ID:	CTTR2018353027P38202
Title:	William Irwin
Contact Name:	Not reported
Contact Email:	Not reported
Contact Mail Address:	One Verizon Way, MC: 33E040F
Contact Mail Country:	Not reported
Contact1 Type:	Billing
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1900-01-01

Contact:

Contact Record ID:	CTTR2018353033P38202
Title:	Manager, Verizon EHS Department
Contact Name:	Center
Contact Email:	b.irwin@verizon.com
Contact Mail Address:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Emergency Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1900-01-01

Contact:

Contact Record ID:	CTTR2018353026P38202
Title:	Not reported
Contact Name:	Communications Inc
Contact Email:	b.irwin@verizon.com
Contact Mail Address:	One Verizon Way, MC: 33E040F
Contact Mail Country:	US
Contact1 Type:	Owner / Operator
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1900-01-01

Contact:

Contact Record ID:	CTTR2018353029P38202
Title:	Not reported
Contact Name:	Not reported
Contact Email:	Not reported
Contact Mail Address:	52 SUMMER ST
Contact Mail Country:	US
Contact1 Type:	Other
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1900-01-01

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Facility ID:	FATR2013MA593407
Name:	VERIZON MANCHESTER CO (VZ- MA593407)
Address:	52 SUMMER ST
City,State,Zip:	MANCHESTER, MA 01944
Country:	US
Mailing Address:	2 Hampshire Street, 3rd Floor
Mailing City,State,Zip:	Lawrence, MA 01840
Mailing Country:	US
Report Year:	2013
All Chemicals Same As Last Year:	N
Longitude:	-70.7664
Date Signed:	1/3/2014
Notes:	Not reported
Dike Or Other Safeguard:	Not reported
Latitude:	42.5769
Facility Dept:	Not reported
Failed Validation:	Not reported
Date Modified:	08/25/2014
Fees Total:	Not reported
Number of Employees:	0
Site Coord Abbreviated?:	Not reported
Site Map:	Not reported
State Label Code:	MA2013
Submitted By:	William Irwin - Manager, Global EH&S Compliance
Validation Report:	Not reported
Fire District:	MANCHESTER Fire Department ID: 4655
Latlong Location Description:	Not reported
Latlong Method:	Not reported
LEPC Name:	Not reported
Facility Status:	Not reported
Latest Report:	Not reported
EHS Above TPQ:	Not reported

TIER 2:

Record Key:	MA593407DB
ID:	107212169
Type:	Dun & Bradstreet
Description:	Not reported
Last Modified:	1/3/2014
Record Key:	MA593407EIN
ID:	232259884
Type:	EIN #
Description:	Not reported
Last Modified:	1/3/2014
Record Key:	MA593407NCS
ID:	517110
Type:	NAICS
Description:	Not reported
Last Modified:	1/3/2014
Record Key:	MA593407SIC
ID:	4813
Type:	SIC
Description:	TELEPHONE COM, EXCEPT RADIO
Last Modified:	1/3/2014

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Chemcials:

Acute:	T
Average Amount:	14592
Average Amount Code:	06
Chem Inv Record ID:	MA59340791443
Chem Same As Last Year:	N
Chronic:	T
CICAS:	7664-93-9
CI EHS Chemical:	T
CI Last Modified:	8/25/2014
Days On Site:	365
Entered Chemical Name:	LEAD ACID BATTERIES
Fire:	T
Gas:	F
Liquid:	T
Max Amount:	14592
Max Amount Code:	06
Max Amount Container:	304
Mixture:	T
Pressure:	F
Pure:	F
Reactive:	T
Solid:	T
State01 Checkbox:	T
State01 Number:	500.00
State01 Text:	Not reported
State02 Checkbox:	Not reported
State02 Number:	0.00
State02 Text:	Year
State03 Checkbox:	Not reported
State03 Number:	12000.00
State03 Text:	Not reported
State04 Checkbox:	Not reported
State04 Number:	7200.00
State04 Text:	Solid
State05 Checkbox:	Not reported
State05 Text:	Not reported
State06 Checkbox:	Not reported
State06 Text:	Not reported
State07 Checkbox:	Not reported
State07 Text:	from I95 to Rt 128N to SCHOOL ST toward MANCHESTER/MAGNOLIA to LINCOLN St to NORWOOD AVE to BROOK ST to ALLEN AVE to SUMMER ST(RT-127)
State Label Code:	MA2013
Trade Secret:	Not reported

Chemical Mixture:

Mix Chemicals:	SULFURIC ACID
Mix CAS:	7664-93-9
Percentage:	8.15
Weight Vol:	Wt
Mix EHS:	T
Mix Last Modified Date:	8/25/2014

Location:

Type Code:	Other
Pressure Code:	Ambient pressure

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Temperature Code:	Ambient temperature
Location:	Floor 1
Amount:	14592
Amount Unit:	pounds

TIER 2:

Contact:

Contact Record ID:	CTTR201336537
Title:	Property Manager
Contact Name:	Corbett
Contact Email:	james.j.corbett@verizon.com
Contact Mail Address:	33 Green St
Contact Mail Country:	US
Contact1 Type:	Emergency Contact
Contact2 Type:	Fac. Emergency Coordinator
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	8/25/2014

Contact:

Contact Record ID:	CTTR2013MA
Title:	- Manager, Global EH&S Compliance
Contact Name:	Irwin
Contact Email:	b.irwin@verizon.com
Contact Mail Address:	2 Hampshire Street, 3rd Floor
Contact Mail Country:	US
Contact1 Type:	Owner / Operator
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	8/25/2014

Contact:

Contact Record ID:	CTTR2013MAE
Title:	Manager
Contact Name:	Service Center
Contact Email:	b.irwin@verizon.com
Contact Mail Address:	2 Hampshire Street, 3rd Floor
Contact Mail Country:	US
Contact1 Type:	Emergency Contact
Contact2 Type:	Tier II Information Contact
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	8/25/2014

Facility ID:	FATR2017000000032013
Name:	VERIZON MANCHESTER CO (VZ- MA593407)
Address:	52 SUMMER ST
City,State,Zip:	MANCHESTER, MA 01944
Country:	USA

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Mailing Address:	2 Hampshire Street, 3rd floor
Mailing City,State,Zip:	Lawrence, MA 01840
Mailing Country:	Not reported
Report Year:	2017
All Chemicals Same As Last Year:	Not reported
Longitude:	-70.76640
Date Signed:	1/9/2018
Notes:	Not reported
Dike Or Other Safeguard:	Not reported
Latitude:	42.57690
Facility Dept:	Not reported
Failed Validation:	Not reported
Date Modified:	06/28/2018
Fees Total:	Not reported
Number of Employees:	0
Site Coord Abbreviated?:	Not reported
Site Map:	Not reported
State Label Code:	MA2017
Submitted By:	William Irwin, Manager, Global EH&S Compliance
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
LEPC Name:	Not reported
Facility Status:	Not reported
Latest Report:	Not reported
EHS Above TPQ:	Not reported

TIER 2:

Record Key:	FDTR2017000000037396
ID:	Not reported
Type:	RMP
Description:	RMP
Last Modified:	Not reported
Record Key:	FDTR2017000000037397
ID:	Not reported
Type:	State ID
Description:	State ID
Last Modified:	Not reported
Record Key:	FDTR2017000000037398
ID:	Not reported
Type:	TRI
Description:	TRI
Last Modified:	Not reported
Record Key:	FDTR2017000000037399
ID:	107212169
Type:	DUN & BradStreet
Description:	DUN & BradStreet
Last Modified:	Not reported
Record Key:	FDTR2017000000037400
ID:	232259884
Type:	EIN
Description:	EIN
Last Modified:	Not reported

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Record Key:	FDTR2017000000037401
ID:	4813
Type:	SIC
Description:	SIC
Last Modified:	Not reported

Record Key:	FDTR2017000000037402
ID:	517311
Type:	NAICS
Description:	Not reported
Last Modified:	Not reported

Record Key:	FDTR2017000000037403
ID:	8601
Type:	T2M Facility ID
Description:	T2M Facility ID
Last Modified:	Not reported

Chemcials:

Acute:	T
Average Amount:	14592.00
Average Amount Code:	6
Chem Inv Record ID:	CVTR2017000000121217
Chem Same As Last Year:	Not reported
Chronic:	Not reported
CICAS:	Not reported
CI EHS Chemical:	Yes
CI Last Modified:	6/28/2018
Days On Site:	365
Entered Chemical Name:	Lead Acid Batteries
Fire:	Not reported
Gas:	Not reported
Liquid:	T
Max Amount:	14592.00
Max Amount Code:	6
Max Amount Container:	1.459200000000000e+004
Mixture:	T
Pressure:	Not reported
Pure:	Not reported
Reactive:	Not reported
Solid:	T
State01 Checkbox:	T
State01 Number:	0
State01 Text:	Stationary batteries that remain onsite
State02 Checkbox:	Not reported
State02 Number:	0
State02 Text:	Year
State03 Checkbox:	Not reported
State03 Number:	0
State03 Text:	Not reported
State04 Checkbox:	Not reported
State04 Number:	0
State04 Text:	Solid
State05 Checkbox:	Not reported
State05 Text:	Not reported
State06 Checkbox:	Not reported
State06 Text:	Not reported

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

State07 Checkbox: T
State07 Text: No shipments received this year
State Label Code: MA2017
Trade Secret: Not reported

Chemical Mixture:
Mix Chemicals: SULFURIC ACID
Mix CAS: 7664939
Percentage: 8.10
Weight Vol: Wt
Mix EHS: Not reported
Mix Last Modified Date: Not reported

Location:
Type Code: Battery
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: Inside Main Building-Floor 1
Amount: 0
Amount Unit: lbs

TIER 2:

Contact:
Contact Record ID: CTTR2017121217P32013
Title: Not reported
Contact Name: Every 10 years
Contact Email: Not reported
Contact Mail Address: infrequent
Contact Mail Country: Not reported
Contact1 Type: Carrier Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1/1/1900

Contact:
Contact Record ID: CTTR2017295774P32013
Title: Property Manager
Contact Name: Corbett
Contact Email: james.j.corbett@verizon.com
Contact Mail Address: Not reported
Contact Mail Country: Not reported
Contact1 Type: Emergency Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1/1/1900

Contact:
Contact Record ID: CTTR2017295773P32013
Title: Property Manager
Contact Name: Corbett

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Contact Email:	james.j.corbett@verizon.com
Contact Mail Address:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Fac. Emergency Coordinator
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Contact Record ID:	CTTR2017295769P32013
Title:	Not reported
Contact Name:	Not reported
Contact Email:	Not reported
Contact Mail Address:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Billing
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Contact Record ID:	CTTR2017295771P32013
Title:	Not reported
Contact Name:	Not reported
Contact Email:	Not reported
Contact Mail Address:	52 SUMMER ST
Contact Mail Country:	US
Contact1 Type:	Other
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Contact Record ID:	CTTR2017295767P32013
Title:	Not reported
Contact Name:	Not reported
Contact Email:	Not reported
Contact Mail Address:	Not reported
Contact Mail Country:	US
Contact1 Type:	Parent Company
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Contact Record ID:	CTTR2017295775P32013
Title:	Manager

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Contact Name:	Serivce Center
Contact Email:	b.irwin@verizon.com
Contact Mail Address:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Emergency Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Contact Record ID:	CTTR2017295772P32013
Title:	Manager, Global EH&S Compliance
Contact Name:	Irwin
Contact Email:	b.irwin@verizon.com
Contact Mail Address:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Tier II Information Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Contact Record ID:	CTTR2017295768P32013
Title:	Not reported
Contact Name:	Verizon Communications, Inc.
Contact Email:	b.irwin@verizon.com
Contact Mail Address:	2 Hampshire Street, 3rd Floor
Contact Mail Country:	US
Contact1 Type:	Owner / Operator
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Facility ID:	FATR2016000000027788
Name:	VERIZON MANCHESTER CO (VZ- MA593407)
Address:	52 SUMMER ST
City,State,Zip:	MANCHESTER, MA 01944
Country:	USA
Mailing Address:	2 Hampshire Street; 3rd floor
Mailing City,State,Zip:	Lawrence, MA 01840
Mailing Country:	United States
Report Year:	2016
All Chemicals Same As Last Year:	Not reported
Longitude:	-70.76640
Date Signed:	02/03/2017
Notes:	Not reported
Dike Or Other Safeguard:	F
Latitude:	42.57690
Facility Dept:	Not reported

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Failed Validation:	Not reported
Date Modified:	08/08/2017
Fees Total:	Not reported
Number of Employees:	0
Site Coord Abbreviated?:	F
Site Map:	F
State Label Code:	Not reported
Submitted By:	William Irwin
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
LEPC Name:	Not reported
Facility Status:	Not reported
Latest Report:	Not reported
EHS Above TPQ:	Not reported

TIER 2:

Record Key:	FDTR2016000000020343
ID:	Not reported
Type:	RMP
Description:	RMP
Last Modified:	Not reported
Record Key:	FDTR2016000000020344
ID:	Not reported
Type:	State ID
Description:	State ID
Last Modified:	Not reported
Record Key:	FDTR2016000000020345
ID:	Not reported
Type:	TRI
Description:	TRI
Last Modified:	Not reported
Record Key:	FDTR2016000000020346
ID:	107212169
Type:	DUN & BradStreet
Description:	DUN & BradStreet
Last Modified:	Not reported
Record Key:	FDTR2016000000020347
ID:	232259884
Type:	EIN
Description:	EIN
Last Modified:	Not reported
Record Key:	FDTR2016000000020348
ID:	4813
Type:	SIC
Description:	SIC
Last Modified:	Not reported
Record Key:	FDTR2016000000020349
ID:	517110
Type:	NAICS
Description:	Wired Telecommunications Carriers

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Last Modified: Not reported

TIER 2:

Contact:
Contact Record ID: CTTR2016255722P27788
Title: Manager
Contact Name: Serivce Center
Contact Email: b.irwin@verizon.com
Contact Mail Address: Not reported
Contact Mail Country: Not reported
Contact1 Type: Emergency Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Contact Record ID: CTTR2016255718P27788
Title: Not reported
Contact Name: Not reported
Contact Email: Not reported
Contact Mail Address: 52 SUMMER ST
Contact Mail Country: US
Contact1 Type: Other
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Contact Record ID: CTTR2016255715P27788
Title: Not reported
Contact Name: Communications; Inc.
Contact Email: b.irwin@verizon.com
Contact Mail Address: 2 Hampshire Street; 3rd Floor
Contact Mail Country: US
Contact1 Type: Owner / Operator
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Contact Record ID: CTTR2016255721P27788
Title: Property Manager
Contact Name: Corbett
Contact Email: james.j.corbett@verizon.com
Contact Mail Address: Not reported
Contact Mail Country: Not reported
Contact1 Type: Emergency Contact
Contact2 Type: Not reported
Contact3 Type: Not reported

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Contact Record ID: CTTR2016255714P27788
Title: Not reported
Contact Name: Not reported
Contact Email: Not reported
Contact Mail Address: Not reported
Contact Mail Country: US
Contact1 Type: Parent Company
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Contact Record ID: CTTR2016255720P27788
Title: Property Manager
Contact Name: Corbett
Contact Email: james.j.corbett@verizon.com
Contact Mail Address: Not reported
Contact Mail Country: Not reported
Contact1 Type: Fac. Emergency Coordinator
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Contact Record ID: CTTR2016255719P27788
Title: Manager; Global EH&S Compliance
Contact Name: Irwin
Contact Email: b.irwin@verizon.com
Contact Mail Address: Not reported
Contact Mail Country: Not reported
Contact1 Type: Tier II Information Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Contact Record ID: CTTR2016105600P27788
Title: Not reported
Contact Name: Every 10 years
Contact Email: Not reported
Contact Mail Address: infrequent
Contact Mail Country: Not reported
Contact1 Type: Carrier Contact
Contact2 Type: Not reported

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	Not reported

Contact:

Contact Record ID:	CTTR2016255716P27788
Title:	Not reported
Contact Name:	Not reported
Contact Email:	Not reported
Contact Mail Address:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Billing
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	Not reported

Facility ID:	FATR2015000000008601
Name:	VERIZON MANCHESTER CO (VZ- MA593407)
Address:	52 SUMMER ST
City,State,Zip:	MANCHESTER, MA 01944
Country:	USA
Mailing Address:	2 Hampshire Street; 3rd floor
Mailing City,State,Zip:	Lawrence, MA 01840
Mailing Country:	United States
Report Year:	2015
All Chemicals Same As Last Year:	Not reported
Longitude:	-70.7664
Date Signed:	01/14/2016
Notes:	Not reported
Dike Or Other Safeguard:	F
Latitude:	42.5769
Facility Dept:	Not reported
Failed Validation:	Not reported
Date Modified:	05/19/2016
Fees Total:	Not reported
Number of Employees:	0
Site Coord Abbreviated?:	F
Site Map:	F
State Label Code:	Not reported
Submitted By:	Bill Irwin
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
LEPC Name:	Not reported
Facility Status:	Not reported
Latest Report:	Not reported
EHS Above TPQ:	Not reported

TIER 2:

Record Key:	86010000000001
ID:	Not reported
Type:	State ID

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Description: State ID
Last Modified: Not reported

Record Key: 86010000000002
ID: 517110
Type: NAICS
Description: Wired Telecommunications Carriers
Last Modified: Not reported

Record Key: 86010000000003
ID: 107212169
Type: DUN & BradStreet
Description: DUN & BradStreet
Last Modified: Not reported

Record Key: 86010000000004
ID: 4813
Type: SIC
Description: SIC
Last Modified: Not reported

Record Key: 86010000000005
ID: Not reported
Type: RMP
Description: RMP
Last Modified: Not reported

Record Key: 86010000000006
ID: 232259884
Type: EIN
Description: EIN
Last Modified: Not reported

Record Key: 86010000000007
ID: Not reported
Type: TRI
Description: TRI
Last Modified: Not reported

Chemcials:
Acute: T
Average Amount: 14592
Average Amount Code: 6
Chem Inv Record ID: 83102
Chem Same As Last Year: Not reported
Chronic: T
CICAS: Not reported
CI EHS Chemical: Yes
CI Last Modified: 2016-01-14T14:55:16.
Days On Site: 365
Entered Chemical Name: LEAD ACID BATTERIES
Fire: T
Gas: F
Liquid: T
Max Amount: 14592
Max Amount Code: 6
Max Amount Container: 304

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Mixture:	T
Pressure:	F
Pure:	F
Reactive:	T
Solid:	T
State01 Checkbox:	T
State01 Number:	500
State01 Text:	N/A
State02 Checkbox:	F
State02 Number:	0
State02 Text:	Year
State03 Checkbox:	F
State03 Number:	12000
State03 Text:	Not reported
State04 Checkbox:	F
State04 Number:	0
State04 Text:	Solid
State05 Checkbox:	F
State05 Text:	Not reported
State06 Checkbox:	F
State06 Text:	Not reported
State07 Checkbox:	F
State07 Text:	from I95 to Rt 128N to SCHOOL ST toward MANCHESTER/MAGNOLIA to LINCOLN St to NORWOOD AVE to BROOK ST to ALLEN AVE to SUMMER ST(RT-127)
State Label Code:	Not reported
Trade Secret:	F

Chemical Mixture:

Mix Chemicals:	SULFURIC ACID
Mix CAS:	7664939
Percentage:	8.15
Weight Vol:	Wt
Mix EHS:	T
Mix Last Modified Date:	Not reported

Location:

Type Code:	Other
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Floor 1
Amount:	14592
Amount Unit:	lbs

Facility ID:	FATR2014MA593407
Name:	VERIZON MANCHESTER CO (VZ- MA593407)
Address:	52 SUMMER ST
City,State,Zip:	MANCHESTER, MA 01944
Country:	USA
Mailing Address:	2 Hampshire Street, 3rd Floor
Mailing City,State,Zip:	Lawrence, MA 01840
Mailing Country:	US
Report Year:	2014
All Chemicals Same As Last Year:	N
Longitude:	-70.7664

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Date Signed:	1/3/2015
Notes:	Not reported
Dike Or Other Safeguard:	Not reported
Latitude:	42.5769
Facility Dept:	Not reported
Failed Validation:	Not reported
Date Modified:	04/03/2015
Fees Total:	Not reported
Number of Employees:	0
Site Coord Abbreviated?:	Not reported
Site Map:	Not reported
State Label Code:	MA2014
Submitted By:	William Irwin - Manager, Global EH&S Compliance
Validation Report:	Not reported
Fire District:	MANCHESTER Fire Department ID: 4655
Latlong Location Description:	Not reported
Latlong Method:	Not reported
LEPC Name:	Not reported
Facility Status:	Not reported
Latest Report:	Not reported
EHS Above TPQ:	Not reported

TIER 2:

Record Key:	MA593407DB
ID:	107212169
Type:	Dun & Bradstreet
Description:	Not reported
Last Modified:	1/3/2015
Record Key:	MA593407EIN
ID:	232259884
Type:	EIN #
Description:	Not reported
Last Modified:	1/3/2015
Record Key:	MA593407NCS
ID:	517110
Type:	NAICS
Description:	Not reported
Last Modified:	1/3/2015
Record Key:	MA593407SIC
ID:	4813
Type:	SIC
Description:	TELEPHONE COM, EXCEPT RADIO
Last Modified:	1/3/2015

Chemcials:

Acute:	T
Average Amount:	14592
Average Amount Code:	06
Chem Inv Record ID:	MA59340791443
Chem Same As Last Year:	N
Chronic:	T
CICAS:	7664-93-9
CI EHS Chemical:	T
CI Last Modified:	1/5/2015

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Days On Site:	365
Entered Chemical Name:	LEAD ACID BATTERIES
Fire:	T
Gas:	F
Liquid:	T
Max Amount:	14592
Max Amount Code:	06
Max Amount Container:	304
Mixture:	T
Pressure:	F
Pure:	F
Reactive:	T
Solid:	T
State01 Checkbox:	T
State01 Number:	500.00
State01 Text:	Not reported
State02 Checkbox:	Not reported
State02 Number:	0.00
State02 Text:	Year
State03 Checkbox:	Not reported
State03 Number:	12000.00
State03 Text:	Not reported
State04 Checkbox:	Not reported
State04 Number:	7200.00
State04 Text:	Solid
State05 Checkbox:	Not reported
State05 Text:	Not reported
State06 Checkbox:	Not reported
State06 Text:	Not reported
State07 Checkbox:	Not reported
State07 Text:	from I95 to Rt 128N to SCHOOL ST toward MANCHESTER/MAGNOLIA to LINCOLN St to NORWOOD AVE to BROOK ST to ALLEN AVE to SUMMER ST(RT-127)
State Label Code:	MA2014
Trade Secret:	Not reported

Chemical Mixture:

Mix Chemicals:	SULFURIC ACID
Mix CAS:	7664-93-9
Percentage:	8.15
Weight Vol:	Wt
Mix EHS:	T
Mix Last Modified Date:	1/5/2015

Location:

Type Code:	Other
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Floor 1
Amount:	14592
Amount Unit:	pounds

TIER 2:

Contact:

Contact Record ID:	CTTR201436537

VERIZON MASSACHUSETTS #593407 (Continued) **U003654523**

Title:	Property Manager
Contact Name:	Corbett
Contact Email:	james.j.corbett@one.verizon.com
Contact Mail Address:	33 Green St
Contact Mail Country:	US
Contact1 Type:	Emergency Contact
Contact2 Type:	Fac. Emergency Coordinator
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/5/2015

Contact:

Contact Record ID:	CTTR2014MA
Title:	- Manager, Global EH&S Compliance
Contact Name:	Irwin
Contact Email:	b.irwin@verizon.com
Contact Mail Address:	2 Hampshire Street, 3rd Floor
Contact Mail Country:	US
Contact1 Type:	Owner / Operator
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/5/2015

Contact:

Contact Record ID:	CTTR2014MAE
Title:	Manager
Contact Name:	Service Center
Contact Email:	b.irwin@verizon.com
Contact Mail Address:	2 Hampshire Street, 3rd Floor
Contact Mail Country:	US
Contact1 Type:	Emergency Contact
Contact2 Type:	Tier II Information Contact
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/5/2015

E13 **MANCHESTER ESSEX REGIONAL SCHOOLS** **E MANIFEST** **1032161813**
NNW **36 LINCON ST** **N/A**
1/8-1/4 **MANCHESTER BY THE SEA, MA 01944**
0.141 mi.
742 ft. **Site 1 of 2 in cluster E**

Relative:
Higher

Actual:
39 ft.

E MANIFEST:

Manifest Tracking Number:	023163111JJK
Last Updated Date:	20220919
Shipped Date:	20220819
Received Date:	20220907
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MV9785262055
Generator Name:	Manchester Essex Regional Schools

MANCHESTER ESSEX REGIONAL SCHOOLS (Continued) **1032161813**

Generator Location Street Number:	Not reported
Generator Location Street 1:	36 LINCON ST
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER BY THE SEA
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	6 SHIRE DR
Generator Mail Street 2:	Not reported
Generator Mail City:	NORFOLK
Generator Mail Zip:	02056
Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	NJD002200046
Designated Facility Name:	Cycle Chem, Inc.
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	217 SOUTH FIRST STREET
Designated Facility Mail City:	ELIZABETH
Designated Facility Mail Zip:	07206
Designated Facility Mail State:	NJ
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	217 SOUTH FIRST STREET
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	ELIZABETH
Designated Facility Location Zip:	07206
Designated Facility Location State:	NJ
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Transporter:

Manifest Tracking Number:	023163111JJK
Transporter Line Number:	1
Transporter EPA ID:	NJD003812047
Transporter Name:	Acv Environmental Services, Inc

Waste Line:

Manifest Tracking Number:	023163111JJK
Waste Line Number:	1
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN1950
U.S. DOT Description:	Rq, Un1950, Waste Aerosols, 2.1
Non-Hazardous Waste Description:	Not reported
Number of Containers:	2
Container Type Code:	CF
Container Type Description:	Fiber or plastic boxes, cartons, cases
Waste Quantity:	113
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.0565
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.0565
Waste Quantity, in Kilograms:	51.247196
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	51.247196

MANCHESTER ESSEX REGIONAL SCHOOLS (Continued) **1032161813**

Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D001
Quantity Haz Kg:	51.247196
Quantity Haz Tons:	0.0565
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0
State Waste Codes:	Not reported
Manifest Tracking Number:	023163111JJK
Waste Line Number:	2
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN3266
U.S. DOT Description:	Rq, Un3266, Waste Corrosive Liquid, Basic, Inorganic, N.O.S. (Sodium Hydroxide, Potassium Hydroxide), 8 , Ii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	312
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.156
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.156
Waste Quantity, in Kilograms:	141.49669
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	141.49669
Management Method Code:	H121
Management Method Description:	NEUTRALIZATION ONLY
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported

MANCHESTER ESSEX REGIONAL SCHOOLS (Continued) **1032161813**

EPA Waste Indicator: Y
Federal Waste Codes: D002
Quantity Haz Kg: 141.49669
Quantity Haz Tons: 0.156
Quantity Non Haz Kg: 0
Quantity Non Haz Tons: 0
State Waste Codes: Not reported

Manifest Tracking Number: 023163111JJK
Waste Line Number: 3
U.S. DOT Hazardous Indicator: Y
U.S. DOT ID Number: UN1993
U.S. DOT Description: Rq, Un1993, Waste Flammable Liquids, N.O.S. (Xylene, Toluene), 3 , Ii
Non-Hazardous Waste Description: Not reported
Number of Containers: 1
Container Type Code: CF
Container Type Description: Fiber or plastic boxes, cartons, cases
Waste Quantity: 208
Quantity Unit of Measure Code: P
Quantity Unit of Measure Description: Pounds
Waste Quantity, in Tons: 0.104
Acute Waste Quantity, in Tons: 0
Non-Acute Waste Quantity, in Tons: 0.104
Waste Quantity, in Kilograms: 94.33112
Acute Waste Quantity, in Kilograms: 0
Non-Acute Waste Quantity, in Kilorgrams: 94.33112
Management Method Code: H061
Management Method Description: FUEL BLENDING
Waste Residue Indicator: N
Quantity Discrepancy Indicator: N
Waste Type Discrepancy Indicator: N
Waste Density: Not reported
Waste Density Unit of Measure Code: Not reported
Waste Density Unit of Measure Description: Not reported
Form Code: Not reported
Form Code Description: Not reported
Source Code: Not reported
Source Code Description: Not reported
Waste Minimization Code: Not reported
Waste Minimization Code Description: Not reported
Consent Number: Not reported
EPA Waste Indicator: Y
Federal Waste Codes: D001, D018, D035, D038, F003, F005
Quantity Haz Kg: 94.33112
Quantity Haz Tons: 0.104
Quantity Non Haz Kg: 0
Quantity Non Haz Tons: 0
State Waste Codes: Not reported

Manifest Tracking Number: 023163111JJK
Waste Line Number: 4
U.S. DOT Hazardous Indicator: N
U.S. DOT ID Number: Not reported
U.S. DOT Description: Not reported
Non-Hazardous Waste Description: Non Dot Regulated-Universal Waste Mercury Containing Lamps (4ft Tubes)
Number of Containers: 8
Container Type Code: CF

MANCHESTER ESSEX REGIONAL SCHOOLS (Continued) **1032161813**

Container Type Description:	Fiber or plastic boxes, cartons, cases
Waste Quantity:	767
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.3835
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.3835
Waste Quantity, in Kilograms:	347.84604
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	347.84604
Management Method Code:	Not reported
Management Method Description:	Not reported
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	347.84604
Quantity Non Haz Tons:	0.3835
State Waste Codes:	Not reported

Manifest Tracking Number:	023163111JJK
Waste Line Number:	5
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported
U.S. DOT Description:	Not reported
Non-Hazardous Waste Description:	Non Rcra Non Dot Regulated Material (Resins, Latex)
Number of Containers:	5
Container Type Code:	CF
Container Type Description:	Fiber or plastic boxes, cartons, cases
Waste Quantity:	5025
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	2.5125
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	2.5125
Waste Quantity, in Kilograms:	2278.913
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	2278.913
Management Method Code:	Not reported
Management Method Description:	Not reported
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported

MANCHESTER ESSEX REGIONAL SCHOOLS (Continued) **1032161813**

Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	2278.913
Quantity Non Haz Tons:	2.5125
State Waste Codes:	Not reported

Manifest Tracking Number:	023163111JJK
Waste Line Number:	6
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN1993
U.S. DOT Description:	Rq, Un1993, Waste Flammable Liquids, N.O.S. (Xylene, Toluene), 3 , Ii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	CF
Container Type Description:	Fiber or plastic boxes, cartons, cases
Waste Quantity:	1011
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.5055
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.5055
Waste Quantity, in Kilograms:	458.5037
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	458.5037
Management Method Code:	H061
Management Method Description:	FUEL BLENDING
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D001, D018, D035, D038, F003, F005
Quantity Haz Kg:	458.5037
Quantity Haz Tons:	0.5055
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0
State Waste Codes:	Not reported

MANCHESTER ESSEX REGIONAL SCHOOLS (Continued) **1032161813**

Manifest Tracking Number:	023163111JJK
Waste Line Number:	7
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN1334
U.S. DOT Description:	Un1334, Waste Naphthalene, Crude, 4.1 , Iii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	7
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.0035
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.0035
Waste Quantity, in Kilograms:	3.1746051
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	3.1746051
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D001, U165
Quantity Haz Kg:	3.1746051
Quantity Haz Tons:	0.0035
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0
State Waste Codes:	Not reported

Manifest Tracking Number:	023163111JJK
Waste Line Number:	8
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN3098
U.S. DOT Description:	Un3098, Waste Oxidizing Liquid, Corrosive, N.O.S. (Hydrogen Peroxide, Strontium Nitrate), 5.1 (8), Iii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	13
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.0065
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.0065

MANCHESTER ESSEX REGIONAL SCHOOLS (Continued) **1032161813**

Waste Quantity, in Kilograms:	5.895695
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	5.895695
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D001, D002
Quantity Haz Kg:	5.895695
Quantity Haz Tons:	0.0065
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0
State Waste Codes:	Not reported

Manifest Tracking Number:	023163111JJK
Waste Line Number:	9
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN1428
U.S. DOT Description:	Un1428, Waste Sodium, 4.3 , I
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	6
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.003
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.003
Waste Quantity, in Kilograms:	2.72109
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	2.72109
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported

MANCHESTER ESSEX REGIONAL SCHOOLS (Continued) **1032161813**

Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D001, D003
Quantity Haz Kg:	2.72109
Quantity Haz Tons:	0.003
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0
State Waste Codes:	Not reported
Manifest Tracking Number:	023163111JJK
Waste Line Number:	10
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN3288
U.S. DOT Description:	Un3288, Waste Toxic Solid, Inorganic, N.O.S. (Cobalt Chloride, Lead Chloride), 6.1 , Ii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	23
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.0115
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.0115
Waste Quantity, in Kilograms:	10.430845
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	10.430845
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D008, D009, D022, U044
Quantity Haz Kg:	10.430845
Quantity Haz Tons:	0.0115
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0
State Waste Codes:	Not reported
Manifest Tracking Number:	023163111JJK
Waste Line Number:	11
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported
U.S. DOT Description:	Not reported

MANCHESTER ESSEX REGIONAL SCHOOLS (Continued) **1032161813**

Non-Hazardous Waste Description:	Un3082, Environmentally Hazardous Substances, Liquid, N.O.S. (Potassium Ferrocyanide, Ammonium Ferrocyanide), 9 , Iii
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	11
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.0055
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.0055
Waste Quantity, in Kilograms:	4.988665
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	4.988665
Management Method Code:	Not reported
Management Method Description:	Not reported
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	4.988665
Quantity Non Haz Tons:	0.0055
State Waste Codes:	Not reported
Manifest Tracking Number:	023163111JJK
Waste Line Number:	12
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN3261
U.S. DOT Description:	Un3261, Waste Corrosive Solid, Acidic, Organic, N.O.S. (Sulfonic Acid, Benzesulfonic Acid), 8 , Ii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	17
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.0085
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.0085
Waste Quantity, in Kilograms:	7.709756
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	7.709756
Management Method Code:	H061

MANCHESTER ESSEX REGIONAL SCHOOLS (Continued) **1032161813**

Management Method Description:	FUEL BLENDING
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D002
Quantity Haz Kg:	7.709756
Quantity Haz Tons:	0.0085
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0
State Waste Codes:	Not reported

Manifest Tracking Number:	023163111JJK
Waste Line Number:	13
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN3266
U.S. DOT Description:	Rq, Un3266, Waste Corrosive Liquid, Basic, Inorganic, N.O.S. (Sodium Hydroxide, Potassium Hydroxide), 8 , Ii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	47
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.0235
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.0235
Waste Quantity, in Kilograms:	21.315205
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	21.315205
Management Method Code:	H121
Management Method Description:	NEUTRALIZATION ONLY
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y

MANCHESTER ESSEX REGIONAL SCHOOLS (Continued) **1032161813**

Federal Waste Codes:	D002
Quantity Haz Kg:	21.315205
Quantity Haz Tons:	0.0235
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0
State Waste Codes:	Not reported

E14 **MANCHESTER ESSEX REGIONAL SCHOOLS** **HW GEN** **S113411398**
NNW **36 LINCOLN ST** **N/A**
1/8-1/4 **MANCHESTER BY THE SEA, MA 01944**
0.141 mi.
742 ft. **Site 2 of 2 in cluster E**

Relative: **Higher**
Actual: **39 ft.**

HW GEN:

Name:	MANCHESTER ESSEX REGIONAL SCHOOLS
Address:	36 LINCOLN ST
City,State,Zip:	MANCHESTER BY THE SEA, MA 01944
EPA Id:	MV9785262055
RCRA Generator Status:	VSQG
State Generator Status:	Not reported

D15 **PRIVATE PROPERTY** **SHWS** **S112553877**
SSW **50 SUMMER STREET** **LUST** **N/A**
1/8-1/4 **MANCHESTER, MA 01944** **RELEASE**
0.153 mi. **HW GEN**
807 ft. **Site 3 of 5 in cluster D** **TIER 2**

Relative: **Higher**
Actual: **37 ft.**

SHWS:

Name:	PRIVATE PROPERTY
Address:	50 SUMMER STREET
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0036319
Source Type:	TANK
Release Town:	MANCHESTER
Notification Date:	06/11/2020
Category:	72 HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	10/09/2020
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Not reported

LUST:

Facility:

Name:	PRIVATE PROPERTY
Address:	50 SUMMER STREET
City,State,Zip:	MANCHESTER, MA 019440000
Current Status:	**Permanent Solution with No Conditions**
Release Tracking Number/Current Status:	3-0036319 / PSNC
Status Date:	10/09/2020
Source Type:	UST
Release Town:	MANCHESTER
Notification Date:	06/11/2020
Category:	72 HR

PRIVATE PROPERTY (Continued) **S112553877**

Associated ID: Not reported
Phase: Not reported
Response Action Outcome: PN - PN
Oil Or Haz Material: Not reported

Location Type: PRIVPROP
Source: TANK
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 948 parts per million

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 10/15/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 10/9/2020
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 10/9/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 3/30/2021
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/11/2020
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/11/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/15/2021
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/30/2020
Response Action Outcome: PN

PRIVATE PROPERTY (Continued) **S112553877**

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 8/10/2020
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/6/2020
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/7/2020
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 9/28/2020
Response Action Outcome: PN

Release:
Name: PRIVATE PROPERTY
Address: 50 SUMMER STREET
City,State,Zip: MANCHESTER, MA 019440000
Release Tracking Number/Current Status: 3-0036319 / PSNC
Primary ID: Not reported
Official City: MANCHESTER
Notification: 06/11/2020
Category: 72 HR
Status Date: 10/09/2020
Phase: Not reported
Response Action Outcome: PN - PN
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 10/15/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 10/9/2020
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 10/9/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 3/30/2021

PRIVATE PROPERTY (Continued) **S112553877**

Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/11/2020
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/11/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/15/2021
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/30/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 8/10/2020
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/6/2020
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/7/2020
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 9/28/2020
Response Action Outcome: PN

Chemicals:
Chemical: GASOLINE
Quantity: 948 parts per million
Location Type: PRIVPROP
Source: TANK
Source: UST

HW GEN:
Name: CRICKET PRESS INC
Address: 50 SUMMER ST
City,State,Zip: MANCHESTER BY THE SEA, MA 01944
EPA Id: MAR000007039
RCRA Generator Status: VSQG
State Generator Status: SQG-MA

PRIVATE PROPERTY (Continued) **S112553877**

TIER 2:

Facility ID:	8601
Name:	VERIZON MANCHESTER CO (MA593407)
Address:	50R SUMMER ST
City,State,Zip:	MANCHESTER-BY-THE-SEA, MA 01944
Country:	Not reported
Mailing Address:	Not reported
Mailing City,State,Zip:	Not reported
Mailing Country:	Not reported
Report Year:	2023
All Chemicals Same As Last Year:	Not reported
Longitude:	Not reported
Date Signed:	Not reported
Notes:	Not reported
Dike Or Other Safeguard:	Not reported
Latitude:	Not reported
Facility Dept:	Not reported
Failed Validation:	Not reported
Date Modified:	Not reported
Fees Total:	Not reported
Number of Employees:	Not reported
Site Coord Abbreviated?:	Not reported
Site Map:	Not reported
State Label Code:	Not reported
Submitted By:	Not reported
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
LEPC Name:	Not reported
Facility Status:	ACTIVE
Latest Report:	2023 Tier II Report Annual (01/22/2024)
EHS Above TPQ:	Yes

D16 **CRICKET PRESS** **PFAS ECHO** **1027347764**
SSW **50 SUMMER STREET** **N/A**
1/8-1/4 **MANCHESTER, MA 01944**
0.153 mi.
807 ft. **Site 4 of 5 in cluster D**

Relative:
Higher

Actual:
37 ft.

PFAS ECHO:

Facility ID:	110002016112
Name:	Cricket Press
Address:	50 SUMMER STREET
City,State,Zip:	MANCHESTER, MA 01944
Latitude:	42.57627
Longitude:	-70.76622
Count:	1
County:	ESSEX
Status:	Active
Region:	01
Industry:	Printing

ECHO Facility Report:

Facility Percent Minority:	4.339
Facility Derived Tribes:	-
Facility Population:	526.36

CRICKET PRESS (Continued) **1027347764**

EPA Programs:	CAA; RCRA
Federal Facility:	No
Federal Agency:	-
Facility FIPS Code:	25009
Facility Indian Country Flag:	N
Facility Collection Method:	ADDRESS MATCHING-HOUSE NUMBER
Facility Derived HUC:	01090001
Facility Derived WBD:	010900010301
Facility Derived CD113:	06
Facility Derived CB2010:	250092181003001
Facility Major Flag:	-
Facility Active Flag:	Y
Facility Inspection Count:	0
Facility Date Last Inspection:	3/11/2008
Facility Days Last Inspection:	6,311
Facility Informal Count:	0
Facility Date Last Informal Action:	4/15/2008
Facility Formal Action Count:	0
Facility Date Last Formal Action:	-
Facility Total Penalties:	0
Facility Penalty Count:	-
Facility Date Last Penalty:	-
Facility Last Penalty AMT:	0
Facility QTRS With NC:	0
Facility Programs With SNC:	0
Facility Compliance Status:	No Violation Identified
Facility SNC Flag:	N
AIR Flag:	Y
NPDES Flag:	N
SDWIS Flag:	N
RCRA Flag:	Y
TRI Flag:	N
GHG Flag:	N
AIR IDS:	MA0000002511901343
CAA Permit Types:	Minor Emissions
CAA NAICS:	323122
CAA SICS:	2795
NPDES IDS:	-
CWA Permit Types:	-
CWA NAICS:	-
CWA SICS:	-
RCRA IDS:	MAR000007039
RCRA Permit Types:	Other
RCRA NAICS:	32311
SDWA IDS:	-
SDWA System Types:	-
SDWA Compliance Status:	-
SDWA SNC Flag:	N
TRI IDS:	-
TRI Releases Transfers:	-
TRI On Site Releases:	-
TRI Off Site Transfers:	-
TRI Reporter:	-
Facility IMP Water Flag:	-

D17 **L.A.D. COMPANIES INC.** **RCRA NonGen / NLR** **1001088103**
SSW **50 SUMMER ST.** **US AIRS** **MAR000007039**
1/8-1/4 **MANCHESTER, MA 01944** **FINDS**
0.153 mi. **ECHO**
807 ft. **Site 5 of 5 in cluster D** **E MANIFEST**

Relative: **Higher**
Actual: **37 ft.**

RCRA Listings:

Date Form Received by Agency:		19960328
Handler Name:		Cricket Press Inc
Handler Address:		50 Summer St
Handler City,State,Zip:		MANCHESTER, MA 01944
EPA ID:		MAR000007039
Contact Name:		PHILLIPS STEVENS
Contact Address:		50 SUMMER ST
Contact City,State,Zip:		MANCHESTER, MA 01944
Contact Telephone:		508-526-7131
Contact Fax:		Not reported
Contact Email:		Not reported
Contact Title:		Not reported
EPA Region:		01
Land Type:		Private
Federal Waste Generator Description:		Not a generator, verified
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Not reported
State District Owner:		Ma
State District:		N
Mailing Address:		50 SUMMER ST
Mailing City,State,Zip:		MANCHESTER BY THE SEA, MA 01944-0000
Owner Name:	Harry Slade & Danial Slade	
Owner Type:		Private
Operator Name:	Cricket Press Inc	
Operator Type:		Private
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		No
Universal Waste Destination Facility:		No
Federal Universal Waste:		No
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		N
Sub-Part K Indicator:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
202 GPRA Corrective Action Baseline:		No
Subject to Corrective Action Universe:		No
Non-TSDFs Where RCRA CA has Been Imposed Universe:		No
Corrective Action Priority Ranking:		No NCAPS ranking
Environmental Control Indicator:		No
Institutional Control Indicator:		No

L.A.D. COMPANIES INC. (Continued) **1001088103**

Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20171020
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	Ignitable Waste
Waste Code:	D011
Waste Description:	Silver

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	HARRY SLADE & DANIAL SLADE
Legal Status:	Private
Date Became Current:	20041016
Date Ended Current:	Not reported
Owner/Operator Address:	50 SUMMER ST
Owner/Operator City,State,Zip:	MANCHESTER, MA 01944
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	CRICKET PRESS INC
Legal Status:	Private
Date Became Current:	19410301
Date Ended Current:	Not reported
Owner/Operator Address:	50 SUMMER ST
Owner/Operator City,State,Zip:	MANCHESTER, MA 01944
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	19960328
Handler Name: CRICKET PRESS INC	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Ma
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No

L.A.D. COMPANIES INC. (Continued) **1001088103**

Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 32311
NAICS Description: Printing

Has the Facility Received Notices of Violations:
Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: State Statute or Regulation
Date Violation was Determined: 20080311
Actual Return to Compliance Date: 20080904
Return to Compliance Qualifier: Observed

L.A.D. COMPANIES INC. (Continued) **1001088103**

Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 001
Date of Enforcement Action: 20080415
Enforcement Responsible Agency: State
Enforcement Docket Number: Non-9017-2h
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: 20080904
Disposition Status: AS
Disposition Status Description: ACTION SATISFIED (CASE CLOSED)
Consent/Final Order Sequence Number:Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: SAMA
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 20080311
Actual Return to Compliance Date: 20080904
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: Not reported
Enforcement Identifier: 001
Date of Enforcement Action: 20080415
Enforcement Responsible Agency: State
Enforcement Docket Number: Non-9017-2h
Enforcement Attorney: Not reported
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: 20080904
Disposition Status: AS
Disposition Status Description: ACTION SATISFIED (CASE CLOSED)
Consent/Final Order Sequence Number:Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: SAMA
Enforcement Responsible Sub-Organization: Not reported

L.A.D. COMPANIES INC. (Continued) **1001088103**

SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported

L.A.D. COMPANIES INC. (Continued) **1001088103**

Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Evaluation Action Summary:

Evaluation Date:	20080904
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE SCHEDULE EVALUATION
Evaluation Responsible Person Identifier:	SAMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	20080311
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	SAMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	20080904
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported

L.A.D. COMPANIES INC. (Continued) **1001088103**

Former Citation:	Not reported
Evaluation Date:	20080311
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	SAMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	20080904
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19990825
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	DJBMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19980304
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	R1JHK
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

US AIRS MINOR:

Envid:	1001088103
Region Code:	01
Programmatic ID:	AIR MA0000002511901343
Facility Registry ID:	110002016112
D and B Number:	Not reported
Primary SIC Code:	2795
NAICS Code:	323122
Default Air Classification Code:	MIN
Facility Type of Ownership Code:	POF
Air CMS Category Code:	Not reported
HPV Status:	Not reported

US AIRS MINOR:

Region Code:	01

L.A.D. COMPANIES INC. (Continued) **1001088103**

Programmatic ID: AIR MA0000002511901343
Facility Registry ID: 110002016112
Air Operating Status Code: OPR
Default Air Classification Code: MIN
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 1989-01-12 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 01
Programmatic ID: AIR MA0000002511901343
Facility Registry ID: 110002016112
Air Operating Status Code: OPR
Default Air Classification Code: MIN
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 1992-01-10 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 01
Programmatic ID: AIR MA0000002511901343
Facility Registry ID: 110002016112
Air Operating Status Code: OPR
Default Air Classification Code: MIN
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 1995-02-17 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 01
Programmatic ID: AIR MA0000002511901343
Facility Registry ID: 110002016112
Air Operating Status Code: OPR
Default Air Classification Code: MIN
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 1998-03-04 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 01
Programmatic ID: AIR MA0000002511901343
Facility Registry ID: 110002016112
Air Operating Status Code: OPR
Default Air Classification Code: MIN
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 1999-08-25 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

L.A.D. COMPANIES INC. (Continued) **1001088103**

Activity Status: Not reported

Region Code: 01
Programmatic ID: AIR MA0000002511901343
Facility Registry ID: 110002016112
Air Operating Status Code: OPR
Default Air Classification Code: MIN
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2000-05-01 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

FINDS:
Registry ID: 110002016112

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
THE EMISSION INVENTORY SYSTEM (EIS) MAINTAINS AN INVENTORY OF LARGE STATIONARY SOURCES AND VOLUNTARILY-REPORTED SMALLER SOURCES OF AIR POINT POLLUTANT EMITTERS. IT CONTAINS INFORMATION ABOUT FACILITY SITES AND THEIR PHYSICAL LOCATION, EMISSIONS UNITS, EMISSIONS PROCESSES, RELEASE POINTS, CONTROL APPROACHES, AND REGULATIONS. FACILITY INVENTORY DATA ARE KEPT SEPARATE FROM THE EMISSIONS DATA AND HAVE STABLE IDENTIFIERS TO IMPROVE CONTINUITY FROM YEAR TO YEAR AND TO HELP IDENTIFY DUPLICATE OR MISSING FACILITIES
The Air Facility System (AFS) contains compliance and permit data for stationary sources of air pollution regulated by the EPA, state, and local air pollution agencies.
ICIS-Air (AIR) AIR is the modernization of the Air Facility System (AFS) into the Integrated Compliance Information System (ICIS). AIR contains enforcement, compliance, and permit data for stationary sources of air pollution regulated by the EPA, State, and Local air pollution agencies.
The Massachusetts - Environmental Protection Integrated Computer System (MA-EPICS) is the central repository for all environmental protection data for the State of Massachusetts.
The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1001088103
Registry ID: 110002016112

DFR URL:
Name: CRICKET PRESS
Address: 50 Summer Street
City,State,Zip: MANCHESTER, MA 01944

L.A.D. COMPANIES INC. (Continued) **1001088103**

E MANIFEST:

Manifest Tracking Number:	014463136FLE
Last Updated Date:	20200826
Shipped Date:	20200805
Received Date:	20200805
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAR000007039
Generator Name:	L.A.D. Companies Inc.
Generator Location Street Number:	Not reported
Generator Location Street 1:	50 SUMMER ST.
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	50 Summer St.
Generator Mail Street 2:	Not reported
Generator Mail City:	Manchester
Generator Mail Zip:	01944
Generator Mail State:	MA
Generator Contact Company Name:	L.A.D. Companies Inc.
Designated Facility EPA ID:	MAD053452637
Designated Facility Name:	Clean Harbors Of Braintree Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	1 Hill Avenue
Designated Facility Mail City:	Braintree
Designated Facility Mail Zip:	02184
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	1 Hill Avenue
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	Braintree
Designated Facility Location Zip:	02184
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	016828025JJK
Last Updated Date:	20200203
Shipped Date:	20180919
Received Date:	20181003
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Web
Generator EPA ID:	MAR000007039
Generator Name:	Cricket Press Inc
Generator Location Street Number:	Not reported
Generator Location Street 1:	50 SUMMER ST
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported

L.A.D. COMPANIES INC. (Continued) **1001088103**

Generator Mail Street 1:	50 SUMMER ST
Generator Mail Street 2:	Not reported
Generator Mail City:	MANCHESTER BY THE SEA
Generator Mail Zip:	01944-0000
Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	NJD002200046
Designated Facility Name:	Cyclechem,Inc.
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	217 SOUTH FIRST STREET
Designated Facility Mail City:	ELIZABETHPORT
Designated Facility Mail Zip:	07206
Designated Facility Mail State:	NJ
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	217 SOUTH FIRST STREET
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	ELIZABETHPORT
Designated Facility Location Zip:	07206
Designated Facility Location State:	NJ
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Transporter:

Manifest Tracking Number:	016828025JJK
Transporter Line Number:	1
Transporter EPA ID:	NJD003812047
Transporter Name:	Allstate Power Vac Inc

Waste Line:

Manifest Tracking Number:	016828025JJK
Waste Line Number:	1
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN1993
U.S. DOT Description:	Rq, Un1993 Waste Flammable Liquids, N.O.S., 3, Pgii (Petroleum Distillates, Methanol)
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	DM
Container Type Description:	Metal drums, barrels, kegs
Waste Quantity:	100
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.05
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.05
Waste Quantity, in Kilograms:	45.3515
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	45.3515
Management Method Code:	H061
Management Method Description:	FUEL BLENDING
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported

L.A.D. COMPANIES INC. (Continued) **1001088103**

Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D001, U154
Quantity Haz Kg:	45.3515
Quantity Haz Tons:	0.05
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0
State Waste Codes:	Not reported

Manifest Tracking Number:	016828025JJK
Waste Line Number:	2
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN1993
U.S. DOT Description:	Rq, Un1993 Waste Flammable Liquids, N.O.S., 3, Pgii (Petroleum Distillates, Mineral Spirits)
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	DM
Container Type Description:	Metal drums, barrels, kegs
Waste Quantity:	100
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.05
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.05
Waste Quantity, in Kilograms:	45.3515
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	45.3515
Management Method Code:	H061
Management Method Description:	FUEL BLENDING
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D001
Quantity Haz Kg:	45.3515
Quantity Haz Tons:	0.05
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0

L.A.D. COMPANIES INC. (Continued) **1001088103**

State Waste Codes: Not reported

Manifest Tracking Number: 016828025JJK
Waste Line Number: 3
U.S. DOT Hazardous Indicator: Y
U.S. DOT ID Number: UN1805
U.S. DOT Description: Un1805, Waste, Phosphoric Acid Solution
Non-Hazardous Waste Description: Not reported
Number of Containers: 1
Container Type Code: DF
Container Type Description: Fiberboard or plastic drums, barrels, kegs
Waste Quantity: 20
Quantity Unit of Measure Code: P
Quantity Unit of Measure Description: Pounds
Waste Quantity, in Tons: 0.01
Acute Waste Quantity, in Tons: 0
Non-Acute Waste Quantity, in Tons: 0.01
Waste Quantity, in Kilograms: 9.0703
Acute Waste Quantity, in Kilograms: 0
Non-Acute Waste Quantity, in Kilorgrams: 9.0703
Management Method Code: H141
Management Method Description: STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator: N
Quantity Discrepancy Indicator: N
Waste Type Discrepancy Indicator: N
Waste Density: Not reported
Waste Density Unit of Measure Code: Not reported
Waste Density Unit of Measure Description: Not reported
Form Code: Not reported
Form Code Description: Not reported
Source Code: Not reported
Source Code Description: Not reported
Waste Minimization Code: Not reported
Waste Minimization Code Description: Not reported
Consent Number: Not reported
EPA Waste Indicator: Y
Federal Waste Codes: D002
Quantity Haz Kg: 9.0703
Quantity Haz Tons: 0.01
Quantity Non Haz Kg: 0
Quantity Non Haz Tons: 0
State Waste Codes: Not reported

Manifest Tracking Number: 016828025JJK
Waste Line Number: 4
U.S. DOT Hazardous Indicator: N
U.S. DOT ID Number: Not reported
U.S. DOT Description: Not reported
Non-Hazardous Waste Description: Non-Dot/Non Epa Regulated Materials
Number of Containers: 1
Container Type Code: DM
Container Type Description: Metal drums, barrels, kegs
Waste Quantity: 100
Quantity Unit of Measure Code: P
Quantity Unit of Measure Description: Pounds
Waste Quantity, in Tons: 0.05
Acute Waste Quantity, in Tons: 0

L.A.D. COMPANIES INC. (Continued) **1001088103**

Non-Acute Waste Quantity, in Tons:	0.05
Waste Quantity, in Kilograms:	45.3515
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	45.3515
Management Method Code:	Not reported
Management Method Description:	Not reported
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	45.3515
Quantity Non Haz Tons:	0.05
State Waste Codes:	Not reported

Manifest Tracking Number:	016828025JJK
Waste Line Number:	5
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported
U.S. DOT Description:	Not reported
Non-Hazardous Waste Description:	Non-Dot/Non-Epa Regulated Materials
Number of Containers:	1
Container Type Code:	DM
Container Type Description:	Metal drums, barrels, kegs
Waste Quantity:	100
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.05
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.05
Waste Quantity, in Kilograms:	45.3515
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	45.3515
Management Method Code:	Not reported
Management Method Description:	Not reported
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported

L.A.D. COMPANIES INC. (Continued) **1001088103**

Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	45.3515
Quantity Non Haz Tons:	0.05
State Waste Codes:	Not reported
Manifest Tracking Number:	016828025JJK
Waste Line Number:	6
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported
U.S. DOT Description:	Not reported
Non-Hazardous Waste Description:	Non-Dot/Non-Epa Regulated Materials (Glycol Coolant)
Number of Containers:	2
Container Type Code:	DM
Container Type Description:	Metal drums, barrels, kegs
Waste Quantity:	50
Quantity Unit of Measure Code:	G
Quantity Unit of Measure Description:	Gallons
Waste Quantity, in Tons:	0.20850709
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.20850709
Waste Quantity, in Kilograms:	189.1222
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	189.1222
Management Method Code:	Not reported
Management Method Description:	Not reported
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	189.1222
Quantity Non Haz Tons:	0.20850709
State Waste Codes:	NJ-ID27
Manifest Tracking Number:	016828025JJK
Waste Line Number:	7
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported
U.S. DOT Description:	Not reported

L.A.D. COMPANIES INC. (Continued) **1001088103**

Non-Hazardous Waste Description:	Non-Dot/Non-Epa Regulated Materials (Oil)
Number of Containers:	1
Container Type Code:	DM
Container Type Description:	Metal drums, barrels, kegs
Waste Quantity:	50
Quantity Unit of Measure Code:	G
Quantity Unit of Measure Description:	Gallons
Waste Quantity, in Tons:	0.20850709
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.20850709
Waste Quantity, in Kilograms:	189.1222
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	189.1222
Management Method Code:	Not reported
Management Method Description:	Not reported
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	189.1222
Quantity Non Haz Tons:	0.20850709
State Waste Codes:	NJ-ID27
Manifest Tracking Number:	016828025JJK
Waste Line Number:	8
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported
U.S. DOT Description:	Not reported
Non-Hazardous Waste Description:	Non-Dot/Non-Epa Regulated Materials (Printing Inks)
Number of Containers:	1
Container Type Code:	CF
Container Type Description:	Fiber or plastic boxes, cartons, cases
Waste Quantity:	400
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.2
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.2
Waste Quantity, in Kilograms:	181.406
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	181.406
Management Method Code:	Not reported
Management Method Description:	Not reported
Waste Residue Indicator:	N

L.A.D. COMPANIES INC. (Continued) **1001088103**

Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	181.406
Quantity Non Haz Tons:	0.2
State Waste Codes:	NJ-ID27

F18 **MASSACHUSETTS ELECTRIC COMPANY** **E MANIFEST** **1032168419**
WSW **20 DESMOND AVE** **N/A**
1/8-1/4 **MANCHESTER, MA 01944**
0.209 mi.
1101 ft. **Site 1 of 2 in cluster F**

Relative: **Higher**

Actual: **32 ft.**

E MANIFEST:

Manifest Tracking Number:	018177691FLE
Last Updated Date:	20230420
Shipped Date:	20230330
Received Date:	20230331
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAC300012655
Generator Name:	Massachusetts Electric Company
Generator Location Street Number:	Not reported
Generator Location Street 1:	20 DESMOND AVE
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	170 Data Drive
Generator Mail Street 2:	Not reported
Generator Mail City:	Waltham
Generator Mail Zip:	02451
Generator Mail State:	MA
Generator Contact Company Name:	Massachusetts Electric Company
Designated Facility EPA ID:	MAD053452637
Designated Facility Name:	Clean Harbors Of Braintree Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	1 Hill Avenue
Designated Facility Mail City:	Braintree
Designated Facility Mail Zip:	02184
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported

MASSACHUSETTS ELECTRIC COMPANY (Continued) **1032168419**

Designated Facility Location Street 1: 1 Hill Avenue
Designated Facility Location Street 2: Not reported
Designated Facility Location City: Braintree
Designated Facility Location Zip: 02184
Designated Facility Location State: MA
Designated Facility Contact Company Name: Not reported
Manifest Residue Indicator: N
Rejection Indicator: N

PCB Information:
Manifest Tracking Number: 018177691FLE
Waste Line Number: 1
Article or Container ID: Not reported
Bulk Identity: PCB DEBRIS
Date of Removal: 20230330
Load Type: BulkWaste
Load Type Description: Bulk Waste
Waste Type: Not reported
Weight: 721.211744

Transporter:
Manifest Tracking Number: 018177691FLE
Transporter Line Number: 1
Transporter EPA ID: MAD039322250
Transporter Name: Clean Harbors Environmental Services, Inc.

Waste Line:
Manifest Tracking Number: 018177691FLE
Waste Line Number: 1
U.S. DOT Hazardous Indicator: Y
U.S. DOT ID Number: UN3432
U.S. DOT Description: Un3432, Polychlorinated Biphenyls, Solid, 9, Pg Iii
Non-Hazardous Waste Description: Not reported
Number of Containers: 1
Container Type Code: TT
Container Type Description: Cargo tanks (tank trucks)
Waste Quantity: 578
Quantity Unit of Measure Code: K
Quantity Unit of Measure Description: Kilograms
Waste Quantity, in Tons: 0.63724464
Acute Waste Quantity, in Tons: 0
Non-Acute Waste Quantity, in Tons: 0.63724464
Waste Quantity, in Kilograms: 578
Acute Waste Quantity, in Kilograms: 0
Non-Acute Waste Quantity, in Kilorgrams: 578
Management Method Code: H141
Management Method Description: STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator: N
Quantity Discrepancy Indicator: N
Waste Type Discrepancy Indicator: N
Waste Density: Not reported
Waste Density Unit of Measure Code: Not reported
Waste Density Unit of Measure Description: Not reported
Form Code: Not reported
Form Code Description: Not reported
Source Code: Not reported

MASSACHUSETTS ELECTRIC COMPANY (Continued) **1032168419**

Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	Not reported
Quantity Haz Tons:	Not reported
Quantity Non Haz Kg:	578
Quantity Non Haz Tons:	0.63724464
State Waste Codes:	MA-MA02

G19
West
1/8-1/4
0.214 mi.
1131 ft.

MASSACHUSETTS ELECTRIC COMPANY
CORNER OF SCHOOL & VINE
MANCHESTER, MA 01944

Site 1 of 2 in cluster G

E MANIFEST **1032169455**
N/A

Relative:
Higher

Actual:
35 ft.

E MANIFEST:

Manifest Tracking Number:	011020681FLE
Last Updated Date:	20221220
Shipped Date:	20221129
Received Date:	20221130
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAC300012655
Generator Name:	Massachusetts Electric Company
Generator Location Street Number:	Not reported
Generator Location Street 1:	CORNER OF SCHOOL & VINE
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	40 Sylvan Road
Generator Mail Street 2:	Not reported
Generator Mail City:	Waltham
Generator Mail Zip:	02451
Generator Mail State:	MA
Generator Contact Company Name:	Massachusetts Electric Company
Designated Facility EPA ID:	MAD053452637
Designated Facility Name:	Clean Harbors Of Braintree Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	1 Hill Avenue
Designated Facility Mail City:	Braintree
Designated Facility Mail Zip:	02184
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	1 Hill Avenue
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	Braintree
Designated Facility Location Zip:	02184
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

MASSACHUSETTS ELECTRIC COMPANY (Continued) **1032169455**

Transporter:
Manifest Tracking Number: 011020681FLE
Transporter Line Number: 1
Transporter EPA ID: MAD039322250
Transporter Name: Clean Harbors Environmental Services, Inc.

Waste Line:
Manifest Tracking Number: 011020681FLE
Waste Line Number: 1
U.S. DOT Hazardous Indicator: Y
U.S. DOT ID Number: NA3082
U.S. DOT Description: Rq, Na3082, Hazardous Waste, Liquid, N.O.S. (Lead), 9, Pg Iii (D008)
Non-Hazardous Waste Description: Not reported
Number of Containers: 1
Container Type Code: TT
Container Type Description: Cargo tanks (tank trucks)
Waste Quantity: 1
Quantity Unit of Measure Code: Y
Quantity Unit of Measure Description: Cubic Yards
Waste Quantity, in Tons: 0.84
Acute Waste Quantity, in Tons: 0
Non-Acute Waste Quantity, in Tons: 0.84
Waste Quantity, in Kilograms: 761.9052
Acute Waste Quantity, in Kilograms: 0
Non-Acute Waste Quantity, in Kilorgrams: 761.9052
Management Method Code: H110
Management Method Description: STABILIZATION
Waste Residue Indicator: N
Quantity Discrepancy Indicator: N
Waste Type Discrepancy Indicator: N
Waste Density: Not reported
Waste Density Unit of Measure Code: Not reported
Waste Density Unit of Measure Description: Not reported
Form Code: Not reported
Form Code Description: Not reported
Source Code: Not reported
Source Code Description: Not reported
Waste Minimization Code: Not reported
Waste Minimization Code Description: Not reported
Consent Number: Not reported
EPA Waste Indicator: N
Federal Waste Codes: Not reported
Quantity Haz Kg: 0
Quantity Haz Tons: 0
Quantity Non Haz Kg: 761.9052
Quantity Non Haz Tons: 0.84
State Waste Codes: Not reported

G20
West
1/8-1/4
0.237 mi.
1254 ft.

SACRED HEART CHURCH
62 SCHOOL ST
MANCHESTER, MA 01944

Site 2 of 2 in cluster G

LUST
RELEASE
SPILLS
ASBESTOS

S101044589
N/A

Relative:
Higher

Actual:
36 ft.

LUST:

Facility:

Name:	SACRED HEART CHURCH
Address:	62 SCHOOL ST
City,State,Zip:	MANCHESTER, MA 01944
Current Status:	**Response Action Outcome**
Release Tracking Number/Current Status:	3-0004415 / RAO
Status Date:	10/06/1994
Source Type:	UST
Release Town:	MANCHESTER
Notification Date:	07/15/1993
Category:	NONE
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Not reported
Location Type:	CHURCH
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not reported

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/6/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	7/15/1993
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release:

Name:	SACRED HEART CHURCH
Address:	62 SCHOOL ST
City,State,Zip:	MANCHESTER, MA 01944
Release Tracking Number/Current Status:	3-0004415 / RAO
Primary ID:	Not reported
Official City:	MANCHESTER
Notification:	07/15/1993
Category:	NONE

SACRED HEART CHURCH (Continued) **S101044589**

Status Date: 10/06/1994
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/6/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical: UNKNOWN
Quantity: Not reported
Location Type: CHURCH
Source: UST

MA Spills:

Facility ID:	3-4415	Spill ID:	N92-1420
Staff Lead:	FAGAN, J	Date Entered:	19940127
Last Entered:	19940127	First Response:	19921030
Spill Date:	19921030	Spill Time:	Not reported
Report Date:	19921030	Report Time:	10:10AM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	SOIL	Other Impact:	Not reported
Material:	#2 FUEL OIL	Other Material:	Not reported
Qty Reported:	UNKNOWN	Qty Actual:	UNKNOWN
Qty Reported:	----------	Qty Actual:	----------
CAS No:	Not reported	PCB Lev (ppm):	NONE
Source:	U.S.T.	Other Source:	Not reported
Incident:	TANK REMOVAL	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	SA	LUST Elig:	NO
Report Prep:	Not reported	Category:	Not reported

Notifier: CHRUS PIETRASZ/ARCHDIOCESE OF BOSTON
Notif Tel: Not reported
Days/Close: 0

ASBESTOS:

Name: SACRED HEART CHURCH
Address: 62 SCHOOL STREET
City,State,Zip: MANCHESTER, MA 01944
Notification: 100239417R1
DEP Region: NE

SACRED HEART CHURCH (Continued) **S101044589**

Notifiers Name:	THE AULSON COMPANY LLC
Start Date:	04/18/2016
End Date:	04/25/2016
Date Entered:	18/04/2016
Entry Date:	04/18/2016
Quantity Materical Removed SF:	4500
Quantity Material Removed LF:	Not reported
Project Description:	OTHER VAT & MASTIC
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	2016
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Name:	SACRED HEART CHURCH
Address:	62 SCHOOL STREET
City,State,Zip:	MANCHESTER, MA

SACRED HEART CHURCH (Continued) **S101044589**

Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	04/18/2016
End Date:	04/25/2016
Date Entered:	Not reported
Entry Date:	03/22/2016
Quantity Materical Removed SF:	4500.00
Quantity Material Removed LF:	Not reported
Project Description:	OTHER VAT & MASTIC
AR Tracking ID:	234417
Super Lic Number:	AS032238
Monitor Lic Number:	AA000006
Lab Lic Number:	AA000006
Year:	2016
Sticker Number:	100239417
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	9785264335
Sub Town:	Not reported
Worksite:	2ND FLOOR
Occupied:	-1
Contractor:	AC000717
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Repr,Renv
Abatement Process:	Fcontain
Location:	INDOORS
Decon Process:	3 CHAMBER DECON
Disposal Methods:	DOUBLE BAGS
Facility Usage:	PARISH HALL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	SACRED HEART CHURCH
Owner Address:	62 SCHOOL STREET
Owner City:	MANCHESTER
Owner State:	MA
On Site Manager Name:	FATHER PAUL FLAMMIA
On Site Manager Phone:	9785261263
Ins Comp:	N/A
Policy Number:	N/A
EXP Date:	4/25/2016
Facility Size:	12000
Transporter Name:	THE AULSON COMPANY LLC
Transporter Address:	49 DANTON DRIVE SUITE 201
Transporter City:	METHUEN
Transporter State:	MA
Final Site:	Not reported
Certified Name:	BRIAN S. WALSH
Cert Sign Date:	03/22/2016
Certified Company:	THE AULSON COMPANY LLC
Certified Phone:	9786889100
Entered_by:	EVERYONE
Name:	SACRED HEART SCHOOL

SACRED HEART CHURCH (Continued) **S101044589**

Address:	62 SCHOOL STREET
City,State,Zip:	MANCHESTER, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	04/06/2010
End Date:	04/08/2010
Date Entered:	Not reported
Entry Date:	04/01/2010
Quantity Materical Removed SF:	4250.00
Quantity Material Removed LF:	.00
Project Description:	Trns
AR Tracking ID:	124688
Super Lic Number:	AS071933
Monitor Lic Number:	AA000044
Lab Lic Number:	AA000044
Year:	2010
Sticker Number:	100103700
Form Type:	ANF-001
Fee Status:	Fifty
Facility Phone:	9785261263
Sub Town:	Not reported
Worksite:	BASEMENT
Occupied:	-1
Contractor:	AC000035
Contract Type:	WRITTEN
Hours:	Week days: 7A-4P Week end:
Project Type:	Renv
Abatement Process:	NEGAIR/CRITBAR/NEGAIR
Location:	Indoors
Decon Process:	THREE STAGE
Disposal Methods:	MATERIALS WILL BE WETTED AND PLACED IN DOUBLE BAGS AND LABELED FOR TRANSPORTATION
Facility Usage:	RELIGIOUS SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	1004999
DLWD Waiver Number:	10-160-NB
Small Owner Occ:	5
Owner Name:	ARCHDIOCESE OF BOSTON
Owner Address:	66 BROOKS DRIVE
Owner City:	BOSTON
Owner State:	MA
On Site Manager Name:	JOHN SAPUTO
On Site Manager Phone:	978-526-1263
Ins Comp:	ZURICH AMERICAN
Policy Number:	WC488324700
EXP Date:	12/28/2010
Facility Size:	10,000
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	39
Certified Name:	CRAIG STARKMAN
Cert Sign Date:	04/01/2010
Certified Company:	DEC-TAM
Certified Phone:	9784702860

SACRED HEART CHURCH (Continued) **S101044589**

Entered_by:	Not reported
Name:	TARA MONTESSORI SCHOOL
Address:	62 SCHOOL STREET
City,State,Zip:	MANCHESTER, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	08/30/2006
End Date:	08/30/2006
Date Entered:	Not reported
Entry Date:	08/16/2006
Quantity Materical Removed SF:	30.00
Quantity Material Removed LF:	.00
Project Description:	Trns
AR Tracking ID:	71968
Super Lic Number:	AS051070
Monitor Lic Number:	AM060336
Lab Lic Number:	AA000122
Year:	2006
Sticker Number:	100037533
Form Type:	ANF-001
Fee Status:	Fifty
Facility Phone:	9785268487
Sub Town:	Not reported
Worksite:	BASEMENT
Occupied:	-1
Contractor:	AC000133
Contract Type:	Off
Hours:	Week days: BASEMENT Week end:
Project Type:	Renv
Abatement Process:	Fcontain
Location:	Indoors
Decon Process:	3 STAGE DECON
Disposal Methods:	ALL ACM TO BE DOUBLED BAGGED IN 6 MIL LABELLED ASBESTOS REMOVAL BAGS.
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	5
Owner Name:	SAME
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	ASBESTOS FREE, INC.
Transporter Address:	42 BROADWAY
Transporter City:	WAKEFIELD
Transporter State:	Not reported
Final Site:	39
Certified Name:	FRANK L. ARSENAULT
Cert Sign Date:	08/16/2006

SACRED HEART CHURCH (Continued) **S101044589**

Certified Company:	ASBESTOS FREE, INC.
Certified Phone:	7812454403
Entered_by:	Not reported
Name:	SACRED HEART SCHOOL
Address:	62 SCHOOL STREET
City,State,Zip:	MANCHESTER, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	05/27/2010
End Date:	05/27/2010
Date Entered:	Not reported
Entry Date:	05/26/2010
Quantity Materical Removed SF:	25.00
Quantity Material Removed LF:	.00
Project Description:	Trns
AR Tracking ID:	127019
Super Lic Number:	AS071933
Monitor Lic Number:	AA000044
Lab Lic Number:	AA000044
Year:	2010
Sticker Number:	100106807
Form Type:	ANF-001
Fee Status:	Fifty
Facility Phone:	9785261263
Sub Town:	Not reported
Worksite:	BSMT
Occupied:	-1
Contractor:	AC000035
Contract Type:	WRITTEN
Hours:	Week days: 7A-4P Week end:
Project Type:	Renv
Abatement Process:	CRITBAR/NEGAIR/DECON/WMETHODS
Location:	Indoors
Decon Process:	THREE STAGE
Disposal Methods:	MATERIALS WILL BE WETTED AND PLACED IN DOUBLE BAGS AND LABELED FOR TRANSPORTATION
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	1005924
DLWD Waiver Number:	HV10177
Small Owner Occ:	5
Owner Name:	ARCHDIOCESE OF BOSTON
Owner Address:	66 BROOKS DRIVE
Owner City:	BOSTON
Owner State:	MA
On Site Manager Name:	JOHN SAPUTO
On Site Manager Phone:	978-526-1263
Ins Comp:	ZURICH AMERICAN
Policy Number:	WC488324700
EXP Date:	12/28/2010
Facility Size:	10000
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported

SACRED HEART CHURCH (Continued) **S101044589**

Final Site:	39
Certified Name:	CRAIG STARKMAN
Cert Sign Date:	05/26/2010
Certified Company:	DEC-TAM
Certified Phone:	9784702860
Entered_by:	Not reported

F21 **MASSACHUSETTS ELECTRIC COMPANY** **E MANIFEST** **1032167631**
WSW **12 DESMOND AVE** **N/A**
1/8-1/4 **MANCHESTER, MA 01944**
0.239 mi.
1261 ft. **Site 2 of 2 in cluster F**

Relative: **Lower**

Actual: **31 ft.**

E MANIFEST:

Manifest Tracking Number:	017661773FLE
Last Updated Date:	20230423
Shipped Date:	20230402
Received Date:	20230403
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAC300012655
Generator Name:	Massachusetts Electric Company
Generator Location Street Number:	Not reported
Generator Location Street 1:	12 DESMOND AVE
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	170 Data Drive
Generator Mail Street 2:	Not reported
Generator Mail City:	Waltham
Generator Mail Zip:	02451
Generator Mail State:	MA
Generator Contact Company Name:	Massachusetts Electric Company
Designated Facility EPA ID:	MAD053452637
Designated Facility Name:	Clean Harbors Of Braintree Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	1 Hill Avenue
Designated Facility Mail City:	Braintree
Designated Facility Mail Zip:	02184
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	1 Hill Avenue
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	Braintree
Designated Facility Location Zip:	02184
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

PCB Information:

Manifest Tracking Number:	017661773FLE
Waste Line Number:	1

MASSACHUSETTS ELECTRIC COMPANY (Continued) **1032167631**

Article or Container ID:	Not reported
Bulk Identity:	PCB DEBRIS
Date of Removal:	20230402
Load Type:	BulkWaste
Load Type Description:	Bulk Waste
Waste Type:	Not reported
Weight:	272

Transporter:

Manifest Tracking Number:	017661773FLE
Transporter Line Number:	1
Transporter EPA ID:	MAD039322250
Transporter Name:	Clean Harbors Environmental Services, Inc.

Waste Line:

Manifest Tracking Number:	017661773FLE
Waste Line Number:	1
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported
U.S. DOT Description:	Not reported
Non-Hazardous Waste Description:	None, Non-Dot Regulated Pcbs, N/A, None
Number of Containers:	1
Container Type Code:	TT
Container Type Description:	Cargo tanks (tank trucks)
Waste Quantity:	907
Quantity Unit of Measure Code:	K
Quantity Unit of Measure Description:	Kilograms
Waste Quantity, in Tons:	0.9999669
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.9999669
Waste Quantity, in Kilograms:	907
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	907
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	Not reported
Quantity Haz Tons:	Not reported
Quantity Non Haz Kg:	907
Quantity Non Haz Tons:	0.9999669
State Waste Codes:	MA-MA02

22
WSW
1/8-1/4
0.240 mi.
1266 ft.

MASSACHUSETTS ELECTRIC COMPANY
170 44 SCHOOL STREET
MANCHESTER, MA 01944

E MANIFEST **1032168092**
N/A

Relative:
Lower

Actual:
18 ft.

E MANIFEST:

Manifest Tracking Number:	018824610FLE
Last Updated Date:	20250223
Shipped Date:	20250131
Received Date:	20250203
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAC300012655
Generator Name:	Massachusetts Electric Company
Generator Location Street Number:	170
Generator Location Street 1:	170 44 SCHOOL STREET
Generator Location Street 2:	Not reported
Generator Location City:	MANCHESTER
Generator Location State:	MA
Generator Location Zip:	01944
Generator Mail Street Number:	170
Generator Mail Street 1:	DATA DRIVE
Generator Mail Street 2:	Not reported
Generator Mail City:	WALTHAM
Generator Mail Zip:	02451
Generator Mail State:	MA
Generator Contact Company Name:	MASSACHUSETTS ELECTRIC COMPANY
Designated Facility EPA ID:	MAD053452637
Designated Facility Name:	Clean Harbors Of Braintree Inc
Designated Facility Mail Street Number:	1
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	HILL AVENUE
Designated Facility Mail City:	BRAINTREE
Designated Facility Mail Zip:	02184
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	1
Designated Facility Location Street 1:	HILL AVENUE
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	BRAINTREE
Designated Facility Location Zip:	02184
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Transporter:

Manifest Tracking Number:	018824610FLE
Transporter Line Number:	1
Transporter EPA ID:	MAD039322250
Transporter Name:	Clean Harbors Environmental Services, Inc.

Waste Line:

Manifest Tracking Number:	018824610FLE
Waste Line Number:	1
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	NA3077

MASSACHUSETTS ELECTRIC COMPANY (Continued) **1032168092**

U.S. DOT Description:	Na3077, Hazardous Waste, Solid, N.O.S. (Lead), 9, Pg Iii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	TT
Container Type Description:	Cargo tanks (tank trucks)
Waste Quantity:	1
Quantity Unit of Measure Code:	Y
Quantity Unit of Measure Description:	Cubic Yards
Waste Quantity, in Tons:	0.84
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.84
Waste Quantity, in Kilograms:	761.9052
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	761.9052
Management Method Code:	H110
Management Method Description:	STABILIZATION
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	761.9052
Quantity Non Haz Tons:	0.84
State Waste Codes:	Not reported

---

23 **MANCHESTER NUMBER 23 SUBSTATION** **SHWS** **S112288432**
SSW **23 SUMMER ST** **RELEASE** **N/A**
1/4-1/2 **MANCHESTER, MA 01944**
0.300 mi.
1582 ft.

Relative:
Lower

Actual:
20 ft.

SHWS:

Name:	MANCHESTER NUMBER 23 SUBSTATION
Address:	23 SUMMER ST
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0031289
Source Type:	UNKNOWN
Release Town:	MANCHESTER
Notification Date:	12/19/2012
Category:	120 DY
Associated ID:	Not reported
Current Status:	PSC
Status Date:	12/26/2018
Phase:	PHASE III
Response Action Outcome:	PC
Oil Or Haz Material:	Hazardous Material

MANCHESTER NUMBER 23 SUBSTATION (Continued) **S112288432**

Release:

Name:	MANCHESTER NUMBER 23 SUBSTATION
Address:	23 SUMMER ST
City,State,Zip:	MANCHESTER, MA 019440000
Release Tracking Number/Current Status:	3-0031289 / PSC
Primary ID:	Not reported
Official City:	MANCHESTER
Notification:	12/19/2012
Category:	120 DY
Status Date:	12/26/2018
Phase:	PHASE III
Response Action Outcome:	PC - PC
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	1/2/2013
Response Action Outcome:	PC
Action Type:	Tier Classification
Action Status:	Legal Notice Published
Action Date:	1/20/2014
Response Action Outcome:	PC
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/4/2013
Response Action Outcome:	PC
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	10/21/2013
Response Action Outcome:	PC
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	10/4/2013
Response Action Outcome:	PC
Action Type:	Tier Classification
Action Status:	TCEXT
Action Date:	11/5/2018
Response Action Outcome:	PC
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	12/19/2012
Response Action Outcome:	PC
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/19/2012
Response Action Outcome:	PC

MANCHESTER NUMBER 23 SUBSTATION (Continued) **S112288432**

Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	12/19/2012
Response Action Outcome:	PC
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	12/19/2013
Response Action Outcome:	PC
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	12/19/2013
Response Action Outcome:	PC
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	12/19/2013
Response Action Outcome:	PC
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	12/20/2012
Response Action Outcome:	PC
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	12/21/2016
Response Action Outcome:	PC
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	12/26/2012
Response Action Outcome:	PC
Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	12/26/2017
Response Action Outcome:	PC
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	12/26/2017
Response Action Outcome:	PC
Action Type:	Phase 2
Action Status:	Revised Statement or Transmittal Received
Action Date:	12/26/2017
Response Action Outcome:	PC
Action Type:	Response Action Outcome - RAO
Action Status:	PSCRCD
Action Date:	12/26/2018
Response Action Outcome:	PC
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received

MANCHESTER NUMBER 23 SUBSTATION (Continued) **S112288432**

Action Date: 4/22/2013
Response Action Outcome: PC

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 4/22/2014
Response Action Outcome: PC

Chemicals:
Chemical: ARSENIC
Quantity: 25.7 milligrams per kilogram
Source: UNKNOWN

H24 **SEABREEZE VARIETY** **UST FINDER** **1028399825**
SW **8 BEACH ST** **UST FINDER RELEASE** **N/A**
1/4-1/2 **MANCHESTER-BY-THE-SEA, MA 1944**
0.349 mi.
1842 ft. **Site 1 of 2 in cluster H**

Relative:
Lower

Actual:
24 ft.

UST FINDER:
Object ID: 653617
Facility ID: MA5488
Name: SEABREEZE VARIETY
Address: 8 BEACH ST
City,State,Zip: MANCHESTER-BY-THE-SEA, MA 1944
Address Match Type: Not reported
Open USTs: 2
Closed USTs: 3
TOS USTs: 0
Population 1500ft: 819
Private Wells 1500ft: 1
Within 100yr Floodplain: No
Land Use: Developed, High Intensity
Within SPA: No
SPA PWS Facility ID: Not reported
SPA Water Type: Not reported
SPA Facility Type: Not reported
SPA HUC12: Not reported
Within WHPA: No
WHPA PWS Facility ID: Not reported
WHPA Water Type: Not reported
WHPA Facility Type: Not reported
WHPA HUC12: Not reported
Facility Status: Open UST(s)
Date of Last Inspection: Not reported
EPA Region: 1
Tribe: Not reported
Coordinate Source: State
X Coord: -70.7696299999999
Y Coord: 42.5745900000001
Latitude: 42.57459
Longitude: -70.76963

UST FINDER:
Object ID: 745173
Facility ID: MA5488
Tank ID: MA5488_1
Tank Status: Closed

SEABREEZE VARIETY (Continued) **1028399825**

Installation Date:	1984/04/10 16:00:00+00
Removal Date:	2008/12/01 15:59:59+00
Tank Capacity:	3000
Substances:	Gasoline
Tank Wall Type:	Single

Object ID:	745174
Facility ID:	MA5488
Tank ID:	MA5488_2
Tank Status:	Closed
Installation Date:	1984/04/10 16:00:00+00
Removal Date:	2008/12/01 15:59:59+00
Tank Capacity:	5000
Substances:	Gasoline
Tank Wall Type:	Single

Object ID:	745175
Facility ID:	MA5488
Tank ID:	MA5488_3
Tank Status:	Closed
Installation Date:	1984/04/10 16:00:00+00
Removal Date:	2008/12/01 15:59:59+00
Tank Capacity:	12000
Substances:	Gasoline
Tank Wall Type:	Single

Object ID:	769440
Facility ID:	MA5488
Tank ID:	MA5488_4
Tank Status:	Open
Installation Date:	2008/12/06 15:59:59+00
Removal Date:	Not reported
Tank Capacity:	3000
Substances:	Gasoline
Tank Wall Type:	Double

Object ID:	769441
Facility ID:	MA5488
Tank ID:	MA5488_5
Tank Status:	Open
Installation Date:	2008/12/06 15:59:59+00
Removal Date:	Not reported
Tank Capacity:	6000
Substances:	Diesel Gasoline
Tank Wall Type:	Double

UST FINDER RELEASE:

Object ID:	201237
Facility ID:	Not reported
Lust ID:	MA3-0028168
Name:	SEABREEZE VARIETY
Address:	8 BEACH ST
City,State,Zip:	MANCHESTER, MA 19440000
Address Match Type:	PointAddress
Reported Date:	2008/11/26 15:59:59+00
Status:	No Further Action

SEABREEZE VARIETY (Continued) **1028399825**

Substance:	Not reported
Population within 1500ft:	830
Domestic Wells within 1500ft:	1
Land Use:	Developed, Medium Intensity
Within SPA:	No
SPA PWS Facility ID:	Not reported
SPA Water Type:	Not reported
SPA Facility Type:	Not reported
SPA HUC12:	Not reported
Within WHPA:	No
WHPA PWS Facility ID:	Not reported
WHPA Water Type:	Not reported
WHPA Facility Type:	Not reported
WHPA HUC12:	Not reported
Within 100yr Floodplain:	No
Tribe:	Not reported
EPA Region:	1
NFA Letter 1:	Not reported
NFA Letter 2:	Not reported
NFA Letter 3:	Not reported
NFA Letter 4:	Not reported
Closed With Residual Contaminate:	Not reported
Coordinate Source:	Geocode
X Coord:	-70.7700661
Y Coord:	42.57462386
Latitude:	42.57462386
Longitude:	-70.7700660999999

H25 **SEABREEZE VARIETY** **SHWS S110526328**
SW **8 BEACH ST** **LUST N/A**
1/4-1/2 **MANCHESTER, MA 01944** **RELEASE**
0.349 mi.
1842 ft. **Site 2 of 2 in cluster H**

Relative: **Lower**
Actual: **24 ft.**

SHWS:

Name:	SEABREEZE VARIETY
Address:	8 BEACH ST
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0028168
Source Type:	1X5K AND
Release Town:	MANCHESTER
Notification Date:	11/26/2008
Category:	72 HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	07/24/2012
Phase:	PHASE II
Response Action Outcome:	A2
Oil Or Haz Material:	Not reported

Name:	SEABREEZE VARIETY
Address:	8 BEACH ST
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0028168
Source Type:	2 X 3K
Release Town:	MANCHESTER
Notification Date:	11/26/2008
Category:	72 HR

SEABREEZE VARIETY (Continued) **S110526328**

Associated ID:	Not reported
Current Status:	RAO
Status Date:	07/24/2012
Phase:	PHASE II
Response Action Outcome:	A2
Oil Or Haz Material:	Not reported

LUST:

Facility:

Name:	SEABREEZE VARIETY
Address:	8 BEACH ST
City,State,Zip:	MANCHESTER, MA 019440000
Current Status:	**Response Action Outcome**
Release Tracking Number/Current Status:	3-0028168 / RAO
Status Date:	07/24/2012
Source Type:	UST
Release Town:	MANCHESTER
Notification Date:	11/26/2008
Category:	72 HR
Associated ID:	Not reported
Phase:	PHASE II
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Not reported
Location Type:	COMMERCIAL
Location Type:	GAS STA
Source:	2 X 3K
Source:	1X5K AND
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	GASOLINE
Quantity:	410 parts per million
Chemical:	GASOLINE
Quantity:	319 parts per million

Actions:

Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/14/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	1/14/2009
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received

SEABREEZE VARIETY (Continued) **S110526328**

Action Date: 1/26/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 10/24/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 10/24/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 11/11/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 11/30/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/10/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 12/10/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 12/2/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

SEABREEZE VARIETY (Continued) **S110526328**

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/2/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 12/2/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/22/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/24/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/2/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/30/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 4/1/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/24/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 9/10/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/28/2009

SEABREEZE VARIETY (Continued) **S110526328**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Name: SEABREEZE VARIETY
Address: 8 BEACH ST
City,State,Zip: MANCHESTER, MA 019440000
Release Tracking Number/Current Status: 3-0028168 / RAO
Primary ID: Not reported
Official City: MANCHESTER
Notification: 11/26/2008
Category: 72 HR
Status Date: 07/24/2012
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/14/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/14/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 1/26/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 10/24/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 10/24/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 11/11/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

SEABREEZE VARIETY (Continued) **S110526328**

reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 11/30/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/10/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 12/10/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 12/2/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/2/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 12/2/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/22/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)

SEABREEZE VARIETY (Continued) **S110526328**

Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/24/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/2/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/30/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 4/1/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/24/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 9/10/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/28/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: GASOLINE
Quantity: 410 parts per million
Chemical: GASOLINE
Quantity: 319 parts per million
Location Type: COMMERCIAL
Location Type: GAS STA
Source: 2 X 3K
Source: 1X5K AND
Source: UST

26
ENE
1/4-1/2
0.383 mi.
2024 ft.

RESIDENCE
24 FOREST ST
MANCHESTER, MA

LAST RELEASE

S110684365
N/A

Relative:
Higher

Actual:
43 ft.

LAST:

Name:	RESIDENCE
Address:	24 FOREST ST
City,State,Zip:	MANCHESTER, MA
Release Tracking Number/Current Status:	3-0029448 / RAO
Source Type:	AST
Release Town:	MANCHESTER
Notification Date:	08/16/2010
Category:	TWO HR
Associated ID:	Not reported
Status Date:	01/19/2011
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Not reported

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	200 gallons
Location Type:	RESIDNTIAL
Source:	AST

Actions:

Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	1/19/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	1/19/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	1/26/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	10/13/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	10/19/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA

RESIDENCE (Continued) **S110684365**

Action Status: FLDRUN
Action Date: 11/30/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 12/15/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 12/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 8/16/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 8/16/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/16/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/16/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 8/17/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 8/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 8/23/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

RESIDENCE (Continued) **S110684365**

reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 8/23/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/24/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/27/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/27/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 8/31/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 9/23/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/3/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Name: RESIDENCE
Address: 24 FOREST ST
City,State,Zip: MANCHESTER, MA
Release Tracking Number/Current Status: 3-0029448 / RAO
Primary ID: Not reported
Official City: MANCHESTER
Notification: 08/16/2010
Category: TWO HR
Status Date: 01/19/2011
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not

RESIDENCE (Continued) **S110684365**

been reduced to background.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 1/19/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/19/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 1/26/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 10/13/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 10/19/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 11/30/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 12/15/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 12/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 8/16/2010

RESIDENCE (Continued) **S110684365**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 8/16/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/16/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/16/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 8/17/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 8/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 8/23/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 8/23/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/24/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/27/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

RESIDENCE (Continued) **S110684365**

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	8/27/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FLDRUN
Action Date:	8/31/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	9/23/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	9/3/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	200 gallons
Location Type:	RESIDNTIAL
Source:	AST

27
WSW
1/4-1/2
0.400 mi.
2113 ft.

PROPERTY **LUST** **S110526288**
1-3 POWDER HOUSE LA **RELEASE** **N/A**
MANCHESTER, MA 01944

Relative: Lower

Actual: 30 ft.

LUST:

Facility:

Name:	PROPERTY
Address:	1-3 POWDER HOUSE LA
City,State,Zip:	MANCHESTER, MA 01944
Current Status:	**Response Action Outcome**
Release Tracking Number/Current Status:	3-0004233 / RAO
Status Date:	11/08/1996
Source Type:	UST
Release Town:	MANCHESTER
Notification Date:	10/01/1993
Category:	NONE
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Not reported
Location Type:	APARTMENT
Source:	UST

PROPERTY (Continued) **S110526288**

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 10/1/1993
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: RAOEQ
Action Date: 11/8/1996
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: DEPNDS
Action Date: 6/7/1996
Response Action Outcome: Not reported

Release:
Name: PROPERTY
Address: 1-3 POWDER HOUSE LA
City,State,Zip: MANCHESTER, MA 01944
Release Tracking Number/Current Status: 3-0004233 / RAO
Primary ID: Not reported
Official City: MANCHESTER
Notification: 10/01/1993
Category: NONE
Status Date: 11/08/1996
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 10/1/1993
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: RAOEQ
Action Date: 11/8/1996
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: DEPNDS
Action Date: 6/7/1996
Response Action Outcome: Not reported

PROPERTY (Continued) **S110526288**

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported
Location Type: APARTMENT
Source: UST

I28 **NO LOCATION AID** **UST FINDER RELEASE** **1029055189**
WSW **6 ELM STREET** **N/A**
1/4-1/2 **MANCHESTER, MA 19440**
0.432 mi.
2279 ft. **Site 1 of 7 in cluster I**

Relative:
Lower

Actual:
17 ft.

UST FINDER RELEASE:
Object ID: 201411
Facility ID: Not reported
Lust ID: MA3-0031969
Name: NO LOCATION AID
Address: 6 ELM STREET
City,State,Zip: MANCHESTER, MA 19440000
Address Match Type: PointAddress
Reported Date: 2014/02/03 15:59:59+00
Status: No Further Action
Substance: Not reported
Population within 1500ft: 961
Domestic Wells within 1500ft: 2
Land Use: Developed, Medium Intensity
Within SPA: No
SPA PWS Facility ID: Not reported
SPA Water Type: Not reported
SPA Facility Type: Not reported
SPA HUC12: Not reported
Within WHPA: Yes
WHPA PWS Facility ID: MA3166000_1
WHPA Water Type: GW - Ground water
WHPA Facility Type: WL - Well
WHPA HUC12: 010900010301
Within 100yr Floodplain: No
Tribe: Not reported
EPA Region: 1
NFA Letter 1: Not reported
NFA Letter 2: Not reported
NFA Letter 3: Not reported
NFA Letter 4: Not reported
Closed With Residual Contaminate: Not reported
Coordinate Source: Geocode
X Coord: -70.77291848
Y Coord: 42.57606766
Latitude: 42.57606766
Longitude: -70.77291848

I29 **NO LOCATION AID** **SHWS** **S132541353**
WSW **6 ELM STREET** **LUST** **N/A**
1/4-1/2 **MANCHESTER, MA 01944** **RELEASE**
0.435 mi.
2295 ft. **Site 2 of 7 in cluster I**

Relative:
Lower

Actual:
16 ft.

SHWS:

Name:	NO LOCATION AID
Address:	6 ELM STREET
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0031969
Source Type:	TANK
Release Town:	MANCHESTER
Notification Date:	02/03/2014
Category:	72 HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	02/02/2015
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Not reported

Name:	NO LOCATION AID
Address:	6 ELM STREET
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0031969
Source Type:	UNKNOWN
Release Town:	MANCHESTER
Notification Date:	02/03/2014
Category:	72 HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	02/02/2015
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Not reported

LUST:

Facility:

Name:	NO LOCATION AID
Address:	6 ELM STREET
City,State,Zip:	MANCHESTER, MA 019440000
Current Status:	**Permanent Solution with No Conditions**
Release Tracking Number/Current Status:	3-0031969 / PSNC
Status Date:	02/02/2015
Source Type:	UST
Release Town:	MANCHESTER
Notification Date:	02/03/2014
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil Or Haz Material:	Not reported

Location Type:	COMMERCIAL
Source:	TANK
Source:	USTOTHER
Source:	UST

NO LOCATION AID (Continued) **S132541353**

Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 1210 parts per million

Actions:
Action Type: Release Abatement Measure
Action Status: Submittal Retracted
Action Date: 10/29/2014
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 12/4/2014
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 2/2/2015
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/21/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/3/2014
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/3/2014
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 2/4/2015
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/20/2014
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 3/24/2014
Response Action Outcome: PN

Action Type: Immediate Response Action

NO LOCATION AID (Continued) **S132541353**

Action Status: Written Plan Received
Action Date: 4/3/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/18/2016
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 5/18/2016
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/8/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 7/31/2014
Response Action Outcome: PN

Facility:
Name: NO LOCATION AID
Address: 6 ELM STREET
City,State,Zip: MANCHESTER, MA 019440000
Current Status: **Permanent Solution with No Conditions**
Release Tracking Number/Current Status: 3-0031969 / PSNC
Status Date: 02/02/2015
Source Type: USTOTHER
Release Town: MANCHESTER
Notification Date: 02/03/2014
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: PN - PN
Oil Or Haz Material: Not reported

Location Type: COMMERCIAL
Source: TANK
Source: USTOTHER
Source: UST
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 1210 parts per million

Actions:
Action Type: Release Abatement Measure

NO LOCATION AID (Continued) **S132541353**

Action Status: Submittal Retracted
Action Date: 10/29/2014
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 12/4/2014
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 2/2/2015
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/21/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/3/2014
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/3/2014
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 2/4/2015
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/20/2014
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 3/24/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 4/3/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/18/2016
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 5/18/2016

NO LOCATION AID (Continued) **S132541353**

Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/8/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 7/31/2014
Response Action Outcome: PN

Release:
Name: NO LOCATION AID
Address: 6 ELM STREET
City,State,Zip: MANCHESTER, MA 019440000
Release Tracking Number/Current Status: 3-0031969 / PSNC
Primary ID: Not reported
Official City: MANCHESTER
Notification: 02/03/2014
Category: 72 HR
Status Date: 02/02/2015
Phase: Not reported
Response Action Outcome: PN - PN
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Abatement Measure
Action Status: Submittal Retracted
Action Date: 10/29/2014
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 12/4/2014
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 2/2/2015
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/21/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/3/2014
Response Action Outcome: PN

Action Type: Release Disposition

NO LOCATION AID (Continued) **S132541353**

Action Status: Reportable Release under MGL 21E
Action Date: 2/3/2014
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 2/4/2015
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/20/2014
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 3/24/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 4/3/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/18/2016
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 5/18/2016
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/8/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 7/31/2014
Response Action Outcome: PN

Chemicals:
Chemical: GASOLINE
Quantity: 1210 parts per million
Location Type: COMMERCIAL
Source: TANK
Source: USTOTHER
Source: UST
Source: UNKNOWN

I30
WSW
1/4-1/2
0.435 mi.
2295 ft.

FORMER CROSS TOWING
6 ELM STREET
MANCHESTER, MA 01944

Site 3 of 7 in cluster I

SHWS RELEASE | **S132541397 N/A**

Relative:
Lower

Actual:
16 ft.

SHWS:

Name:	FORMER CROSS TOWING
Address:	6 ELM STREET
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0032090
Source Type:	UNKNOWN
Release Town:	MANCHESTER
Notification Date:	04/03/2014
Category:	120 DY
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	02/10/2015
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Hazardous Material

Release:

Name:	FORMER CROSS TOWING
Address:	6 ELM STREET
City,State,Zip:	MANCHESTER, MA 019440000
Release Tracking Number/Current Status:	3-0032090 / PSNC
Primary ID:	Not reported
Official City:	MANCHESTER
Notification:	04/03/2014
Category:	120 DY
Status Date:	02/10/2015
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	10/24/2014
Response Action Outcome:	PN
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Enforcement Conference
Action Date:	11/19/2015
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	2/10/2015
Response Action Outcome:	PN
Action Type:	Compliance and Enforcement Action
Action Status:	ACOP
Action Date:	2/10/2016
Response Action Outcome:	PN

FORMER CROSS TOWING (Continued) **S132541397**

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	2/9/2015
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	2/9/2015
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/18/2014
Response Action Outcome:	PN
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	4/24/2014
Response Action Outcome:	PN
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	4/3/2014
Response Action Outcome:	PN
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/3/2014
Response Action Outcome:	PN
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	4/3/2014
Response Action Outcome:	PN
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	5/1/2014
Response Action Outcome:	PN
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	5/1/2014
Response Action Outcome:	PN
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	5/19/2014
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	5/8/2014
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received

FORMER CROSS TOWING (Continued) **S132541397**

Action Date: 6/17/2014
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/21/2014
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/21/2014
Response Action Outcome: PN

Action Type: RNFE
Action Status: Revised Statement or Transmittal Received
Action Date: 8/21/2014
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 8/29/2014
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/5/2014
Response Action Outcome: PN

Chemicals:
Chemical: LEAD
Quantity: 667 milligrams per kilogram
Chemical: ALIPHATIC HYDROCARBONS C5 THROUGH C8
Quantity: 2150 milligrams per kilogram
Chemical: ARSENIC
Quantity: 60.3 milligrams per kilogram
Source: UNKNOWN

I31 **FORMER CROSS TOWING** **SHWS** **S132541514**
WSW **6 ELM STREET** **RELEASE** **N/A**
1/4-1/2 **MANCHESTER, MA 01944**
0.435 mi.
2295 ft. **Site 4 of 7 in cluster I**

Relative: **Lower**
Actual: **16 ft.**

SHWS:
Name: FORMER CROSS TOWING
Address: 6 ELM STREET
City,State,Zip: MANCHESTER, MA 019440000
Facility ID: 3-0032404
Source Type: UNKNOWN
Release Town: MANCHESTER
Notification Date: 08/26/2014
Category: 120 DY
Associated ID: Not reported
Current Status: PSNC
Status Date: 02/10/2015
Phase: Not reported
Response Action Outcome: Not reported

FORMER CROSS TOWING (Continued) **S132541514**

Oil Or Haz Material: Hazardous Material

Release:
Name: FORMER CROSS TOWING
Address: 6 ELM STREET
City,State,Zip: MANCHESTER, MA 019440000
Release Tracking Number/Current Status: 3-0032404 / PSNC
Primary ID: Not reported
Official City: MANCHESTER
Notification: 08/26/2014
Category: 120 DY
Status Date: 02/10/2015
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 10/24/2014
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 11/19/2015
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 2/10/2015
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 2/10/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 2/9/2015
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 4/24/2014
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 5/1/2014
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only

FORMER CROSS TOWING (Continued) **S132541514**

Action Date: 5/1/2014
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/21/2014
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/26/2014
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/26/2014
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/26/2014
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 8/29/2014
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/11/2014
Response Action Outcome: Not reported

Chemicals:
Chemical: PCBs
Quantity: 4.69 milligrams per kilogram
Location Type: UNKNOWN
Source: UNKNOWN

J32 **TOWN HALL PARKING LOT** **SHWS** **S118337372**
SW **10 CENTRAL STREET** **RELEASE** **N/A**
1/4-1/2 **MANCHESTER, MA 01944**
0.453 mi.
2391 ft. **Site 1 of 2 in cluster J**

Relative:
Lower

Actual:
13 ft.

SHWS:
Name: TOWN HALL PARKING LOT
Address: 10 CENTRAL STREET
City,State,Zip: MANCHESTER, MA 019440000
Facility ID: 3-0033184
Source Type: UNKNOWN
Release Town: MANCHESTER
Notification Date: 10/05/2015
Category: 120 DY
Associated ID: Not reported
Current Status: PSC
Status Date: 05/24/2018

TOWN HALL PARKING LOT (Continued) **S118337372**

Phase: Not reported
Response Action Outcome: PC
Oil Or Haz Material: Hazardous Material

Release:
Name: TOWN HALL PARKING LOT
Address: 10 CENTRAL STREET
City,State,Zip: MANCHESTER, MA 019440000
Release Tracking Number/Current Status: 3-0033184 / PSC
Primary ID: Not reported
Official City: MANCHESTER
Notification: 10/05/2015
Category: 120 DY
Status Date: 05/24/2018
Phase: Not reported
Response Action Outcome: PC - PC
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 1/25/2018
Response Action Outcome: PC

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 1/29/2018
Response Action Outcome: PC

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/31/2018
Response Action Outcome: PC

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 10/19/2016
Response Action Outcome: PC

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/5/2015
Response Action Outcome: PC

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/5/2015
Response Action Outcome: PC

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/5/2015
Response Action Outcome: PC

TOWN HALL PARKING LOT (Continued) **S118337372**

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/6/2016
Response Action Outcome: PC

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/6/2016
Response Action Outcome: PC

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/6/2016
Response Action Outcome: PC

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/9/2015
Response Action Outcome: PC

Action Type: BOL
Action Status: SHPFAC
Action Date: 4/3/2018
Response Action Outcome: PC

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 5/24/2018
Response Action Outcome: PC

Action Type: Response Action Outcome - RAO
Action Status: PSCRCD
Action Date: 5/24/2018
Response Action Outcome: PC

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/10/2016
Response Action Outcome: PC

Chemicals:
Chemical: 2-METHYLNAPHTHALENE
Quantity: 13 milligrams per kilogram
Chemical: PHENANTHRENE
Quantity: 150 milligrams per kilogram
Chemical: AROMATIC HYDROCARBONS C11 THROUGH C22
Quantity: 2270 milligrams per kilogram
Chemical: NAPHTHALENE
Quantity: 39 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 52 milligrams per kilogram
Chemical: ACENAPHTHENE
Quantity: 16 milligrams per kilogram
Chemical: TOTAL PETROLEUM HYDROCARBONS (TPH)
Quantity: 5740 milligrams per kilogram
Chemical: BENZO[B]FLUORANTHENE
Quantity: 35 milligrams per kilogram

TOWN HALL PARKING LOT (Continued) **S118337372**

Chemical:	DIBENZO[A,H]ANTHRACENE
Quantity:	7 milligrams per kilogram
Chemical:	INDENO(1,2,3-CD)PYRENE
Quantity:	21 milligrams per kilogram
Chemical:	BENZO[A]PYRENE
Quantity:	36 milligrams per kilogram
Chemical:	ACENAPHTHYLENE
Quantity:	21 milligrams per kilogram
Source:	UNKNOWN

J33 **MANCHESTER HARBOR AT PUBLIC BOAT RAMP** **SHWS** **S119931603**
SW **10 CENTRAL STREET** **RELEASE** **N/A**
1/4-1/2 **MANCHESTER, MA 01944** **ASBESTOS**
0.453 mi.
2391 ft. **Site 2 of 2 in cluster J**

Relative:
Lower

Actual:
13 ft.

SHWS:

Name:	MANCHESTER HARBOR AT PUBLIC BOAT RAMP
Address:	10 CENTRAL STREET
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0034951
Source Type:	FUELTANK
Release Town:	MANCHESTER
Notification Date:	05/26/2018
Category:	TWO HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	08/08/2024
Phase:	Not reported
Response Action Outcome:	TN
Oil Or Haz Material:	Oil

Name:	MANCHESTER HARBOR AT PUBLIC BOAT RAMP
Address:	10 CENTRAL STREET
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0034951
Source Type:	BOAT
Release Town:	MANCHESTER
Notification Date:	05/26/2018
Category:	TWO HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	08/08/2024
Phase:	Not reported
Response Action Outcome:	TN
Oil Or Haz Material:	Oil

Name:	MANCHESTER HARBOR AT PUBLIC BOAT RAMP
Address:	10 CENTRAL STREET
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0034951
Source Type:	BOAT ENGIN
Release Town:	MANCHESTER
Notification Date:	05/26/2018
Category:	TWO HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	08/08/2024

MANCHESTER HARBOR AT PUBLIC BOAT RAMP (Continued) **S119931603**

Phase:	Not reported
Response Action Outcome:	TN
Oil Or Haz Material:	Oil

Release:

Name:	MANCHESTER HARBOR AT PUBLIC BOAT RAMP
Address:	10 CENTRAL STREET
City,State,Zip:	MANCHESTER, MA 019440000
Release Tracking Number/Current Status:	3-0034951 / PSNC
Primary ID:	Not reported
Official City:	MANCHESTER
Notification:	05/26/2018
Category:	TWO HR
Status Date:	08/08/2024
Phase:	Not reported
Response Action Outcome:	TN - TN
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/26/2018
Response Action Outcome:	TN
Action Type:	Immediate Response Action - DEP Lead
Action Status:	Work Completed
Action Date:	5/26/2018
Response Action Outcome:	TN
Action Type:	Immediate Response Action - DEP Lead
Action Status:	Work Started
Action Date:	5/26/2018
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FLDDO
Action Date:	5/26/2018
Response Action Outcome:	TN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/3/2018
Response Action Outcome:	TN
Action Type:	RAO - DEP Lead
Action Status:	PSNRCD
Action Date:	8/8/2024
Response Action Outcome:	TN

Chemicals:

Chemical:	GASOLINE
Quantity:	10 gallons
Chemical:	MOTOR OIL
Quantity:	2 gallons

MANCHESTER HARBOR AT PUBLIC BOAT RAMP (Continued) **S119931603**

Location Type:	MUNICIPAL
Location Type:	WATERBODY
Source:	BOAT
Source:	FUELTANK
Source:	BOAT ENGIN

ASBESTOS:

Name:	TOWN HALL-MANCHESTER BY THE SEA
Address:	10 CENTRAL STREET
City,State,Zip:	MANCHESTER, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	09/01/2016
End Date:	09/02/2016
Date Entered:	Not reported
Entry Date:	08/22/2016
Quantity Materical Removed SF:	350.00
Quantity Material Removed LF:	Not reported
Project Description:	OTHER FLOOR TILE AND MASTIC
AR Tracking ID:	246645
Super Lic Number:	AS032747
Monitor Lic Number:	AM062010
Lab Lic Number:	AA000240
Year:	2016
Sticker Number:	100249460
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	9789675978
Sub Town:	Not reported
Worksite:	BASEMENT HALL
Occupied:	-1
Contractor:	AC000791
Contract Type:	WRITTEN
Hours:	5PM TO 12AM
Project Type:	Repr
Abatement Process:	Clnp,Fcontain
Location:	INDOORS
Decon Process:	3 CHAMBER DECON, WET METHODS, NEGATIVE PRESSURE
Disposal Methods:	ALL METHODS WILL COMPLY
Facility Usage:	TOWN HALL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	TOWN OF MANCHESTER BY THE SEA
Owner Address:	10 CENTRAL STREET
Owner City:	MANCHESTER BY THE SEA
Owner State:	MA
On Site Manager Name:	MARK HAMMOND
On Site Manager Phone:	9789675978
Ins Comp:	0
Policy Number:	0
EXP Date:	12/31/2016
Facility Size:	8000
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	58 PYLES LANE

MANCHESTER HARBOR AT PUBLIC BOAT RAMP (Continued) **S119931603**

Transporter City:	NEW CASTLE
Transporter State:	DE
Final Site:	Not reported
Certified Name:	MARIA HOSTAGE
Cert Sign Date:	08/22/2016
Certified Company:	ONE SOURCE ENVIRONMENTAL, LLC
Certified Phone:	6034581482
Entered_by:	MHOSTAGE

I34 **NO LOCATION AID** **UST FINDER RELEASE** **1029055290**
WSW **9 MORSE CT** **N/A**
1/4-1/2 **MANCHESTER, MA 19440**
0.455 mi.
2402 ft. **Site 5 of 7 in cluster I**

Relative: **Lower**
Actual: **27 ft.**

UST FINDER RELEASE:

Object ID:	200831
Facility ID:	Not reported
Lust ID:	MA3-0019810
Name:	NO LOCATION AID
Address:	9 MORSE CT
City,State,Zip:	MANCHESTER, MA 19440000
Address Match Type:	PointAddress
Reported Date:	2000/08/08 15:59:59+00
Status:	No Further Action
Substance:	Not reported
Population within 1500ft:	864
Domestic Wells within 1500ft:	2
Land Use:	Developed, Medium Intensity
Within SPA:	No
SPA PWS Facility ID:	Not reported
SPA Water Type:	Not reported
SPA Facility Type:	Not reported
SPA HUC12:	Not reported
Within WHPA:	Yes
WHPA PWS Facility ID:	MA3166000_1
WHPA Water Type:	GW - Ground water
WHPA Facility Type:	WL - Well
WHPA HUC12:	010900010301
Within 100yr Floodplain:	No
Tribe:	Not reported
EPA Region:	1
NFA Letter 1:	Not reported
NFA Letter 2:	Not reported
NFA Letter 3:	Not reported
NFA Letter 4:	Not reported
Closed With Residual Contaminate:	Not reported
Coordinate Source:	Geocode
X Coord:	-70.77407221
Y Coord:	42.57609898
Latitude:	42.5760989799999
Longitude:	-70.77407221

I35 **9 MORSE COURT** **SHWS** **S132541737**
WSW **9 MORSE COURT** **RELEASE** **N/A**
1/4-1/2 **MANCHESTER, MA 01944**
0.466 mi.
2460 ft. **Site 6 of 7 in cluster I**

Relative:
Lower

Actual:
26 ft.

SHWS:

Name:	9 MORSE COURT
Address:	9 MORSE COURT
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0033011
Source Type:	UNKNOWN
Release Town:	MANCHESTER
Notification Date:	07/10/2015
Category:	120 DY
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	09/27/2016
Phase:	PHASE II
Response Action Outcome:	PN
Oil Or Haz Material:	Hazardous Material

Release:

Name:	9 MORSE COURT
Address:	9 MORSE COURT
City,State,Zip:	MANCHESTER, MA 019440000
Release Tracking Number/Current Status:	3-0033011 / PSNC
Primary ID:	Not reported
Official City:	MANCHESTER
Notification:	07/10/2015
Category:	120 DY
Status Date:	09/27/2016
Phase:	PHASE II
Response Action Outcome:	PN - PN
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/14/2015
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/5/2015
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	10/6/2015
Response Action Outcome:	PN
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	11/10/2015
Response Action Outcome:	PN

9 MORSE COURT (Continued) **S132541737**

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/13/2015
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 11/19/2015
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/30/2015
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 12/23/2015
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 12/23/2015
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 12/23/2015
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 12/29/2015
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 2/10/2016
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/29/2016
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/3/2016
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/15/2016
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received

9 MORSE COURT (Continued) **S132541737**

Action Date: 3/25/2016
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 3/25/2016
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/22/2016
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/28/2016
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/5/2016
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/19/2016
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 5/5/2016
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 6/30/2016
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/10/2015
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/10/2015
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/10/2015
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/14/2015
Response Action Outcome: PN

9 MORSE COURT (Continued) **S132541737**

Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	7/15/2016
Response Action Outcome:	PN
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	7/15/2016
Response Action Outcome:	PN
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	7/15/2016
Response Action Outcome:	PN
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	7/15/2016
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	7/22/2015
Response Action Outcome:	PN
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	7/24/2015
Response Action Outcome:	PN
Action Type:	Release Abatement Measure
Action Status:	Modified Revised or Updated Plan Received
Action Date:	7/28/2015
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	NOTSHP
Action Date:	7/28/2015
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	7/28/2015
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/30/2015
Response Action Outcome:	PN
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	8/17/2016
Response Action Outcome:	PN
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only

9 MORSE COURT (Continued) **S132541737**

Action Date: 8/18/2016
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 8/25/2015
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 8/27/2015
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 9/11/2015
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/16/2015
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/17/2015
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/27/2016
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 9/27/2016
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 9/9/2016
Response Action Outcome: PN

Chemicals:
Chemical: ARSENIC
Quantity: 28 parts per million
Chemical: LEAD
Quantity: 748 parts per million
Chemical: PCBs
Quantity: 1.9 parts per million
Location Type: RESIDNTIAL
Source: UNKNOWN

I36 **NO LOCATION AID** **SHWS** **S132536540**
WSW **9 MORSE CT** **LUST** **N/A**
1/4-1/2 **MANCHESTER, MA 01944** **RELEASE**
0.466 mi.
2460 ft. **Site 7 of 7 in cluster I**

Relative:
Lower

Actual:
26 ft.

SHWS:

Name:	NO LOCATION AID
Address:	9 MORSE CT
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0019810
Source Type:	UNKNOWN
Release Town:	MANCHESTER
Notification Date:	08/08/2000
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	02/09/2001
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Not reported

LUST:

Facility:

Name:	NO LOCATION AID
Address:	9 MORSE CT
City,State,Zip:	MANCHESTER, MA 019440000
Current Status:	**Response Action Outcome**
Release Tracking Number/Current Status:	3-0019810 / RAO
Status Date:	02/09/2001
Source Type:	UST
Release Town:	MANCHESTER
Notification Date:	08/08/2000
Category:	120 DY
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Not reported
Location Type:	COMMERCIAL
Source:	UNKNOWN
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	Not reported
Chemical:	GASOLINE
Quantity:	Not reported
Chemical:	ALIPHATIC HYDROCARBONS C5 THROUGH C8
Quantity:	2190 parts per billion

Actions:

Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only

NO LOCATION AID (Continued) **S132536540**

Action Date: 10/10/2000
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/5/2000
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/29/2000
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 2/12/2001
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/9/2001
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 2/9/2001
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/8/2000
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Oral Approval of Plan or Action
Action Date: 8/8/2000
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/18/2000
Response Action Outcome: Not reported

Release:
Name: NO LOCATION AID
Address: 9 MORSE CT
City,State,Zip: MANCHESTER, MA 019440000
Release Tracking Number/Current Status: 3-0019810 / RAO
Primary ID: Not reported
Official City: MANCHESTER
Notification: 08/08/2000
Category: 120 DY
Status Date: 02/09/2001
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

NO LOCATION AID (Continued) **S132536540**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	10/10/2000
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	10/5/2000
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	11/29/2000
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	2/12/2001
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	2/9/2001
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	2/9/2001
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	8/8/2000
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Oral Approval of Plan or Action
Action Date:	8/8/2000
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	9/18/2000
Response Action Outcome:	Not reported

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	Not reported
Chemical:	GASOLINE
Quantity:	Not reported
Chemical:	ALIPHATIC HYDROCARBONS C5 THROUGH C8
Quantity:	2190 parts per billion
Location Type:	COMMERCIAL

NO LOCATION AID (Continued) **S132536540**

Source: UNKNOWN
Source: UST

K37 **BASEMENT OF RESIDENCE** **SHWS** **S126024717**
WSW **1 PINE STREET** **LAST** **N/A**
1/2-1 **MANCHESTER, MA 01944** **RELEASE**
0.538 mi.
2840 ft. **Site 1 of 6 in cluster K**

Relative:
Higher

Actual:
41 ft.

SHWS:
Name: BASEMENT OF RESIDENCE
Address: 1 PINE STREET
City,State,Zip: MANCHESTER, MA 019440000
Facility ID: 3-0036076
Source Type: FUELTANK
Release Town: MANCHESTER
Notification Date: 01/06/2020
Category: TWO HR
Associated ID: Not reported
Current Status: PSNC
Status Date: 06/16/2021
Phase: PHASE II
Response Action Outcome: PN
Oil Or Haz Material: Not reported

LAST:
Name: BASEMENT OF RESIDENCE
Address: 1 PINE STREET
City,State,Zip: MANCHESTER, MA 019440000
Release Tracking Number/Current Status: 3-0036076 / PSNC
Source Type: AST
Release Town: MANCHESTER
Notification Date: 01/06/2020
Category: TWO HR
Associated ID: Not reported
Status Date: 06/16/2021
Phase: PHASE II
Response Action Outcome: PN - PN
Oil Or Haz Material: Not reported

Chemicals:
Chemical: FUEL OIL #2
Quantity: 100 gallons
Location Type: RESIDNTIAL
Source: FUELTANK
Source: AST

Actions:
Action Type: RLFA
Action Status: FLDRAN
Action Date: 1/15/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 1/16/2020
Response Action Outcome: PN

BASEMENT OF RESIDENCE (Continued) **S126024717**

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/23/2020
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/29/2020
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	1/6/2020
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	NOAPP
Action Date:	1/6/2020
Response Action Outcome:	PN
Action Type:	RLFA
Action Status:	FLDD1U
Action Date:	1/6/2020
Response Action Outcome:	PN
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/6/2020
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	FLDISS
Action Date:	1/6/2020
Response Action Outcome:	PN
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/6/2020
Response Action Outcome:	PN
Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	1/7/2020
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	1/7/2020
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Oral Approval of a Modified Plan
Action Date:	1/8/2020
Response Action Outcome:	PN
Action Type:	RLFA
Action Status:	FLDRAN

BASEMENT OF RESIDENCE (Continued) **S126024717**

Action Date: 1/8/2020
Response Action Outcome: PN

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 1/8/2021
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/8/2021
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/8/2021
Response Action Outcome: PN

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 1/8/2021
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/27/2020
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 2/3/2021
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 2/6/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/19/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/24/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 3/25/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: PRPMTG
Action Date: 3/25/2020
Response Action Outcome: PN

BASEMENT OF RESIDENCE (Continued) **S126024717**

Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	3/6/2020
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	3/6/2020
Response Action Outcome:	PN
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/6/2020
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	4/28/2020
Response Action Outcome:	PN
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	4/3/2020
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Oral Approval of a Modified Plan
Action Date:	4/3/2020
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	5/3/2021
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	5/8/2020
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	6/16/2021
Response Action Outcome:	PN

Release:

Name:	BASEMENT OF RESIDENCE
Address:	1 PINE STREET
City,State,Zip:	MANCHESTER, MA 019440000
Release Tracking Number/Current Status:	3-0036076 / PSNC
Primary ID:	Not reported
Official City:	MANCHESTER
Notification:	01/06/2020
Category:	TWO HR
Status Date:	06/16/2021
Phase:	PHASE II

BASEMENT OF RESIDENCE (Continued) **S126024717**

Response Action Outcome: PN - PN
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type: RLFA
Action Status: FLDRAN
Action Date: 1/15/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 1/16/2020
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/23/2020
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/29/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 1/6/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: NOAPP
Action Date: 1/6/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDD1U
Action Date: 1/6/2020
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/6/2020
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 1/6/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/6/2020
Response Action Outcome: PN

Action Type: RLFA

BASEMENT OF RESIDENCE (Continued) **S126024717**

Action Status: FLDRAN
Action Date: 1/7/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 1/7/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 1/8/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 1/8/2020
Response Action Outcome: PN

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 1/8/2021
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/8/2021
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/8/2021
Response Action Outcome: PN

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 1/8/2021
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/27/2020
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 2/3/2021
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 2/6/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/19/2020

BASEMENT OF RESIDENCE (Continued) **S126024717**

Response Action Outcome: PN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/24/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 3/25/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: PRPMTG
Action Date: 3/25/2020
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/6/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/6/2020
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/6/2020
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 4/28/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/3/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 4/3/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/3/2021
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/8/2020
Response Action Outcome: PN

BASEMENT OF RESIDENCE (Continued) **S126024717**

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 6/16/2021
Response Action Outcome: PN

Chemicals:
Chemical: FUEL OIL #2
Quantity: 100 gallons
Location Type: RESIDNTIAL
Source: FUELTANK
Source: AST

K38 **PHILLIPS 66 STATION** **SHWS** **S132540078**
WSW **2 PINE ST** **RELEASE** **N/A**
1/2-1 **MANCHESTER, MA 01944**
0.562 mi.
2967 ft. **Site 2 of 6 in cluster K**

Relative:
Higher

Actual:
47 ft.

SHWS:
Name: PHILLIPS 66 STATION
Address: 2 PINE ST
City,State,Zip: MANCHESTER, MA 019440000
Facility ID: 3-0028523
Source Type: HOSE
Release Town: MANCHESTER
Notification Date: 05/14/2009
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 07/16/2009
Phase: Not reported
Response Action Outcome: A2
Oil Or Haz Material: Not reported

Release:
Name: PHILLIPS 66 STATION
Address: 2 PINE ST
City,State,Zip: MANCHESTER, MA 019440000
Release Tracking Number/Current Status: 3-0028523 / RAO
Primary ID: Not reported
Official City: MANCHESTER
Notification: 05/14/2009
Category: TWO HR
Status Date: 07/16/2009
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 10/1/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

PHILLIPS 66 STATION (Continued) **S132540078**

reduced to background.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 5/14/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/14/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 5/14/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/3/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/16/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/16/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/16/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: GASOLINE
Quantity: 18 gallons
Location Type: WATERBODY
Location Type: UTILEASE
Location Type: PRIVPROP
Location Type: ROADWAY
Location Type: RESIDNTIAL
Location Type: COMMERCIAL
Location Type: MUNICIPAL
Source: HOSE

K39 **GULF FACILITY** **SHWS** **S132539096**
WSW **2 PINE ST** **RELEASE** **N/A**
1/2-1 **MANCHESTER, MA 01944**
0.562 mi.
2967 ft. **Site 3 of 6 in cluster K**

Relative: **Higher**

Actual: **47 ft.**

SHWS:

Name:	GULF FACILITY
Address:	2 PINE ST
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0026154
Source Type:	FORMER
Release Town:	MANCHESTER
Notification Date:	08/18/2006
Category:	72 HR
Associated ID:	3-0022977
Current Status:	RTNCLOSED
Status Date:	08/17/2010
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Oil

Name:	GULF FACILITY
Address:	2 PINE ST
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0026154
Source Type:	HYDRAULIC
Release Town:	MANCHESTER
Notification Date:	08/18/2006
Category:	72 HR
Associated ID:	3-0022977
Current Status:	RTNCLOSED
Status Date:	08/17/2010
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Oil

Name:	GULF FACILITY
Address:	2 PINE ST
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0026154
Source Type:	LIFT
Release Town:	MANCHESTER
Notification Date:	08/18/2006
Category:	72 HR
Associated ID:	3-0022977
Current Status:	RTNCLOSED
Status Date:	08/17/2010
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Oil

Name:	GULF FACILITY
Address:	2 PINE ST
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0026154
Source Type:	UNKNOWN
Release Town:	MANCHESTER
Notification Date:	08/18/2006

GULF FACILITY (Continued) **S132539096**

Category:	72 HR
Associated ID:	3-0022977
Current Status:	RTNCLOSED
Status Date:	08/17/2010
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Oil

Release:

Name:	GULF FACILITY
Address:	2 PINE ST
City,State,Zip:	MANCHESTER, MA 019440000
Release Tracking Number/Current Status:	3-0026154 / RTNCLOSED
Primary ID:	3-0022977
Official City:	MANCHESTER
Notification:	08/18/2006
Category:	72 HR
Status Date:	08/17/2010
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	10/23/2006
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	10/23/2006
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	11/1/2007
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	12/21/2010
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	RMRINI
Action Date:	12/21/2010
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	12/22/2006
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO

GULF FACILITY (Continued) **S132539096**

Action Status: Inspection and Monitoring Report Received
Action Date: 5/13/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 5/13/2016
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 6/1/2009
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 6/10/2015
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/16/2004
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/16/2004
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 6/16/2011
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 6/16/2011
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/18/2009
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSARCD
Action Date: 6/19/2018
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 6/2/2009
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 6/2/2014

GULF FACILITY (Continued) **S132539096**

Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 6/2/2014
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 6/25/2007
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 6/4/2012
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 6/4/2012
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 6/4/2013
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 6/4/2013
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 6/7/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 7/9/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/16/2007
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 8/16/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 8/16/2007
Response Action Outcome: Not reported

GULF FACILITY (Continued) **S132539096**

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 8/17/2010
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 8/17/2010
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 8/17/2010
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/18/2006
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/18/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 8/18/2007
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 8/20/2009
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 8/20/2009
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 8/20/2009
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/27/2006
Response Action Outcome: Not reported

Chemicals:
Chemical: HYDRAULIC FLUID
Quantity: 0.75 inches
Chemical: HYDRAULIC OIL
Quantity: 0.5 inches
Location Type: COMMERCIAL
Source: UNKNOWN

GULF FACILITY (Continued) **S132539096**

Source: LIFT
Source: HYDRAULIC
Source: FORMER

K40 **BENNETT ST** **SHWS** **S132537860**
WSW **2 PINE ST** **INST CONTROL** **N/A**
1/2-1 **MANCHESTER, MA 01944** **RELEASE**
0.562 mi.
2967 ft. **Site 4 of 6 in cluster K**

Relative:
Higher

Actual:
47 ft.

SHWS:
Name: BENNETT ST
Address: 2 PINE ST
City,State,Zip: MANCHESTER, MA 019440000
Facility ID: 3-0022977
Source Type: Not reported
Release Town: MANCHESTER
Notification Date: 06/18/2003
Category: 120 DY
Associated ID: 3-0022977
Current Status: PSC
Status Date: 06/19/2018
Phase: Not reported
Response Action Outcome: PA
Oil Or Haz Material: Hazardous Material

INST CONTROL:
Name: BENNETT ST
Address: 2 PINE ST
City,State,Zip: MANCHESTER, MA 019440000
Release Tracking Number: 3-0022977
Action Type: AUL
Action Stat: FEEREC
Action Date: 08/02/2018
Response Action Outcome: PA - PA

Name: BENNETT ST
Address: 2 PINE ST
City,State,Zip: MANCHESTER, MA 019440000
Release Tracking Number: 3-0022977
Action Type: AUL
Action Stat: RECPT
Action Date: 06/29/2018
Response Action Outcome: PA - PA

Name: BENNETT ST
Address: 2 PINE ST
City,State,Zip: MANCHESTER, MA 019440000
Release Tracking Number: 3-0022977
Action Type: AUL
Action Stat: SNAUDI
Action Date: 08/08/2022
Response Action Outcome: PA - PA

Release:
Name: BENNETT ST
Address: 2 PINE ST

BENNETT ST (Continued) **S132537860**

City,State,Zip:	MANCHESTER, MA 019440000
Release Tracking Number/Current Status:	3-0022977 / PSC
Primary ID:	3-0022977
Official City:	MANCHESTER
Notification:	06/18/2003
Category:	120 DY
Status Date:	06/19/2018
Phase:	Not reported
Response Action Outcome:	PA - PA
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	12/21/2010
Response Action Outcome:	PA
Action Type:	Response Action Outcome - RAO
Action Status:	RMRINI
Action Date:	12/21/2010
Response Action Outcome:	PA
Action Type:	Phase 4
Action Status:	Completion Statement Received
Action Date:	3/1/2007
Response Action Outcome:	PA
Action Type:	Response Action Outcome - RAO
Action Status:	RMRINT
Action Date:	5/13/2016
Response Action Outcome:	PA
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	5/13/2016
Response Action Outcome:	PA
Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	5/23/2022
Response Action Outcome:	PA
Action Type:	Response Action Outcome - RAO
Action Status:	Periodic Review Opinion Evaluating Temp Solution
Action Date:	6/10/2015
Response Action Outcome:	PA
Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	6/16/2004
Response Action Outcome:	PA
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	6/16/2004

BENNETT ST (Continued) **S132537860**

Response Action Outcome: PA

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/16/2004
Response Action Outcome: PA

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/16/2004
Response Action Outcome: PA

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 6/16/2011
Response Action Outcome: PA

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 6/16/2011
Response Action Outcome: PA

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/18/2003
Response Action Outcome: PA

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/18/2003
Response Action Outcome: PA

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/18/2009
Response Action Outcome: PA

Action Type: Response Action Outcome - RAO
Action Status: PSARCD
Action Date: 6/19/2018
Response Action Outcome: PA

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 6/2/2014
Response Action Outcome: PA

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 6/2/2014
Response Action Outcome: PA

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 6/22/2006
Response Action Outcome: PA

BENNETT ST (Continued) **S132537860**

Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	6/22/2006
Response Action Outcome:	PA
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	6/29/2018
Response Action Outcome:	PA
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	6/4/2012
Response Action Outcome:	PA
Action Type:	Response Action Outcome - RAO
Action Status:	RMRINT
Action Date:	6/4/2012
Response Action Outcome:	PA
Action Type:	Response Action Outcome - RAO
Action Status:	RMRINT
Action Date:	6/4/2013
Response Action Outcome:	PA
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	6/4/2013
Response Action Outcome:	PA
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	6/7/2017
Response Action Outcome:	PA
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	8/17/2010
Response Action Outcome:	PA
Action Type:	Response Action Outcome - RAO
Action Status:	Revised Statement or Transmittal Received
Action Date:	8/17/2010
Response Action Outcome:	PA
Action Type:	Activity and Use Limitation
Action Status:	Fee Received - FMCRA Use Only
Action Date:	8/2/2018
Response Action Outcome:	PA
Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	8/7/2006
Response Action Outcome:	PA
Action Type:	Activity and Use Limitation
Action Status:	Level II - Audit Inspection

BENNETT ST (Continued) **S132537860**

Action Date: 8/8/2022
Response Action Outcome: PA

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 8/8/2022
Response Action Outcome: PA

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/4/2003
Response Action Outcome: PA

Chemicals:
Chemical: ALIPHATIC HYDROCARBONS C9 THROUGH C18
Quantity: 8 parts per million
Chemical: INDENO(1,2,3-CD)PYRENE
Quantity: 1 parts per million
Chemical: BENZO[B]FLUORANTHENE
Quantity: 1.3 parts per million
Chemical: DIBENZO[A,H]ANTHRACENE
Quantity: 1.4 parts per million
Chemical: ALIPHATIC HYDROCARBONS C19 THROUGH C36
Quantity: 9600 parts per million
Chemical: AROMATIC HYDROCARBONS C11 THROUGH C22
Quantity: 1000 parts per million
Chemical: BENZO[A]PYRENE
Quantity: 2.2 parts per million
Chemical: LEAD
Quantity: 610 parts per million
Chemical: BENZO[A]ANTHRACENE
Quantity: 1.9 parts per million

K41 **RTE 127 GIBBS GAS STA** **SHWS S110684357**
WSW **PINE ST** **RELEASE N/A**
1/2-1 **MANCHESTER, MA 01944**
0.563 mi.
2971 ft. **Site 5 of 6 in cluster K**

Relative:
Higher

Actual:
46 ft.

SHWS:
Name: RTE 127 GIBBS GAS STA
Address: PINE ST
City,State,Zip: MANCHESTER, MA 019440000
Facility ID: 3-0027354
Source Type: TANKER
Release Town: MANCHESTER
Notification Date: 12/30/2007
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 02/14/2008
Phase: Not reported
Response Action Outcome: A1
Oil Or Haz Material: Not reported

Release:
Name: RTE 127 GIBBS GAS STA

RTE 127 GIBBS GAS STA (Continued) **S110684357**

Address:	PINE ST
City,State,Zip:	MANCHESTER, MA 019440000
Release Tracking Number/Current Status:	3-0027354 / RAO
Primary ID:	Not reported
Official City:	MANCHESTER
Notification:	12/30/2007
Category:	TWO HR
Status Date:	02/14/2008
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	12/30/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	12/30/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	2/14/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	2/14/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	15 gallons
Chemical:	DIESEL FUEL
Quantity:	25 gallons
Location Type:	COMMERCIAL
Source:	TANKER

K42 **GASOLINE STATION** **SHWS** **S110684360**
WSW **PINE AT CENTRAL ST** **RELEASE** **N/A**
1/2-1 **MANCHESTER, MA 01944**
0.566 mi.
2988 ft. **Site 6 of 6 in cluster K**

Relative: **Lower**
Actual: **26 ft.**

SHWS:

Name:	GASOLINE STATION
Address:	PINE AT CENTRAL ST
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0028313
Source Type:	HOSE
Release Town:	MANCHESTER
Notification Date:	02/12/2009
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	04/13/2009
Phase:	Not reported
Response Action Outcome:	A1
Oil Or Haz Material:	Not reported

Name:	GASOLINE STATION
Address:	PINE AT CENTRAL ST
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0028313
Source Type:	VEHICLE
Release Town:	MANCHESTER
Notification Date:	02/12/2009
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	04/13/2009
Phase:	Not reported
Response Action Outcome:	A1
Oil Or Haz Material:	Not reported

Name:	GASOLINE STATION
Address:	PINE AT CENTRAL ST
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0028313
Source Type:	DISPENSER
Release Town:	MANCHESTER
Notification Date:	02/12/2009
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	04/13/2009
Phase:	Not reported
Response Action Outcome:	A1
Oil Or Haz Material:	Not reported

Release:

Name:	GASOLINE STATION
Address:	PINE AT CENTRAL ST
City,State,Zip:	MANCHESTER, MA 019440000
Release Tracking Number/Current Status:	3-0028313 / RAO
Primary ID:	Not reported
Official City:	MANCHESTER

GASOLINE STATION (Continued) **S110684360**

Notification: 02/12/2009
Category: TWO HR
Status Date: 04/13/2009
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/12/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/12/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 4/13/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/14/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/14/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/2/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 5/7/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:

Chemical: GASOLINE
Quantity: 10 gallons

GASOLINE STATION (Continued) **S110684360**

Chemical:	GASOLINE
Quantity:	15 gallons
Location Type:	COMMERCIAL
Source:	DISPENSER
Source:	VEHICLE
Source:	HOSE

43
WNW
1/2-1
0.583 mi.
3078 ft.

RESIDENCE
3 CURRIER RD
MANCHESTER, MA 01944

SHWS RELEASE **S113411708 N/A**

Relative: Higher

Actual: 78 ft.

SHWS:

Name:	RESIDENCE
Address:	3 CURRIER RD
City,State,Zip:	MANCHESTER, MA 019440000
Facility ID:	3-0031336
Source Type:	Not reported
Release Town:	MANCHESTER
Notification Date:	01/16/2013
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	01/24/2013
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Hazardous Material

Release:

Name:	RESIDENCE
Address:	3 CURRIER RD
City,State,Zip:	MANCHESTER, MA 019440000
Release Tracking Number/Current Status:	3-0031336 / RAO
Primary ID:	Not reported
Official City:	MANCHESTER
Notification:	01/16/2013
Category:	120 DY
Status Date:	01/24/2013
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/16/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/16/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been

RESIDENCE (Continued) **S113411708**

reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/16/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/24/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: NAPHTHALENE
Quantity: 7.9 milligrams per kilogram
Chemical: ALIPHATIC HYDROCARBONS C9 THROUGH C18
Quantity: 3810 milligrams per kilogram
Chemical: ACENAPHTHENE
Quantity: 10.5 milligrams per kilogram
Chemical: 2-METHYLNAPHTHALENE
Quantity: 7.94 milligrams per kilogram
Chemical: AROMATIC HYDROCARBONS C11 THROUGH C22
Quantity: 2672 milligrams per kilogram
Chemical: ACENAPHTHYLENE
Quantity: 11.4 milligrams per kilogram

---

44 SW 1/2-1 0.640 mi. 3377 ft. **MANCHESTER MARINE** **SHWS S110684351**
ASHLAND AVE **RELEASE N/A**
MANCHESTER, MA 01944

Relative: Lower
Actual: 7 ft.

SHWS:
Name: MANCHESTER MARINE
Address: ASHLAND AVE
City,State,Zip: MANCHESTER, MA 01944
Facility ID: 3-0003657
Source Type: UNKNOWN
Release Town: MANCHESTER
Notification Date: 07/15/1991
Category: NONE
Associated ID: Not reported
Current Status: WSCPRM
Status Date: 12/01/1995
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Oil

Release:
Name: MANCHESTER MARINE
Address: ASHLAND AVE
City,State,Zip: MANCHESTER, MA 01944
Release Tracking Number/Current Status: 3-0003657 / WSCPRM
Primary ID: Not reported
Official City: MANCHESTER

MANCHESTER MARINE (Continued) **S110684351**

Notification: 07/15/1991
Category: NONE
Status Date: 12/01/1995
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: TREGS
Action Status: WAVACC
Action Date: 1/6/1992
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: WCSPRM
Action Date: 12/1/1995
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: WAVSIG
Action Date: 12/23/1991
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 5/21/1992
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1991
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: WAVREC
Action Date: 8/13/1991
Response Action Outcome: Not reported

Chemicals:

Chemical: VOCS
Quantity: Not reported
Location Type: MARINA
Source: UNKNOWN

45
ESE
1/2-1
0.649 mi.
3428 ft.

RESIDENTIAL PROPERTY **SHWS** **S127590277**
195 SUMMER STEET **LUST** **N/A**
MANCHESTER, MA **RELEASE**

Relative:
Higher

Actual:
77 ft.

SHWS:

Name: RESIDENTIAL PROPERTY
Address: 195 SUMMER STEET
City,State,Zip: MANCHESTER, MA
Facility ID: 3-0036881

RESIDENTIAL PROPERTY (Continued) **S127590277**

Source Type:	TANK
Release Town:	MANCHESTER
Notification Date:	06/02/2021
Category:	72 HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	05/31/2022
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Hazardous Material

LUST:

Facility:

Name:	RESIDENTIAL PROPERTY
Address:	195 SUMMER STEET
City,State,Zip:	MANCHESTER, MA
Current Status:	**Permanent Solution with No Conditions**
Release Tracking Number/Current Status:	3-0036881 / PSNC
Status Date:	05/31/2022
Source Type:	UST
Release Town:	MANCHESTER
Notification Date:	06/02/2021
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil Or Haz Material:	Hazardous Material

Location Type:	RESIDNTIAL
Source:	TANK
Source:	UST
Source:	USTOTHER

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	KEROSENE
Quantity:	396 parts per million

Actions:

Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/7/2021
Response Action Outcome:	PN

Action Type:	BOL
Action Status:	SHPFAC
Action Date:	11/2/2021
Response Action Outcome:	PN

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	4/5/2022
Response Action Outcome:	PN

RESIDENTIAL PROPERTY (Continued) **S127590277**

Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	5/31/2022
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	5/31/2022
Response Action Outcome:	PN
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	6/2/2021
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	6/2/2021
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	6/2/2022
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	6/22/2021
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	6/29/2021
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	7/1/2022
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	7/27/2021
Response Action Outcome:	PN
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	7/27/2021
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	8/2/2021
Response Action Outcome:	PN

RESIDENTIAL PROPERTY (Continued) **S127590277**

Facility:

Name:	RESIDENTIAL PROPERTY
Address:	195 SUMMER STEET
City,State,Zip:	MANCHESTER, MA
Current Status:	**Permanent Solution with No Conditions**
Release Tracking Number/Current Status:	3-0036881 / PSNC
Status Date:	05/31/2022
Source Type:	USTOTHER
Release Town:	MANCHESTER
Notification Date:	06/02/2021
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil Or Haz Material:	Hazardous Material
Location Type:	RESIDNTIAL
Source:	TANK
Source:	UST
Source:	USTOTHER

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	KEROSENE
Quantity:	396 parts per million

Actions:

Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/7/2021
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	11/2/2021
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	4/5/2022
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	5/31/2022
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	5/31/2022
Response Action Outcome:	PN
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E

RESIDENTIAL PROPERTY (Continued) **S127590277**

Action Date: 6/2/2021
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/2/2021
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/2/2022
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/22/2021
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/29/2021
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 7/1/2022
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 7/27/2021
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/27/2021
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 8/2/2021
Response Action Outcome: PN

Release:
Name: RESIDENTIAL PROPERTY
Address: 195 SUMMER STEET
City,State,Zip: MANCHESTER, MA
Release Tracking Number/Current Status: 3-0036881 / PSNC
Primary ID: Not reported
Official City: MANCHESTER
Notification: 06/02/2021
Category: 72 HR
Status Date: 05/31/2022
Phase: Not reported
Response Action Outcome: PN - PN
Oil / Haz Material Type: Hazardous Material

RESIDENTIAL PROPERTY (Continued) **S127590277**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/7/2021
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	11/2/2021
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	4/5/2022
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	5/31/2022
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	5/31/2022
Response Action Outcome:	PN
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	6/2/2021
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	6/2/2021
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	6/2/2022
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	6/22/2021
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	6/29/2021
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	7/1/2022
Response Action Outcome:	PN

RESIDENTIAL PROPERTY (Continued) **S127590277**

Action Type: BOL
Action Status: SHPFAC
Action Date: 7/27/2021
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/27/2021
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 8/2/2021
Response Action Outcome: PN

Chemicals:
Chemical: KEROSENE
Quantity: 396 parts per million
Location Type: RESIDNTIAL
Source: TANK
Source: UST
Source: USTOTHER

---

46 West 1/2-1 0.727 mi. 3837 ft. **RESIDENTIAL PROPERTY** **SHWS** **S126984879**
112 PINE STREET **RELEASE** **N/A**
MANCHESTER, MA 01944

Relative: Higher
Actual: 65 ft.

SHWS:
Name: RESIDENTIAL PROPERTY
Address: 112 PINE STREET
City,State,Zip: MANCHESTER, MA 019440000
Facility ID: 3-0036358
Source Type: CONTAINER
Release Town: MANCHESTER
Notification Date: 07/01/2020
Category: TWO HR
Associated ID: Not reported
Current Status: PSNC
Status Date: 08/29/2020
Phase: Not reported
Response Action Outcome: PN
Oil Or Haz Material: Hazardous Material

Release:
Name: RESIDENTIAL PROPERTY
Address: 112 PINE STREET
City,State,Zip: MANCHESTER, MA 019440000
Release Tracking Number/Current Status: 3-0036358 / PSNC
Primary ID: Not reported
Official City: MANCHESTER
Notification: 07/01/2020
Category: TWO HR
Status Date: 08/29/2020
Phase: Not reported
Response Action Outcome: PN - PN

RESIDENTIAL PROPERTY (Continued) **S126984879**

Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Immediate Response Action
Action Status: NOAPP
Action Date: 7/1/2020
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 7/1/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDD1U
Action Date: 7/1/2020
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 7/1/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: PRPMTG
Action Date: 7/1/2020
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/1/2020
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDRUN
Action Date: 7/2/2020
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/21/2020
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 8/29/2020
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/29/2020
Response Action Outcome: PN

Chemicals:

RESIDENTIAL PROPERTY (Continued) **S126984879**

Chemical:	MERCURY
Quantity:	1 pounds
Location Type:	RESIDNTIAL
Source:	CONTAINER

Count: 5 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
MANCHESTER	S118562845	NO LOCATION AID	ELM STREET	01944	SHWS, RELEASE
MANCHESTER	S110684355	NO LOCATION AID	SCHOOL ST	01944	SHWS, RELEASE
MANCHESTER	S110684363	RAILROAD TRACKS	SEA STREET INTERSECTION	01944	SHWS, RELEASE
MANCHESTER	S112146226	NO LOCATION AID	SUMMER STREET	01944	SHWS, RELEASE
MANCHESTER	S117405649	UTILITY POLE NO 1	WALKER ROAD ADJ 26	01944	SHWS, RELEASE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/05/2025
Date Data Arrived at EDR: 06/20/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 68

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 06/20/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/03/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 13

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 03/11/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 83

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 07/29/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 05/19/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/15/2025
Next Scheduled EDR Contact: 12/02/2024
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 05/19/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/15/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/10/2025
Date Data Arrived at EDR: 06/12/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 4

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

SHWS: Site Transition List

Contains information on releases of oil and hazardous materials that have been reported to DEP.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF: Solid Waste Facility Database/Transfer Stations

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 06/28/2024
Date Data Arrived at EDR: 06/28/2024
Date Made Active in Reports: 09/24/2024
Number of Days to Update: 88

Source: Department of Environmental Protection
Telephone: 617-292-5989
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Annually

LF PROFILES: Landfill Profiles Listing

This spreadsheet describes landfills that have actively accepted waste or have closed under MassDEP Solid Waste Regulations first adopted in 1971 (310 CMR 16.00 and 310 CMR 19.00). The list does not include landfills that closed before 1971 (and which never had a MassDEP permit or approval), or for which agency data is incomplete.

Date of Government Version: 07/01/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 12/14/2015
Number of Days to Update: 48

Source: Department of Environmental Protection
Telephone: 617-292-5868
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Varies

Lists of state and tribal leaking storage tanks

LUST: Leaking Underground Storage Tank Listing

Sites within the Leaking Underground Storage Tank Listing that have a UST listed as its source.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

LAST: Leaking Aboveground Storage Tank Sites
Sites within the Releases Database that have a AST listed as its source.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23
Source: Department of Environmental Protection
Telephone: 617-292-5500
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 01/07/2025
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/07/2025
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 04/08/2025
Date Data Arrived at EDR: 04/23/2025
Date Made Active in Reports: 04/24/2025
Number of Days to Update: 1
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 06/24/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

UST: Summary Listing of all the Tanks Registered in the State of Massachusetts
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 02/26/2025
Date Data Arrived at EDR: 05/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 84
Source: Department of Fire Services, Office of the Public Safety
Telephone: 617-556-1035
Last EDR Contact: 07/29/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Quarterly

AST 2: Aboveground Storage Tanks
Aboveground storage tanks

Date of Government Version: 04/03/2025
Date Data Arrived at EDR: 04/03/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 82
Source: Department of Fire Services
Telephone: 978-567-3181
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

AST: Aboveground Storage Tank Database
Registered Aboveground Storage Tanks.

Date of Government Version: 03/15/2025
Date Data Arrived at EDR: 04/08/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 77
Source: Department of Public Safety
Telephone: 617-556-1035
Last EDR Contact: 07/03/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: No Update Planned

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 11/08/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/15/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 01/07/2025
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Sites With Activity and Use Limitation

Activity and Use Limitations establish limits and conditions on the future use of contaminated property, and therefore allow cleanups to be tailored to these uses.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/09/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS 2: Potential Brownfields Listing

A listing of potential brownfields site locations in the state.

Date of Government Version: 07/11/2023
Date Data Arrived at EDR: 07/27/2023
Date Made Active in Reports: 10/16/2023
Number of Days to Update: 81

Source: Department of Environmental Protection
Telephone: 617-556-1007
Last EDR Contact: 07/24/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

BROWNFIELDS: Completed Brownfields Covenants Listing

Under Massachusetts law, M.G.L. c. 21E is the statute that governs the cleanup of releases of oil and/or hazardous material to the environment. The Brownfields Act of 1998 amended M.G.L. c. 21E by establishing significant liability relief and financial incentives to spur the redevelopment of brownfields, while ensuring that the Commonwealth's environmental standards are met. Most brownfields are redeveloped with the benefit of liability protections that operate automatically under M.G.L. c. 21E.

Date of Government Version: 12/31/2024
Date Data Arrived at EDR: 01/22/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 75

Source: Office of the Attorney General
Telephone: 617-963-2423
Last EDR Contact: 07/21/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Annually

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 09/09/2024
Date Data Arrived at EDR: 09/11/2024
Date Made Active in Reports: 12/06/2024
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/04/2025
Next Scheduled EDR Contact: 12/22/2025
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/15/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/08/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 02/07/2024
Date Data Arrived at EDR: 11/13/2024
Date Made Active in Reports: 11/19/2024
Number of Days to Update: 6
Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/17/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 04/04/2025
Date Data Arrived at EDR: 06/02/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 71
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 04/04/2025
Date Data Arrived at EDR: 06/02/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 71
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Quarterly

Local Land Records

LIENS: Liens Information Listing
A listing of environmental liens.

Date of Government Version: 03/07/2018
Date Data Arrived at EDR: 03/09/2018
Date Made Active in Reports: 06/21/2018
Number of Days to Update: 104
Source: Department of Environmental Protection
Telephone: 617-292-5628
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16
Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/11/2025
Date Data Arrived at EDR: 06/12/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 4

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

MA SPILLS: Historical Spill List

The Spills Database was the release notification tracking system for spills that occurred prior to October 1, 1993. This information should be considered to be primarily of historical interest since all of the listed spills have either been cleaned up or assigned new tracking numbers and moved to the Reportable Releases or Sites Transition List databases.

Date of Government Version: 09/30/1993
Date Data Arrived at EDR: 12/03/2003
Date Made Active in Reports: 12/31/2003
Number of Days to Update: 28

Source: Department of Environmental Protection
Telephone: 617-292-5720
Last EDR Contact: 12/03/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

RELEASE: Reportable Releases

Contains information on all releases of oil and hazardous materials that have been reported to DEP

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 12/11/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/08/2013
Number of Days to Update: 36

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 03/10/1998
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/05/2013
Number of Days to Update: 61

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 07/23/2025
Date Data Arrived at EDR: 07/23/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 6

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 07/23/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/07/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 06/25/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/07/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/03/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EPA WATCH LIST: EPA Watch List

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/24/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 07/31/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/11/2025
Next Scheduled EDR Contact: 12/22/2025
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/11/2025
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 7

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/11/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 04/14/2025
Date Data Arrived at EDR: 04/15/2025
Date Made Active in Reports: 07/08/2025
Number of Days to Update: 84

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/14/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/29/2025
Date Data Arrived at EDR: 08/04/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 8

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/05/2025
Date Data Arrived at EDR: 04/11/2025
Date Made Active in Reports: 07/08/2025
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/09/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 28

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 10/02/2024
Date Made Active in Reports: 01/10/2025
Number of Days to Update: 100

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/02/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 05/07/2025
Date Data Arrived at EDR: 05/07/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 27

Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 07/08/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 10/16/2024
Date Made Active in Reports: 01/14/2025
Number of Days to Update: 90

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 08/28/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 07/31/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 09/17/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 03/31/2025
Date Data Arrived at EDR: 04/22/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 86
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/17/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 03/31/2025
Date Data Arrived at EDR: 05/02/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 76

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/24/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/19/2025
Date Made Active in Reports: 03/07/2025
Number of Days to Update: 16

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 06/25/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/28/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 05/15/2025
Date Data Arrived at EDR: 05/15/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 75

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/11/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/01/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/18/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 04/01/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 83

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 04/08/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 84

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 05/28/2025
Date Data Arrived at EDR: 05/28/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 6

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/09/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 06/04/2024
Date Data Arrived at EDR: 11/22/2024
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 88

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/22/2025
Date Data Arrived at EDR: 05/05/2025
Date Made Active in Reports: 05/21/2025
Number of Days to Update: 16

Source: EPA
Telephone: (617) 918-1111
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/22/2025
Date Data Arrived at EDR: 06/25/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 06/25/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 02/14/2025
Date Data Arrived at EDR: 03/11/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 84

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/02/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/12/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/07/2025
Date Data Arrived at EDR: 05/13/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 77

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/07/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 03/23/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 05/05/2025
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 07/16/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS PROJECT: NORTHEASTERN UNIVERSITY PFAS PROJECT

The PFAS Contamination Site Tracker records qualitative and quantitative data from each site in a chart, specifically examining discovery, contamination levels, government response, litigation, health impacts, media coverage, and community characteristics. All data presented in the chart were extracted from government websites, such as state health departments or the Environmental Protection Agency, and news articles.

Date of Government Version: 05/15/2024
Date Data Arrived at EDR: 03/06/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 89

Source: Social Science Environmental Health Research Institute
Telephone: N/A
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS ECHO FIRE TRAIN: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS PT 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 12/16/2016
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 03/10/2017
Number of Days to Update: 63

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: No Update Planned

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data

The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 04/13/2025
Date Data Arrived at EDR: 04/15/2025
Date Made Active in Reports: 07/08/2025
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

UST FINDER: UST Finder Database

EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 106

Source: Environmental Protection Agency
Telephone: 202-564-0394
Last EDR Contact: 08/13/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

UST FINDER RELEASE: UST Finder Releases Database

US EPA’s UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA’s Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/31/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 79

Source: Environmental Protecton Agency
Telephone: 202-564-0394
Last EDR Contact: 08/13/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Semi-Annually

E MANIFEST: Hazardous Waste Electronic Manifest System

EPA established a national system for tracking hazardous waste shipments electronically. This system, known as ?e-Manifest,? will modernize the nation?s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 08/13/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 833-501-6826
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Varies

PFAS: PFAS Contaminated Sites Listing

Detection of Per- and Polyfluoroalkyl Substances (PFAS) in drinking water.

Date of Government Version: 03/24/2025
Date Data Arrived at EDR: 03/25/2025
Date Made Active in Reports: 06/13/2025
Number of Days to Update: 80

Source: Department of Environmental Protection
Telephone: 617-292-6770
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Varies

AIRS: Permitted Facilities Listing

A listing of Air Quality permit applications.

Date of Government Version: 04/07/2025
Date Data Arrived at EDR: 04/08/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 77

Source: Department of Environmental Protection
Telephone: 617-292-5789
Last EDR Contact: 07/20/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

ASBESTOS: Asbestos Notification Listing

Asbestos sites

Date of Government Version: 05/21/2025
Date Data Arrived at EDR: 05/21/2025
Date Made Active in Reports: 08/20/2025
Number of Days to Update: 91

Source: Department of Environmental Protection
Telephone: 617-292-5982
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

DRYCLEANERS: Regulated Drycleaning Facilities

A listing of Department of Environmental Protection regulated drycleaning facilities that use perchloroethylene under the Environmental Results Program.

Date of Government Version: 04/25/2025
Date Data Arrived at EDR: 05/01/2025
Date Made Active in Reports: 07/25/2025
Number of Days to Update: 85

Source: Department of Environmental Protection
Telephone: 617-292-5633
Last EDR Contact: 08/12/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

ENFORCEMENT: Enforcement Action Cases

A listing of enforcement action cases tracked by Department of Environmental Protection programs, including Solid Waste and Hazardous Waste.

Date of Government Version: 04/03/2025
Date Data Arrived at EDR: 04/08/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 77

Source: Department of Environmental Quality
Telephone: 617-292-5979
Last EDR Contact: 07/15/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

FIN ASSURANCE 1: Financial Assurance Information Listing

Information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 12/01/2010
Date Data Arrived at EDR: 12/23/2010
Date Made Active in Reports: 02/03/2011
Number of Days to Update: 42

Source: Department of Environmental Protection
Telephone: 617-292-5970
Last EDR Contact: 08/26/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Varies

FIN ASSURANCE 2: Financial Assurance Information Listing

A listing of financial assurance information for underground storage tanks. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/26/2025
Date Data Arrived at EDR: 05/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 84

Source: Office of State Fire Marshal
Telephone: 978-567-3100
Last EDR Contact: 07/29/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

FIN ASSURANCE 3: Financial Assurance Information listing

Information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay

Date of Government Version: 03/27/2025
Date Data Arrived at EDR: 03/27/2025
Date Made Active in Reports: 06/13/2025
Number of Days to Update: 78

Source: Department of Environmental Protection
Telephone: 617-292-5970
Last EDR Contact: 07/08/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

GWDP: Ground Water Discharge Permits

The Ground Water Discharge Permits datalayer (formerly known as Groundwater Discharge Points) is a statewide point dataset containing approximate locations of permitted discharges to groundwater.

Date of Government Version: 01/10/2025
Date Data Arrived at EDR: 01/22/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 75

Source: MassGIS
Telephone: 617-556-1150
Last EDR Contact: 07/17/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

HW GEN: List of Massachusetts Hazardous Waste Generators

Permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities.

Date of Government Version: 06/04/2025
Date Data Arrived at EDR: 06/16/2025
Date Made Active in Reports: 09/11/2025
Number of Days to Update: 87

Source: Department of Environmental Protection
Telephone: 617-292-5500
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Semi-Annually

MERCURY: Mercury Product Recyling Drop-Off Locations Listing

A listing of locations, collecting and recycling for mercury-added products. Mercury is toxic to the human nervous system, as well as fish and animals. Mercury can enter the body either through skin absorption or through inhalation of mercury vapors. At room temperature, small beads of mercury will vaporize.

Date of Government Version: 04/02/2025
Date Data Arrived at EDR: 05/13/2025
Date Made Active in Reports: 07/25/2025
Number of Days to Update: 73

Source: Department of Environmental Protection
Telephone: 617-292-5632
Last EDR Contact: 08/07/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

NPDES: NPDES Permit Listing
Listing of treatment plants in Massachusetts that hold permits to discharge to groundwater.

Date of Government Version: 05/05/2025
Date Data Arrived at EDR: 05/06/2025
Date Made Active in Reports: 07/30/2025
Number of Days to Update: 85
Source: Department of Environmental Protection
Telephone: 508-767-2781
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

TIER 2: Tier 2 Information Listing
A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 08/07/2024
Date Made Active in Reports: 11/06/2024
Number of Days to Update: 91
Source: Massachusetts Emergency Management Agency
Telephone: 508-820-2019
Last EDR Contact: 07/29/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Annually

TSD: TSD Facility
List of Licensed Hazardous Waste Treatment, Storage Disposal Facilities (TSDFs) in Massachusetts.

Date of Government Version: 06/04/2025
Date Data Arrived at EDR: 06/16/2025
Date Made Active in Reports: 09/11/2025
Number of Days to Update: 87
Source: Department of Environmental Protection
Telephone: 617-292-5580
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Varies

UIC: Underground Injection Control Listing
A list of UIC registration data and their locations

Date of Government Version: 05/05/2025
Date Data Arrived at EDR: 05/06/2025
Date Made Active in Reports: 05/13/2025
Number of Days to Update: 7
Source: Department of Environmental Protection
Telephone: 617-566-1172
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A
Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/04/2025
Date Data Arrived at EDR: 05/06/2025
Date Made Active in Reports: 07/21/2025
Number of Days to Update: 76

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 07/31/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 1

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/17/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/06/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/09/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 07/02/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 08/27/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

MANCHESTER MEMORIAL ELEMENTARY SCHOOL
43 LINCOLN ST
MANCHESTER, MA 01944

TARGET PROPERTY COORDINATES

Latitude (North):	42.579256 - 42° 34' 45.32''
Longitude (West):	70.764275 - 70° 45' 51.39''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	355213.5
UTM Y (Meters):	4715387.5
Elevation:	32 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	19019793 MARBLEHEAD NORTH, MA
Version Date:	2021
East Map:	19019789 GLOUCESTER, MA
Version Date:	2021

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

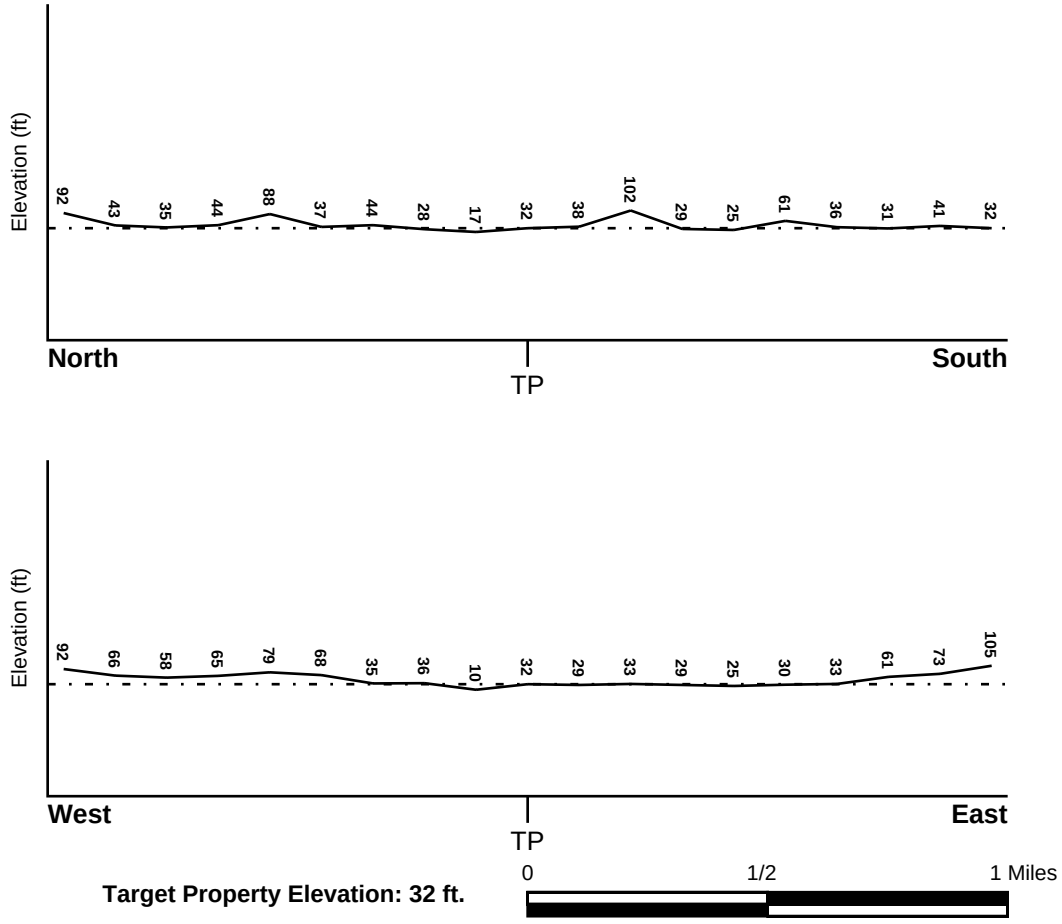
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General North

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 32 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
25009C0434G	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
25009C0433G	FEMA FIRM Flood data
25009C0453G	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
EAST HALF OF SALEM	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
7	1/4 - 1/2 Mile SSW	SE
17	1/2 - 1 Mile SW	ESE
1G	1/4 - 1/2 Mile SSW	SE
2G	1/2 - 1 Mile SW	ESE

For additional site information, refer to Physical Setting Source Map Findings.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

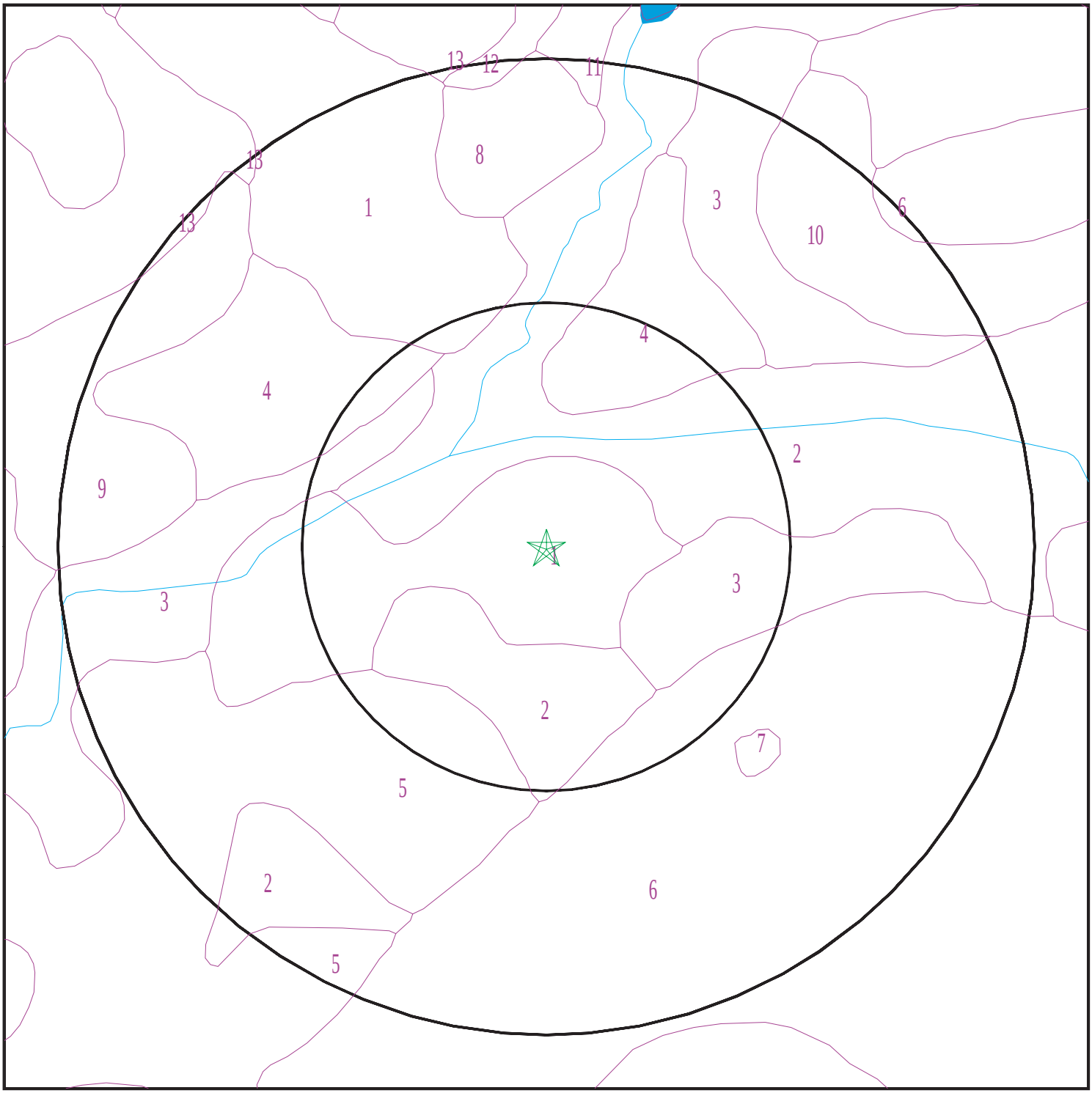
Era:	Paleozoic
System:	Ordovian
Series:	Lower Paleozoic granitic rocks
Code:	Pzg1 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 8116131.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Manchester Memorial Elementary School	CLIENT:	Mabbett & Assoc.
ADDRESS:	43 Lincoln St Manchester MA 01944	CONTACT:	Cassidy Way
LAT/LONG:	42.579256 / 70.764275	INQUIRY #:	8116131.2s
		DATE:	September 22, 2025 1:47 pm

Copyright © 2025 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name:	Udorthents
Soil Surface Texture:	
Hydrologic Group:	Not reported
Soil Drainage Class:	
Hydric Status: Unknown	
Corrosion Potential - Uncoated Steel:	Not Reported
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

No Layer Information available.

Soil Map ID: 2

Soil Component Name:	Scitico
Soil Surface Texture:	silt loam
Hydrologic Group:	Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.
Soil Drainage Class:	Poorly drained
Hydric Status: Partially hydric	
Corrosion Potential - Uncoated Steel:	High
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 15 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6
2	7 inches	42 inches	silty clay loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6
3	42 inches	57 inches	silty clay loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6
4	57 inches	70 inches	silty clay	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6

Soil Map ID: 3

Soil Component Name: Boxford

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.3 Min: 5.1
2	9 inches	16 inches	silt loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.3 Min: 5.1
3	16 inches	44 inches	silty clay loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.3 Min: 5.1
4	44 inches	59 inches	silty clay loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.3 Min: 5.1

Soil Map ID: 4

Soil Component Name: Sudbury

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 69 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	12 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	12 inches	18 inches	sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	18 inches	25 inches	gravelly coarse sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
4	25 inches	59 inches	stratified very gravelly coarse sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 5

Soil Component Name: Montauk

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 68 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sandy loam	Not reported	Not reported	Max: 4.23 Min: 0.42	Max: 6 Min: 3.6
2	3 inches	25 inches	fine sandy loam	Not reported	Not reported	Max: 4.23 Min: 0.42	Max: 6 Min: 3.6
3	25 inches	59 inches	gravelly loamy sand	Not reported	Not reported	Max: 4.23 Min: 0.42	Max: 6 Min: 3.6

Soil Map ID: 6

Soil Component Name: Chatfield

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:
2	5 inches	33 inches	gravelly very fine sandy loam	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:
3	33 inches	59 inches	unweathered bedrock	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 7

Soil Component Name: Water

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 8

Soil Component Name: Shaker

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 23 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.8 Min: 5.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	9 inches	30 inches	sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.8 Min: 5.6
3	30 inches	59 inches	silty clay	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.8 Min: 5.6

Soil Map ID: 9

Soil Component Name: Merrimac

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	9 inches	14 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	14 inches	22 inches	gravelly sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
4	22 inches	59 inches	stratified very gravelly coarse sand to sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 10

Soil Component Name: Rock outcrop

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 11

Soil Component Name: Elmridge

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 69 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.8 Min: 5.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	7 inches	22 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.8 Min: 5.6
3	22 inches	59 inches	silty clay	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.8 Min: 5.6

Soil Map ID: 12

Soil Component Name: Merrimac

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	9 inches	14 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	14 inches	22 inches	gravelly sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
4	22 inches	59 inches	stratified very gravelly coarse sand to sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 13

Soil Component Name: Merrimac

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	9 inches	14 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	14 inches	22 inches	gravelly sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
4	22 inches	59 inches	stratified very gravelly coarse sand to sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	USGS40000477899	0 - 1/8 Mile NE
B3	USGS40000477924	1/8 - 1/4 Mile North
A4	USGS40000477910	1/8 - 1/4 Mile NE
5	USGS40000477898	1/8 - 1/4 Mile ENE
8	USGS40000477985	1/4 - 1/2 Mile NNE
9	USGS40000477980	1/4 - 1/2 Mile NE
10	USGS40000478016	1/4 - 1/2 Mile NNE
11	USGS40000478006	1/4 - 1/2 Mile NNW
12	USGS40000477974	1/2 - 1 Mile ENE
C13	USGS40000478052	1/2 - 1 Mile North
C14	USGS40000478061	1/2 - 1 Mile NNE
15	USGS40000477897	1/2 - 1 Mile East
16	USGS40000477917	1/2 - 1 Mile East
18	USGS40000478130	1/2 - 1 Mile North
19	USGS40000478147	1/2 - 1 Mile North
20	USGS40000478074	1/2 - 1 Mile NE
21	USGS40000478146	1/2 - 1 Mile NNE
22	USGS40000478171	1/2 - 1 Mile North
23	USGS40000478170	1/2 - 1 Mile NNE
D24	USGS40000478131	1/2 - 1 Mile NW
D26	USGS40000478163	1/2 - 1 Mile NW
27	USGS40000478190	1/2 - 1 Mile NNW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

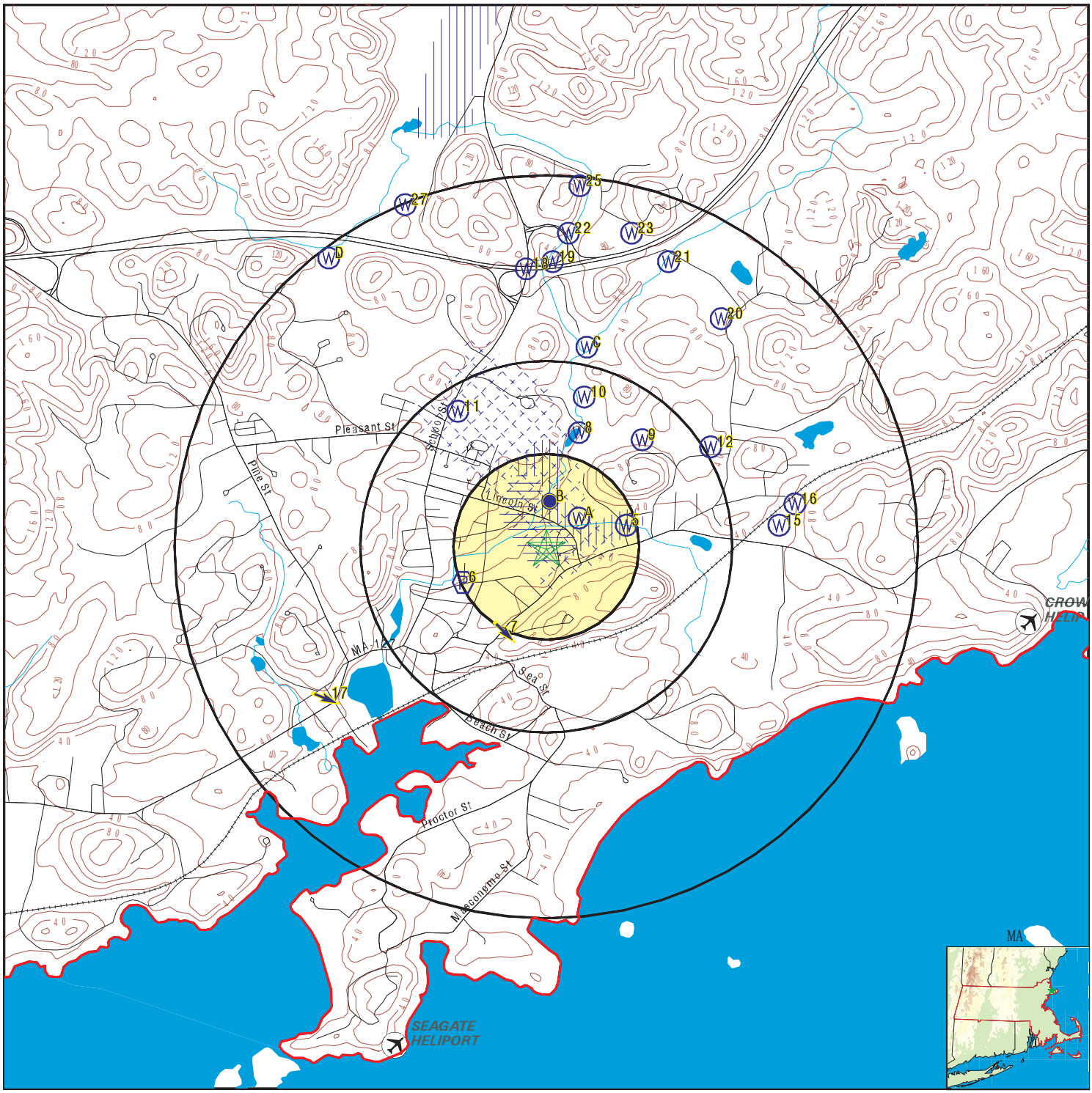
MAP ID	WELL ID	LOCATION FROM TP
6	MA3166000	1/8 - 1/4 Mile WSW

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B2	MA1100000000404	0 - 1/8 Mile North
25	MA1100000000200	1/2 - 1 Mile North

PHYSICAL SETTING SOURCE MAP - 8116131.2s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- Potentially Productive Aquifers
- Not Potentially Productive Aquifers
- DEP Approved Zone IIs
- EPA Designated Sole Src. Aq.

SITE NAME:	Manchester Memorial Elementary School	CLIENT:	Mabbett & Assoc.
ADDRESS:	43 Lincoln St Manchester MA 01944	CONTACT:	Cassidy Way
LAT/LONG:	42.579256 / 70.764275	INQUIRY #:	8116131.2s
		DATE:	September 22, 2025 1:47 pm

Copyright © 2025 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
NE
0 - 1/8 Mile
Lower

FED USGS **USGS40000477899**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 15	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1961
Well Depth:	68	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

B2
North
0 - 1/8 Mile
Lower

MA WELLS **MA1100000000404**

WELLS:

PWS Source ID:	3166000-01G
Site Name:	LINCOLN ST WELL
PWS Type:	Community Groundwater Well
DEP Region:	3
Zone II #:	158

DWP Water Quality Testing System (WQTS) Information:

Water Supplier Name:	MANCHESTER BY THE SEA DPW
Source Name:	LINCOLN ST WELL
Water Supplier Status:	Active
Source Status:	Active
Source Classification:	Community surface and groundwater sources
Source Availability:	ACTIVE

DWP Zone II Information:

Well Name:	LINCOLN ST WELL
Major Drainage Basin:	NORTH COASTAL
Aquifer Type:	CNF
Zone II Approved By:	TA
Zone II Submitted:	01-JAN-90
Zone II Approved:	14-MAY-92
Zone II Status:	Current
Source Pumping Rate (gpm):	261

B3
North
1/8 - 1/4 Mile
Lower

FED USGS **USGS40000477924**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 8	Type:	Well

Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1957
Well Depth:	63	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1957-12-01
Feet below surface:	1.00	Feet to sea level:	Not Reported
Note:	Not Reported		

A4
NE **FED USGS** **USGS40000477910**
1/8 - 1/4 Mile
Lower

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 13	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1961
Well Depth:	53	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

5
ENE **FED USGS** **USGS40000477898**
1/8 - 1/4 Mile
Lower

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 12	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1961
Well Depth:	56	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1961-09-01
Feet below surface:	8.00	Feet to sea level:	Not Reported
Note:	Not Reported		

6
WSW **FRDS PWS** **MA3166000**
1/8 - 1/4 Mile
Lower

Epa region:	01	State:	MA
Pwsid:	MA3166000	Pwsname:	MANCHESTER WATER DEPARTMENT
Cityserved:	Not Reported	Stateserved:	MA

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Zipserved:	Not Reported	Fipscounty:	25009
Status:	Active	Retpopsrvd:	5655
Pwssvcconn:	2069	Psource longname:	Surface_water
Pwstype:	CWS	Owner:	Local_Govt
Contact:	STEVEN T KENNEY	Contactorgname:	MANCHESTER WATER DEPARTMENT
Contactphone:	9785261242	Contactaddress1:	TOWN HALL 10 CENTRAL ST
Contactaddress2:	Not Reported	Contactcity:	MANCHESTER BY THE SEA
Contactstate:	MA	Contactzip:	01944
Pwsactivitycode:	A		

Pwsid:	MA3166000	Facid:	10
Facname:	GRAVELLY POND WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	iron removal
Trtprocess:	hypochlorination, pre	Factypecode:	TP

Pwsid:	MA3166000	Facid:	10
Facname:	GRAVELLY POND WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	iron removal
Trtprocess:	permanganate	Factypecode:	TP

Pwsid:	MA3166000	Facid:	10
Facname:	GRAVELLY POND WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	coagulation	Factypecode:	TP

Pwsid:	MA3166000	Facid:	10
Facname:	GRAVELLY POND WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	filtration, rapid sand	Factypecode:	TP

Pwsid:	MA3166000	Facid:	10
Facname:	GRAVELLY POND WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	inhibitor, orthophosphate	Factypecode:	TP

Pwsid:	MA3166000	Facid:	10
Facname:	GRAVELLY POND WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	other
Trtprocess:	fluoridation	Factypecode:	TP

Pwsid:	MA3166000	Facid:	10
Facname:	GRAVELLY POND WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP

Pwsid:	MA3166000	Facid:	10
Facname:	GRAVELLY POND WTP	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment, post	Factypecode:	TP

Pwsid:	MA3166000	Facid:	13
Facname:	LINCOLN ST WELL	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	inhibitor, orthophosphate	Factypecode:	TP

Pwsid:	MA3166000	Facid:	13
Facname:	LINCOLN ST WELL	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP

Pwsid:	MA3166000	Facid:	13
Facname:	LINCOLN ST WELL	Factype:	Treatment_plant

Facactivitycode:	A	Trtobjective:	other
Trtprocess:	fluoridation	Factypecode:	TP
Pwsid:	MA3166000	Facid:	13
Facname:	LINCOLN ST WELL	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	other
Trtprocess:	fluoridation	Factypecode:	TP
PWS ID:	MA3166000	PWS name:	MANCHESTER WATER DEPARTMENT
Address:	Not Reported	Care of:	TOWN HALL 10 CENTRAL STREET
City:	MANCHESTER	State:	MA
Zip:	019440000	Owner:	MANCHESTER WATER DEPARTMENT
Source code:	Surface water	Population:	5456
PWS ID:	MA3166000	PWS type:	Mailing
PWS name:	MANCHESTER WATER DEPARTMENT		
PWS address:	TOWN HALL CENTRAL STREET	PWS city:	MANCHESTER
PWS state:	MA	PWS zip:	019440000
PWS name:	MANCHESTER WATER DEPARTMENT		
PWS type code:	C	Retail population served:	5581
Contact:	STEVEN T KENNEY	Contact address:	TOWN HALL 10 CENTRAL STREET
Contact address:	MANCHESTER BY THE SEA	Contact city:	MA
Contact state:	01	Contact zip:	9785261242
Contact telephone:	Not Reported		
County:	ESSEX	Source:	Surface water
Treatment Objective:	CORROSION CONTROL	Process:	INHIBITOR, ORTHOPHOSPHATE
Population:	5456		
County:	ESSEX	Source:	Surface water
Treatment Objective:	CORROSION CONTROL	Process:	INHIBITOR, POLYPHOSPHATE
Population:	5456		
County:	ESSEX	Source:	Surface water
Treatment Objective:	CORROSION CONTROL	Process:	PH ADJUSTMENT
Population:	5456		
County:	ESSEX	Source:	Surface water
Treatment Objective:	CORROSION CONTROL	Process:	PH ADJUSTMENT, POST
Population:	5456		
County:	ESSEX	Source:	Surface water
Treatment Objective:	DISINFECTION	Process:	HYPOCHLORINATION, POST
Population:	5456		
County:	ESSEX	Source:	Surface water
Treatment Objective:	DISINFECTION	Process:	HYPOCHLORINATION, PRE
Population:	5456		
County:	ESSEX	Source:	Surface water
Treatment Objective:	IRON REMOVAL	Process:	HYPOCHLORINATION, PRE
Population:	5456		
County:	ESSEX	Source:	Surface water
Treatment Objective:	IRON REMOVAL	Process:	PERMANGANATE
Population:	5456		
County:	ESSEX	Source:	Surface water
Treatment Objective:	IRON REMOVAL	Process:	SEQUESTRATION
Population:	5456		
County:	ESSEX	Source:	Surface water

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Treatment Objective:	MANGANESE REMOVAL	Process:	HYPOCHLORINATION, PRE
Population:	5456		
County:	ESSEX	Source:	Surface water
Treatment Objective:	PARTICULATE REMOVAL	Process:	COAGULATION
Population:	5456		
County:	ESSEX	Source:	Surface water
Treatment Objective:	PARTICULATE REMOVAL	Process:	FILTRATION, RAPID SAND
Population:	5456		
County:	ESSEX	Source:	Surface water
Treatment Objective:	Z	Process:	FLUORIDATION
Population:	5456		
PWS ID:	MA3166000	Activity status:	Active
Date system activated:	9003	Date system deactivated:	Not Reported
Retail population:	00005700	System name:	MANCHESTER WATER DEPARTMENT
System address:	TOWN HALL CENTRAL STREET	System city:	MANCHESTER
System state:	MA	System zip:	019440000
Population served:	5,001 - 10,000 Persons	Treatment:	Treated
Latitude:	423440	Longitude:	0704609
Violation id:	01V0001	Orig code:	S
State:	MA	Violation Year:	2000
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	56		
Violation name:	Initial, Follow-up, or Routine Source Water M/R		
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	01/01/2000
Cmp edt:	Not Reported		
Violation id:	1	Orig code:	S
State:	MA	Violation Year:	2005
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2005
Cmp edt:	Not Reported		
Violation id:	10	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2065	Contamination Name:	Heptachlor
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		
Violation id:	11	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2326	Contamination Name:	Pentachlorophenol
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	12	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2020	Contamination Name:	Toxaphene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	13	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2110	Contamination Name:	2,4,5-TP
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	14	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2015	Contamination Name:	Methoxychlor
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	15	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2010	Contamination Name:	BHC-GAMMA
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	16	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2383		
Contamination Name:	Total Polychlorinated Biphenyls (PCB)		
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	17	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2931	Contamination Name:	1,2-DIBROMO-3-CHLOROPROPANE
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	18	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2306	Contamination Name:	Benzo(a)pyrene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007

Cmp edt: 12/31/2007

Violation id: 19
State: MA
Contamination code: 2031
Violation code: 03
Rule code: 320
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2007
Orig code: S
Violation Year: 2007
Contamination Name: Dalapon
Violation name: Monitoring, Regular
Rule name: SOC
Unit of measure: Not Reported
Cmp bdt: 10/01/2007

Violation id: 2
State: MA
Contamination code: 2051
Violation code: 03
Rule code: 320
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2007
Orig code: S
Violation Year: 2007
Contamination Name: LASSO
Violation name: Monitoring, Regular
Rule name: SOC
Unit of measure: Not Reported
Cmp bdt: 10/01/2007

Violation id: 20
State: MA
Contamination code: 2035
Violation code: 03
Rule code: 320
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2007
Orig code: S
Violation Year: 2007
Contamination Name: Di(2-ethylhexyl) adipate
Violation name: Monitoring, Regular
Rule name: SOC
Unit of measure: Not Reported
Cmp bdt: 10/01/2007

Violation id: 21
State: MA
Contamination code: 2039
Violation code: 03
Rule code: 320
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2007
Orig code: S
Violation Year: 2007
Contamination Name: Di(2-ethylhexyl) phthalate
Violation name: Monitoring, Regular
Rule name: SOC
Unit of measure: Not Reported
Cmp bdt: 10/01/2007

Violation id: 22
State: MA
Contamination code: 2041
Violation code: 03
Rule code: 320
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2007
Orig code: S
Violation Year: 2007
Contamination Name: Dinoseb
Violation name: Monitoring, Regular
Rule name: SOC
Unit of measure: Not Reported
Cmp bdt: 10/01/2007

Violation id: 23
State: MA
Contamination code: 2032
Violation code: 03
Rule code: 320
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2007
Orig code: S
Violation Year: 2007
Contamination Name: Diquat
Violation name: Monitoring, Regular
Rule name: SOC
Unit of measure: Not Reported
Cmp bdt: 10/01/2007

Violation id: 24
State: MA
Contamination code: 2033
Violation code: 03
Rule code: 320
Violation measur: Not Reported
Orig code: S
Violation Year: 2007
Contamination Name: Endothall
Violation name: Monitoring, Regular
Rule name: SOC
Unit of measure: Not Reported

State mcl: Not Reported
Cmp bdt: 10/01/2007
Cmp edt: 12/31/2007

Violation id: 25
Orig code: S
State: MA
Violation Year: 2007
Contamination code: 2034
Contamination Name: Glyphosate
Violation code: 03
Violation name: Monitoring, Regular
Rule code: 320
Rule name: SOC
Violation measur: Not Reported
Unit of measure: Not Reported
State mcl: Not Reported
Cmp bdt: 10/01/2007
Cmp edt: 12/31/2007

Violation id: 26
Orig code: S
State: MA
Violation Year: 2007
Contamination code: 2274
Contamination Name: HEXACHLOROBENZENE
Violation code: 03
Violation name: Monitoring, Regular
Rule code: 320
Rule name: SOC
Violation measur: Not Reported
Unit of measure: Not Reported
State mcl: Not Reported
Cmp bdt: 10/01/2007
Cmp edt: 12/31/2007

Violation id: 27
Orig code: S
State: MA
Violation Year: 2007
Contamination code: 2042
Contamination Name: Hexachlorocyclopentadiene
Violation code: 03
Violation name: Monitoring, Regular
Rule code: 320
Rule name: SOC
Violation measur: Not Reported
Unit of measure: Not Reported
State mcl: Not Reported
Cmp bdt: 10/01/2007
Cmp edt: 12/31/2007

Violation id: 28
Orig code: S
State: MA
Violation Year: 2007
Contamination code: 2036
Contamination Name: OXAMYL
Violation code: 03
Violation name: Monitoring, Regular
Rule code: 320
Rule name: SOC
Violation measur: Not Reported
Unit of measure: Not Reported
State mcl: Not Reported
Cmp bdt: 10/01/2007
Cmp edt: 12/31/2007

Violation id: 29
Orig code: S
State: MA
Violation Year: 2007
Contamination code: 2040
Contamination Name: Picloram
Violation code: 03
Violation name: Monitoring, Regular
Rule code: 320
Rule name: SOC
Violation measur: Not Reported
Unit of measure: Not Reported
State mcl: Not Reported
Cmp bdt: 10/01/2007
Cmp edt: 12/31/2007

Violation id: 3
Orig code: S
State: MA
Violation Year: 2007
Contamination code: 2050
Contamination Name: Atrazine
Violation code: 03
Violation name: Monitoring, Regular
Rule code: 320
Rule name: SOC
Violation measur: Not Reported
Unit of measure: Not Reported
State mcl: Not Reported
Cmp bdt: 10/01/2007
Cmp edt: 12/31/2007

Violation id: 30
Orig code: S
State: MA
Violation Year: 2007
Contamination code: 2037
Contamination Name: Simazine
Violation code: 03
Violation name: Monitoring, Regular
Rule code: 320
Rule name: SOC

Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	31	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2063	Contamination Name:	2,3,7,8-TCDD
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	32	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2388	Contamination Name:	Aroclor 1016
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	500	Rule name:	Not Regulated
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	33	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2390	Contamination Name:	Aroclor 1221
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	500	Rule name:	Not Regulated
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	34	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2392	Contamination Name:	Aroclor 1232
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	500	Rule name:	Not Regulated
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	35	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2394	Contamination Name:	Aroclor 1242
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	500	Rule name:	Not Regulated
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	36	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2396	Contamination Name:	Aroclor 1248
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	500	Rule name:	Not Regulated
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	37	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2398	Contamination Name:	Aroclor 1254
Violation code:	03	Violation name:	Monitoring, Regular

Rule code:	500	Rule name:	Not Regulated
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	38	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2399	Contamination Name:	PCB 1262
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	500	Rule name:	Not Regulated
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	39	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2400	Contamination Name:	Aroclor 1260
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	500	Rule name:	Not Regulated
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	4	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2046	Contamination Name:	Carbofuran
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	41	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2990	Contamination Name:	Benzene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	42	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2982	Contamination Name:	Carbon tetrachloride
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	43	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2977	Contamination Name:	1,1-Dichloroethylene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	44	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2980	Contamination Name:	1,2-Dichloroethane

Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	45	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2984	Contamination Name:	Trichloroethylene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	46	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2981	Contamination Name:	1,1,1-Trichloroethane
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	47	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2976	Contamination Name:	Vinyl chloride
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	48	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2989	Contamination Name:	CHLOROBENZENE
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	49	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2968	Contamination Name:	o-Dichlorobenzene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	5	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2959	Contamination Name:	Chlordane
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	50	Orig code:	S
State:	MA	Violation Year:	2008

Contamination code:	2979	Contamination Name:	trans-1,2-Dichloroethylene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	51	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2380	Contamination Name:	cis-1,2-Dichloroethylene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	52	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2983	Contamination Name:	1,2-Dichloropropane
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	53	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2992	Contamination Name:	Ethylbenzene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	54	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2996	Contamination Name:	Styrene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	55	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2987	Contamination Name:	Tetrachloroethylene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	56	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2991	Contamination Name:	Toluene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	57	Orig code:	S

State: MA
Contamination code: 2969
Violation code: 03
Rule code: 310
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2008
Violation Year: 2008
Contamination Name: p-Dichlorobenzene
Violation name: Monitoring, Regular
Rule name: VOC
Unit of measure: Not Reported
Cmp bdt: 10/01/2008

Violation id: 58
State: MA
Contamination code: 2955
Violation code: 03
Rule code: 310
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2008
Orig code: S
Violation Year: 2008
Contamination Name: Xylenes, Total
Violation name: Monitoring, Regular
Rule name: VOC
Unit of measure: Not Reported
Cmp bdt: 10/01/2008

Violation id: 59
State: MA
Contamination code: 2964
Violation code: 03
Rule code: 310
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2008
Orig code: S
Violation Year: 2008
Contamination Name: DICHLOROMETHANE
Violation name: Monitoring, Regular
Rule name: VOC
Unit of measure: Not Reported
Cmp bdt: 10/01/2008

Violation id: 6
State: MA
Contamination code: 2105
Violation code: 03
Rule code: 320
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2007
Orig code: S
Violation Year: 2007
Contamination Name: 2,4-D
Violation name: Monitoring, Regular
Rule name: SOC
Unit of measure: Not Reported
Cmp bdt: 10/01/2007

Violation id: 60
State: MA
Contamination code: 2962
Violation code: 03
Rule code: 500
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2008
Orig code: S
Violation Year: 2008
Contamination Name: p-Xylene
Violation name: Monitoring, Regular
Rule name: Not Regulated
Unit of measure: Not Reported
Cmp bdt: 10/01/2008

Violation id: 61
State: MA
Contamination code: 2985
Violation code: 03
Rule code: 310
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2008
Orig code: S
Violation Year: 2008
Contamination Name: 1,1,2-Trichloroethane
Violation name: Monitoring, Regular
Rule name: VOC
Unit of measure: Not Reported
Cmp bdt: 10/01/2008

Violation id: 62
State: MA
Contamination code: 2251
Violation code: 03
Rule code: 500
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2008
Orig code: S
Violation Year: 2008
Contamination Name: METHYL TERT-BUTYL ETHER
Violation name: Monitoring, Regular
Rule name: Not Regulated
Unit of measure: Not Reported
Cmp bdt: 10/01/2008

Violation id:	63	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2378	Contamination Name:	1,2,4-Trichlorobenzene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	64	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2456	Contamination Name:	Total Haloacetic Acids (HAA5)
Violation code:	27	Violation name:	Monitoring and Reporting (DBP)
Rule code:	210	Rule name:	St1 DBP
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	12/31/2008		

Violation id:	65	Orig code:	S
State:	MA	Violation Year:	2009
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2009
Cmp edt:	Not Reported		

Violation id:	69	Orig code:	S
State:	MA	Violation Year:	2009
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	01/01/2009
Cmp edt:	Not Reported		

Violation id:	7	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2005	Contamination Name:	Endrin
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	70	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	2950	Contamination Name:	TTHM
Violation code:	27	Violation name:	Monitoring and Reporting (DBP)
Rule code:	210	Rule name:	St1 DBP
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	12/01/2008
Cmp edt:	12/31/2008		

Violation id:	8	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2946	Contamination Name:	ETHYLENE DIBROMIDE
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation id:	9	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	2067	Contamination Name:	Heptachlor epoxide
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	320	Rule name:	SOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2007
Cmp edt:	12/31/2007		

Violation ID:	01V0001	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	04/11/2002
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving

Violation ID:	01V0001	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	08/09/2001
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	1	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	10/17/2006
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving

Violation ID:	1	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	01/24/2006
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	10	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	11	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	12	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	13	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	14	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	15	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	16	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	17	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	18	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	19	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	2	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	20	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	21	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	22	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	23	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	24	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	25	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	26	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	27	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	28	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008

Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 29 Orig Code: S
Enforcemnt FY: 2008 Enforcement Action: 01/29/2008
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 3 Orig Code: S
Enforcemnt FY: 2008 Enforcement Action: 01/29/2008
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 30 Orig Code: S
Enforcemnt FY: 2008 Enforcement Action: 01/29/2008
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 31 Orig Code: S
Enforcemnt FY: 2008 Enforcement Action: 01/29/2008
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 32 Orig Code: S
Enforcemnt FY: 2008 Enforcement Action: 01/29/2008
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 33 Orig Code: S
Enforcemnt FY: 2008 Enforcement Action: 01/29/2008
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 34 Orig Code: S
Enforcemnt FY: 2008 Enforcement Action: 01/29/2008
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 35 Orig Code: S
Enforcemnt FY: 2008 Enforcement Action: 01/29/2008
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 36 Orig Code: S
Enforcemnt FY: 2008 Enforcement Action: 01/29/2008
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 37 Orig Code: S
Enforcemnt FY: 2008 Enforcement Action: 01/29/2008
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 38 Orig Code: S
Enforcemnt FY: 2008 Enforcement Action: 01/29/2008
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 39 Orig Code: S
Enforcemnt FY: 2008 Enforcement Action: 01/29/2008
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID:	4	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	41	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/28/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	42	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/28/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	43	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/28/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	44	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/28/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	45	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/28/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	46	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/28/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	47	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/28/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	48	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/28/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	49	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/28/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	5	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	50	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/28/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	51	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/28/2009

Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 52 Orig Code: S
Enforcemnt FY: 2009 Enforcement Action: 01/28/2009
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 53 Orig Code: S
Enforcemnt FY: 2009 Enforcement Action: 01/28/2009
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 54 Orig Code: S
Enforcemnt FY: 2009 Enforcement Action: 01/28/2009
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 55 Orig Code: S
Enforcemnt FY: 2009 Enforcement Action: 01/28/2009
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 56 Orig Code: S
Enforcemnt FY: 2009 Enforcement Action: 01/28/2009
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 57 Orig Code: S
Enforcemnt FY: 2009 Enforcement Action: 01/28/2009
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 58 Orig Code: S
Enforcemnt FY: 2009 Enforcement Action: 01/28/2009
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 59 Orig Code: S
Enforcemnt FY: 2009 Enforcement Action: 01/28/2009
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 6 Orig Code: S
Enforcemnt FY: 2008 Enforcement Action: 01/29/2008
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 60 Orig Code: S
Enforcemnt FY: 2009 Enforcement Action: 01/28/2009
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 61 Orig Code: S
Enforcemnt FY: 2009 Enforcement Action: 01/28/2009
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 62 Orig Code: S
Enforcemnt FY: 2009 Enforcement Action: 01/28/2009
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID:	63	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/28/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	64	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/28/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	65	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	07/17/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	65	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	07/29/2009
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	69	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	12/22/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	69	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	05/26/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	7	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	70	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	01/28/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	8	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	9	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/29/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	Not Reported	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	11/10/2005
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Not Reported
Violation ID:	Not Reported	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	07/14/2011
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Not Reported		
Violation ID:	Not Reported	Orig Code:	S
Enforcemnt FY:	2014	Enforcement Action:	12/31/2013
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Not Reported		

Violation ID:	Not Reported	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	04/16/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Not Reported		

Violation ID:	Not Reported	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	02/09/2005
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Not Reported		

Violation ID:	Not Reported	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	06/26/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Not Reported		

Violation ID:	Not Reported	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	02/27/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Not Reported		

Violation ID:	Not Reported	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/16/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Not Reported		

Violation ID:	Not Reported	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/15/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Not Reported		

Violation ID:	Not Reported	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	04/17/2009
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Not Reported		

Violation ID:	Not Reported	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	09/03/2005
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Not Reported		

Violation ID:	Not Reported	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	05/28/2013
Enforcement Detail:	St AO (w/penalty) issued	Enforcement Category:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	01V0001	Contaminant:	Lead & Copper Rule
Violation type:	Initial, Follow-up, or Routine SOWT M&R		
Compliance start date:	1/1/2000 0:00:00	Compliance end date:	4/11/2002 0:00:00
Enforcement date:	4/11/2002 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	0		

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	01V0001	Contaminant:	Lead & Copper Rule
Violation type:	Initial, Follow-up, or Routine SOWT M&R		
Compliance start date:	1/1/2000 0:00:00	Compliance end date:	4/11/2002 0:00:00
Enforcement date:	8/9/2001 0:00:00	Enforcement action:	State Formal NOV Issued
Violation measurement:	0		

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C

Violation ID:	1	Contaminant:	Lead & Copper Rule
Violation type:	Follow-up and Routine Tap Sampling		
Compliance start date:	10/1/2005 0:00:00	Compliance end date:	10/17/2006 0:00:00
Enforcement date:	1/24/2006 0:00:00	Enforcement action:	State Formal NOV Issued
Violation measurement:	Not Reported		

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	1	Contaminant:	Lead & Copper Rule
Violation type:	Follow-up and Routine Tap Sampling		
Compliance start date:	10/1/2005 0:00:00	Compliance end date:	10/17/2006 0:00:00
Enforcement date:	10/17/2006 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	10	Contaminant:	Heptachlor
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	11	Contaminant:	Pentachlorophenol
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	12	Contaminant:	Toxaphene
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	13	Contaminant:	2,4,5-Tp (Silvex)
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	14	Contaminant:	Methoxychlor
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	15	Contaminant:	Bhc-Gamma (Lindane)
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	16		
Contaminant:	Total Polychlorinated Biphenyls (Pcb)		
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00

Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported
PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	17	Contaminant:	1,2 Dibromo-3-Chloropropane (Dbcp)
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported
PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	18	Contaminant:	Benzo (A) Pyrene
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported
PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	19	Contaminant:	Dalapon
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported
PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	2	Contaminant:	Alachlor (Lasso)
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported
PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	20	Contaminant:	Di (2-Ethylhexyl) Adipate
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported
PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	21	Contaminant:	Di (2-Ethylhexyl) Phthalate
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported
PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	22	Contaminant:	Dinoseb
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported
PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	23	Contaminant:	Diquat
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported
PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	24	Contaminant:	Endothall
Violation type:	3	Compliance start date:	10/1/2007 0:00:00

Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	25	Contaminant:	Glyphosate
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	26	Contaminant:	Hexachlorobenzene (Hcb)
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	27	Contaminant:	Hexachlorocyclopentadiene
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	28	Contaminant:	Oxamyl (Vydate)
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	29	Contaminant:	Picloram
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	3	Contaminant:	Atrazine
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	30	Contaminant:	Simazine
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	31	Contaminant:	2,3,7,8-Tcdd (Dioxin)
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	32	Contaminant:	Aroclor 1016

Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	33	Contaminant:	Aroclor 1221
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	34	Contaminant:	Aroclor 1232
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	35	Contaminant:	Aroclor 1242
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	36	Contaminant:	Aroclor 1248
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	37	Contaminant:	Aroclor 1254
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	38	Contaminant:	Pcb 1262
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	39	Contaminant:	Aroclor 1260
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	4	Contaminant:	Carbofuran
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C

Violation ID:	40	Contaminant:	Tthm
Violation type:	3	Compliance start date:	12/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	41	Contaminant:	Benzene
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	42	Contaminant:	Carbon Tetrachloride
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	43	Contaminant:	1,1-Dichloroethylene
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	44	Contaminant:	1,2-Dichloroethane
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	45	Contaminant:	Trichloroethylene
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	46	Contaminant:	1,1,1-Trichloroethane
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	47	Contaminant:	Vinyl Chloride
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	48	Contaminant:	Monochlorobenzene (Chlorobenzene)
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name: MANCHESTER WATER DEPARTMENT

Population served:	5581	PWS type code:	C
Violation ID:	49	Contaminant:	O-Dichlorobenzene
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	5	Contaminant:	Chlordane
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	50	Contaminant:	Trans-1,2-Dichloroethylene
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	51	Contaminant:	Cis-1,2-Dichloroethylene
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	52	Contaminant:	1,2-Dichloropropane
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	53	Contaminant:	Ethylbenzene
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	54	Contaminant:	Styrene
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	55	Contaminant:	Tetrachloroethylene
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	56	Contaminant:	Toluene
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	57	Contaminant:	P-Dichlorobenzene
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	58	Contaminant:	Xylenes, Total
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	59		
Contaminant:	Methylene Chloride (Dichloromethane)		
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	6	Contaminant:	2,4-D
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	60	Contaminant:	P-Xylene
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	61	Contaminant:	1,1,2-Trichloroethane
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	62	Contaminant:	Methyl-Tert-Butyl-Ether
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	63	Contaminant:	1,2,4-Trichlorobenzene
Violation type:	3	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of
Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported

PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	64	Contaminant:	2456
Violation type:	27	Compliance start date:	10/1/2008 0:00:00
Compliance end date:	12/31/2008 0:00:00	Enforcement date:	No Enf Action as of

Enforcement action:	7/8/2009 0:00:00	Violation measurement:	Not Reported
PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	7	Contaminant:	Endrin
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported
PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	8	Contaminant:	Ethylene Dibromide (Edb)
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported
PWS name:	MANCHESTER WATER DEPARTMENT		
Population served:	5581	PWS type code:	C
Violation ID:	9	Contaminant:	Heptachlor Epoxide
Violation type:	3	Compliance start date:	10/1/2007 0:00:00
Compliance end date:	12/31/2007 0:00:00	Enforcement date:	1/29/2008 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	Not Reported

---

7
SSW
1/4 - 1/2 Mile
Higher

AQUIFLOW **2633**

Site ID:	3-0002657
Groundwater Flow:	SE
Water Table Depth:	Shallowest: 10 ft. Deepest: 25 ft.
Date:	09/1997

8
NNE
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000477985**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 9	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1961
Well Depth:	53	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

9
NE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000477980**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 19	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1966
Well Depth:	33	Well Depth Units:	ft

Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

10
NNE **FED USGS** **USGS40000478016**
1/4 - 1/2 Mile
Lower

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 11	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1961
Well Depth:	44	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

11
NNW **FED USGS** **USGS40000478006**
1/4 - 1/2 Mile
Higher

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 17	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1966
Well Depth:	34	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

12
ENE **FED USGS** **USGS40000477974**
1/2 - 1 Mile
Higher

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 18	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1966
Well Depth:	36	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

C13
North
1/2 - 1 Mile
Lower

FED USGS **USGS40000478052**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 16	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1966
Well Depth:	34	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

C14
NNE
1/2 - 1 Mile
Lower

FED USGS **USGS40000478061**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 7	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1966
Well Depth:	53	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1966-02-01
Feet below surface:	1.00	Feet to sea level:	Not Reported
Note:	Not Reported		

15
East
1/2 - 1 Mile
Higher

FED USGS **USGS40000477897**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 26	Type:	Well
Description:	Not Reported	HUC:	Not Reported
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1965
Well Depth:	32	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1965-12-01
Feet below surface:	-2.00	Feet to sea level:	Not Reported
Note:	Not Reported		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

16
East
1/2 - 1 Mile
Higher

FED USGS **USGS40000477917**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 25	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1965
Well Depth:	26	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1965-12-01
Feet below surface:	-1.00	Feet to sea level:	Not Reported
Note:	Not Reported		

17
SW
1/2 - 1 Mile
Higher

AQUIFLOW **2575**

Site ID:	3-0003248
Groundwater Flow:	ESE
Water Table Depth:	Shallowest: 5.5 ft. Deepest: 19.2 ft.
Date:	01/08/91

18
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000478130**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCB 1	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1952
Well Depth:	4	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

19
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000478147**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCB 2	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1952
Well Depth:	15	Well Depth Units:	ft

Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

20
NE **FED USGS** **USGS40000478074**
1/2 - 1 Mile
Higher

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 14	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1966
Well Depth:	23	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

21
NNE **FED USGS** **USGS40000478146**
1/2 - 1 Mile
Higher

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 10	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1966
Well Depth:	42	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

22
North **FED USGS** **USGS40000478171**
1/2 - 1 Mile
Higher

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCB 3	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1952
Well Depth:	2	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1952-05-01
Feet below surface:	-1.00	Feet to sea level:	Not Reported
Note:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

23
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40000478170**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 22	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Bedrock
Aquifer Type:	Not Reported	Construction Date:	1973
Well Depth:	165	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

D24
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000478131**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 23	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1965
Well Depth:	24	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1965-12-01
Feet below surface:	1.00	Feet to sea level:	Not Reported
Note:	Not Reported		

25
North
1/2 - 1 Mile
Higher

MA WELLS **MA1100000000200**

WELLS:

PWS Source ID:	3166003-01G
Site Name:	MANCHESTER MEDICAL OFFICE BUILDING
PWS Type:	Transient Non-Community
DEP Region:	3
Zone II #:	0

DWP Water Quality Testing System (WQTS) Information:

Water Supplier Name:	MANCHESTER MEDICAL OFFICE BUILDING
Source Name:	WELL 1
Water Supplier Status:	Active
Source Status:	Active
Source Classification:	Transient Non Community
Source Availability:	ACTIVE

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

D26
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000478163**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 24	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1965
Well Depth:	45	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1965-12-01
Feet below surface:	1.00	Feet to sea level:	Not Reported
Note:	Not Reported		

27
NNW
1/2 - 1 Mile
Higher

FED USGS **USGS40000478190**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-MCW 3	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1965
Well Depth:	45	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

1G
SSW
1/4 - 1/2 Mile
Lower

Site ID:	3-0002657
Groundwater Flow:	SE
Water Table Depth:	Shallowest: 10 ft. Deepest: 25 ft.
Date:	09/1997

AQUIFLOW **2633**

2G
SW
1/2 - 1 Mile
Lower

Site ID:	3-0003248
Groundwater Flow:	ESE
Water Table Depth:	Shallowest: 5.5 ft. Deepest: 19.2 ft.
Date:	01/08/91

AQUIFLOW **2575**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: MA Radon

Radon Test Results

County	% of sites>4 pCi/L	Median
ESSEX	36	2.8

Federal EPA Radon Zone for ESSEX County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 01944

Number of sites tested: 4

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	16.250 pCi/L	25%	50%	25%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Massachusetts Geographic Information System (MassGIS) Datalayers
Source: Executive Office of Environmental Affairs
Telephone:

Public Water Supply Database

Telephone:
The Public Water Supply datalayer contains the locations of public community surface and groundwater supply sources and public non-community supply sources as defined in 310 CMR 22.00.

Areas of Critical Environmental Concern

Telephone:
The Areas of Critical Environmental Concern (ACEC) datalayer shows the location of areas that have been designated ACECs by the Secretary of Environmental Affairs. ACEC designation requires greater environmental review of certain kinds of proposed development under state jurisdiction within the ACEC boundaries. The ACEC Program is administered by the Department of Environmental Management (DEM) on behalf of the Secretary of Environmental Affairs. The Massachusetts Coastal Zone Management (MCZM) Office managed the original Coastal ACEC Program from 1978 to 1993, and continues to play a key role in monitoring coastal ACECs. Procedures for ACEC designation and the general policies governing the effects of designation are contained in the ACEC regulations (301 CMR 12.00). The ACEC datalayer has been compiled by MCZM and DEM and includes both coastal and inland areas.

EPA Designated Sole Source Aquifers

Telephone:
The Sole Source Aquifer datalayer was compiled by the Department of Environmental Protection (DEP) Division of Water Supply (DWS). Seven Sole Source Aquifers have been designated by the US Environmental Protection Agency (EPA) for Massachusetts. A Sole Source Aquifer (SSA) is an aquifer designated by US EPA as the sole or principal source of drinking water for a given aquifer service area; that is, an aquifer which is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should that aquifer become contaminated. The aquifers were defined by an EPA hydrogeologist.

Aquifers

Telephone:
MassGIS produced an aquifer datalayer composed of 20 individual panels, generally based on the boundaries of the major drainage basins. Areas of high and medium yield were mapped. This datalayer includes polygon attribute coding to help in the identification of areas in which cleanup of hazardous waste sites must meet drinking water standards, as defined in the Massachusetts Contingency Plan (MCP) (310 CMR 40.00000).

Non-Potential Drinking Water Source Areas

Telephone:
Non-Potential Drinking Water Source Areas (NPDWSA) are regulatory in nature representing one of many considerations used in determining the standards to which ground water must be cleaned in the event of a release of oil or hazardous material. NPDWSAs are not based on existing water quality and do not indicate poor ambient conditions.

DEP Approved Zone IIs

Telephone:
The Department of Environmental Protection (DEP) approved Zone IIs datalayer was compiled by the DEP Division of Water Supply (DWS). The database contains 281 approved Zone IIs statewide. As stated in 310 CMR 22.02, a Zone II is 'that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation.) It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone IIs shall extend up gradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary).' These data are used in association with the Public Water Supplies datalayer. The following describes certain unique features of this association.\n - Any proposed new well which will pump at least 100,000 gallons per day must have a Zone II delineation completed and approved by DEP prior to the well coming on line. \n- Additionally, a new source may not be on-line yet, but other, older wells may fall within its Zone II boundary.\n - Further, existing wells must have a Zone II delineated as a condition of receiving a water withdrawal permit under the Water Management Act.

OTHER STATE DATABASE INFORMATION

RADON

State Database: MA Radon
Source: Department of Health
Telephone: 413-586-7525
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

APPENDIX E

ADDITIONAL EDR REPORTS

Historical USGS Topography Maps
Historical Aerial Photographs
Historical City Directories
Certified Sanborn® Map Report

Manchester Memorial Elementary School

43 Lincoln St

Manchester, MA 01944

Inquiry Number: 8116131.4

September 22, 2025

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

09/22/25

Site Name:

Manchester Memorial Element
43 Lincoln St
Manchester, MA 01944
EDR Inquiry # 8116131.4

Client Name:

Mabbett & Assoc.
105 Central Street, Suite 4100
Stoneham, MA 02180
Contact: Cassidy Way

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Mabbett & Assoc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA

Project: R2025131.001.004

Coordinates:

Latitude:	42.579256 42° 34' 45" North
Longitude:	-70.764275 -70° 45' 51" West
UTM Zone:	Zone 19 North
UTM X Meters:	355217.59
UTM Y Meters:	4715602.09
Elevation:	32.83' above sea level

Maps Provided:

2021	1956, 1960
2018	1949, 1950
2015	1945
2012	1943
2005	1919
1984, 1985	1915
1977	1893
1970, 1973	1888

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT. Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2025 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2021 Source Sheets



Marblehead North
2021
7.5-minute, 24000



Gloucester
2021
7.5-minute, 24000

2018 Source Sheets



Marblehead North
2018
7.5-minute, 24000



Gloucester
2018
7.5-minute, 24000

2015 Source Sheets



Marblehead North
2015
7.5-minute, 24000



Gloucester
2015
7.5-minute, 24000

2012 Source Sheets



Marblehead North
2012
7.5-minute, 24000



Gloucester
2012
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2005 Source Sheets



Salem
2005
7.5-minute, 25000
Aerial Photo Revised 1978

1984, 1985 Source Sheets



Gloucester
1984
7.5-minute, 25000
Aerial Photo Revised 1978



Salem
1985
7.5-minute, 25000
Aerial Photo Revised 1978

1977 Source Sheets



Marblehead North
1977
7.5-minute, 25000
Aerial Photo Revised 1977

1970, 1973 Source Sheets



Marblehead North
1970
7.5-minute, 24000
Aerial Photo Revised 1969



Gloucester
1973
7.5-minute, 24000
Aerial Photo Revised 1972

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1956, 1960 Source Sheets

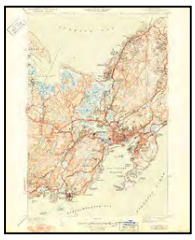


Marblehead North
1956
7.5-minute, 24000
Aerial Photo Revised 1955



Gloucester
1960
7.5-minute, 24000

1949, 1950 Source Sheets



Gloucester
1949
7.5-minute, 31680



Marblehead North
1950
7.5-minute, 31680

1945 Source Sheets



Gloucester
1945
7.5-minute, 31680



Marblehead North
1945
7.5-minute, 31680

1943 Source Sheets



Cape Ann
1943
30-minute, 125000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1919 Source Sheets



Salem
1919
15-minute, 62500

1915 Source Sheets



SALEM
1915
15-minute, 62500

1893 Source Sheets



Salem
1893
15-minute, 62500



Gloucester
1893
15-minute, 62500

1888 Source Sheets



Salem
1888
15-minute, 62500



Gloucester
1888
15-minute, 62500

Historical Topo Map

2021



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

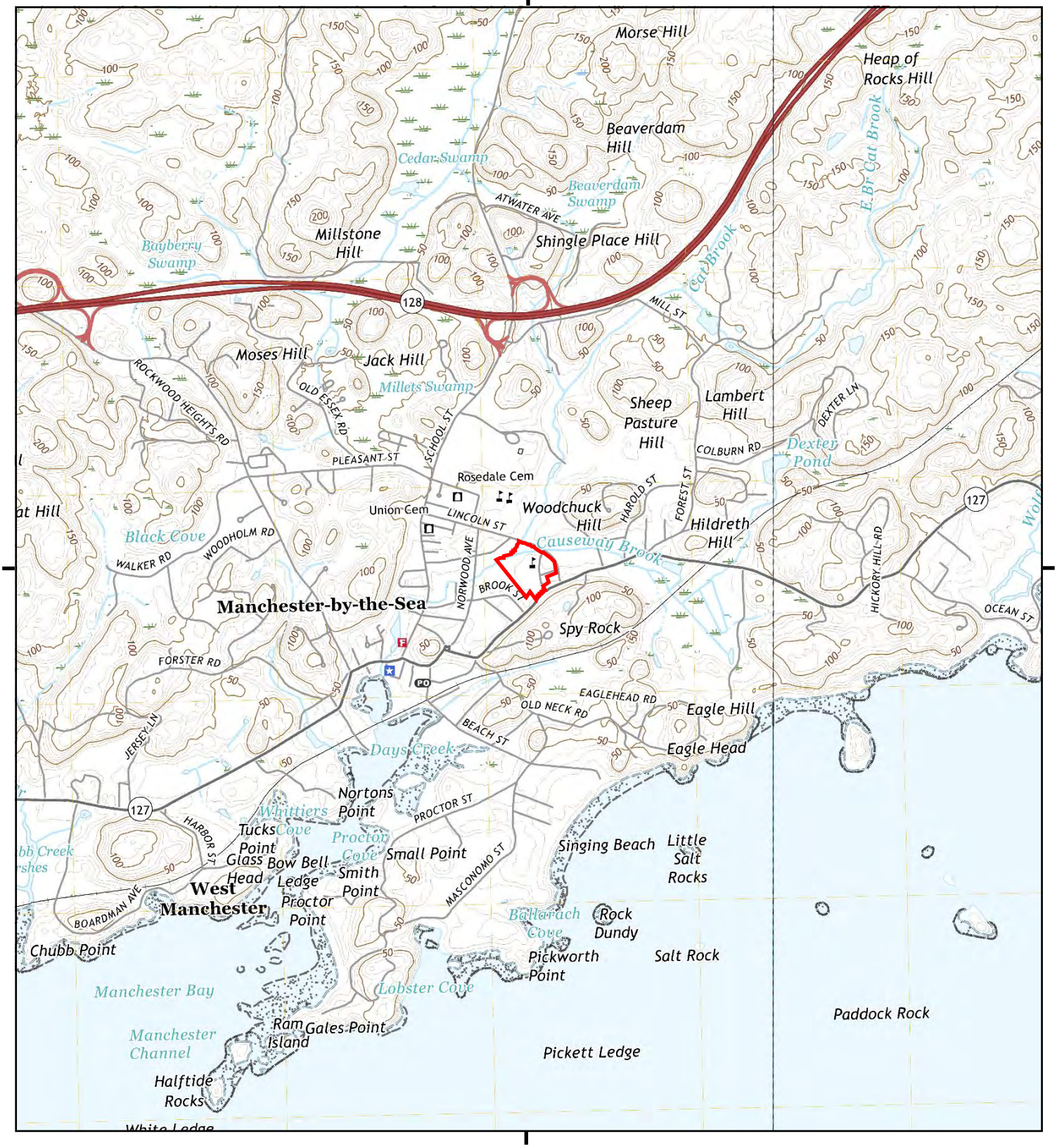
TP, Marblehead North, 2021, 7.5-minute
E, Gloucester, 2021, 7.5-minute

SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N

Historical Topo Map

2018



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Marblehead North, 2018, 7.5-minute
E, Gloucester, 2018, 7.5-minute

SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N

Historical Topo Map

2015



This report includes information from the following map sheet(s).

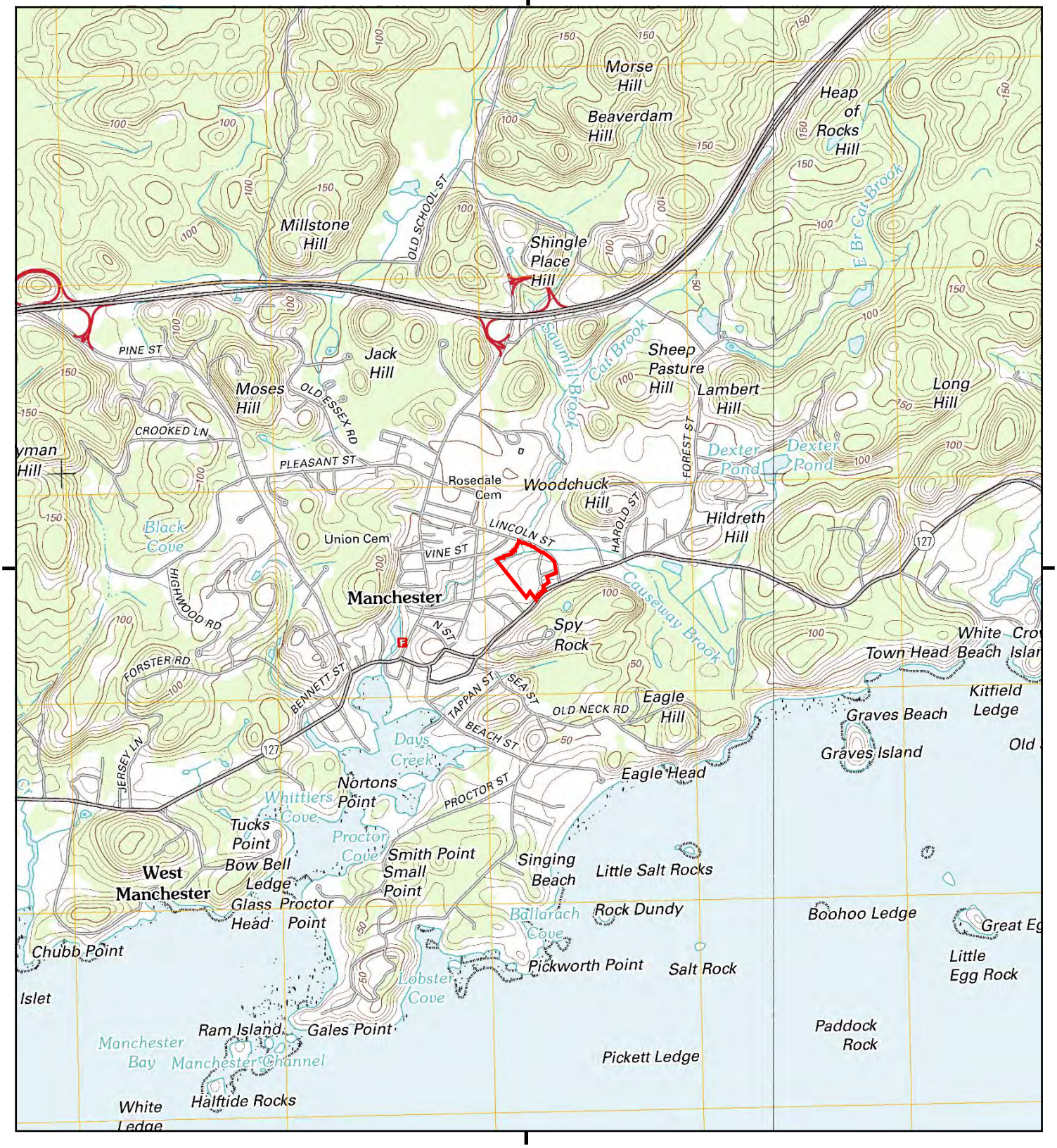
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Marblehead North, 2015, 7.5-minute
E, Gloucester, 2015, 7.5-minute

SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Marblehead North, 2012, 7.5-minute
E, Gloucester, 2012, 7.5-minute

SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

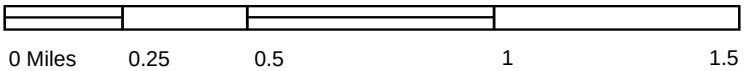
TP, Salem, 2005, 7.5-minute

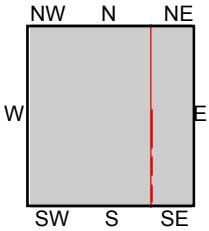
SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

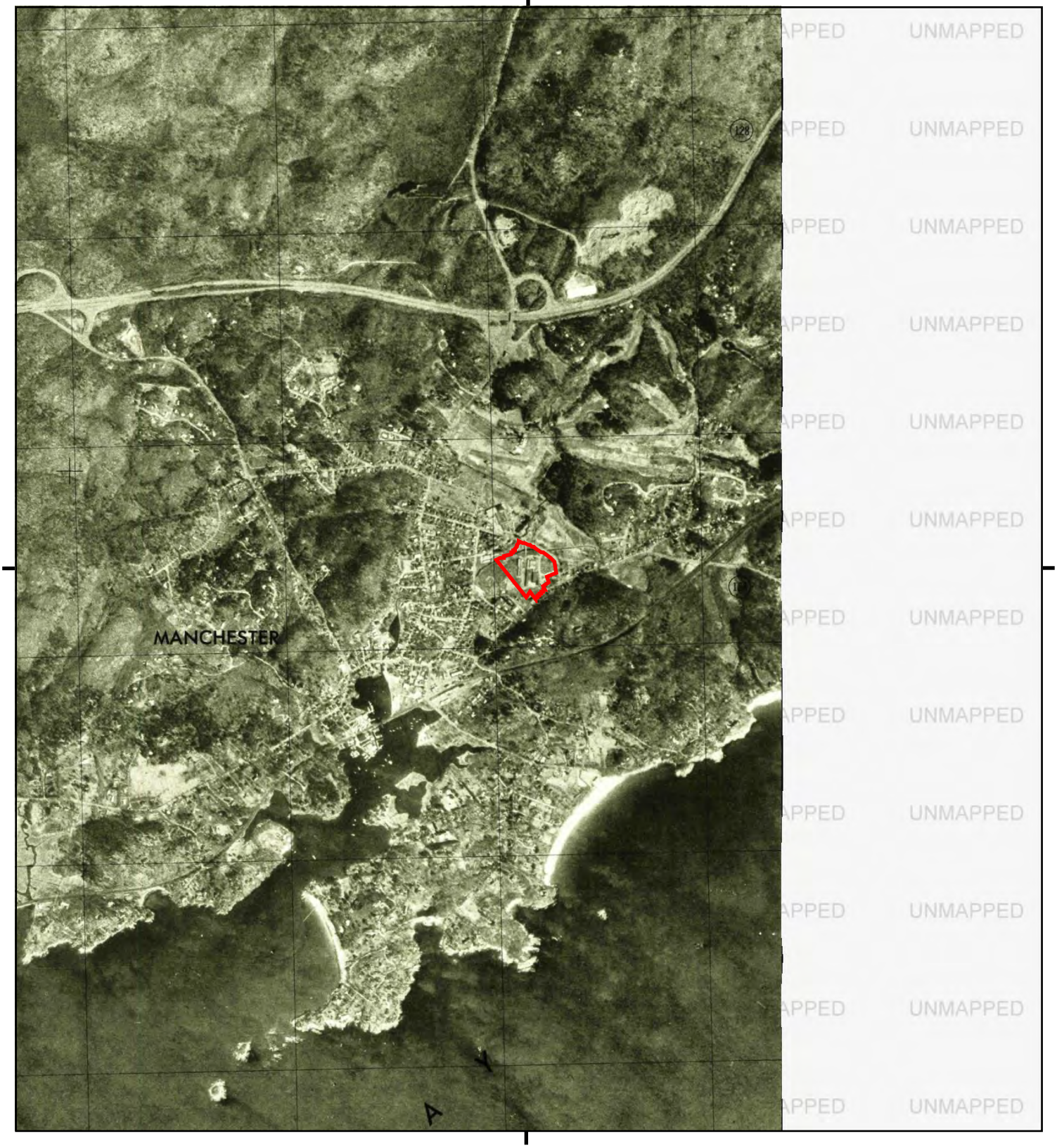




TP, Salem, 1985, 7.5-minute
E, Gloucester, 1984, 7.5-minute

SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.





This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Marblehead North, 1977, 7.5-minute

SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Marblehead North, 1970, 7.5-minute
E, Gloucester, 1973, 7.5-minute

SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Marblehead North, 1956, 7.5-minute
E, Gloucester, 1960, 7.5-minute

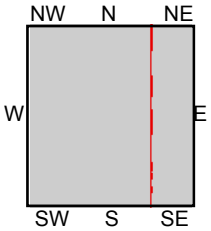
SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



TP, Marblehead North, 1950, 7.5-minute
E, Gloucester, 1949, 7.5-minute

SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

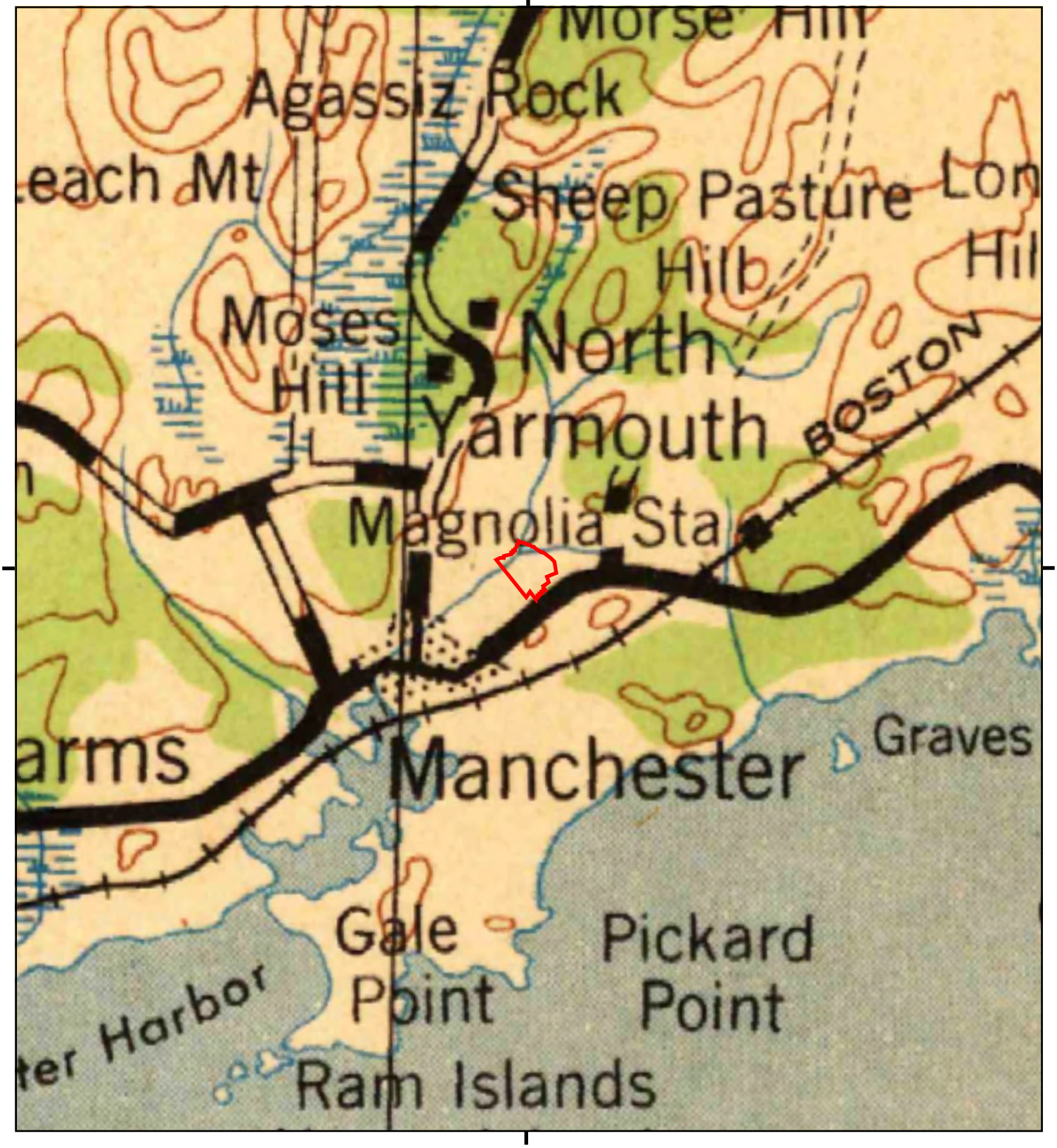
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Marblehead North, 1945, 7.5-minute
E, Gloucester, 1945, 7.5-minute

SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

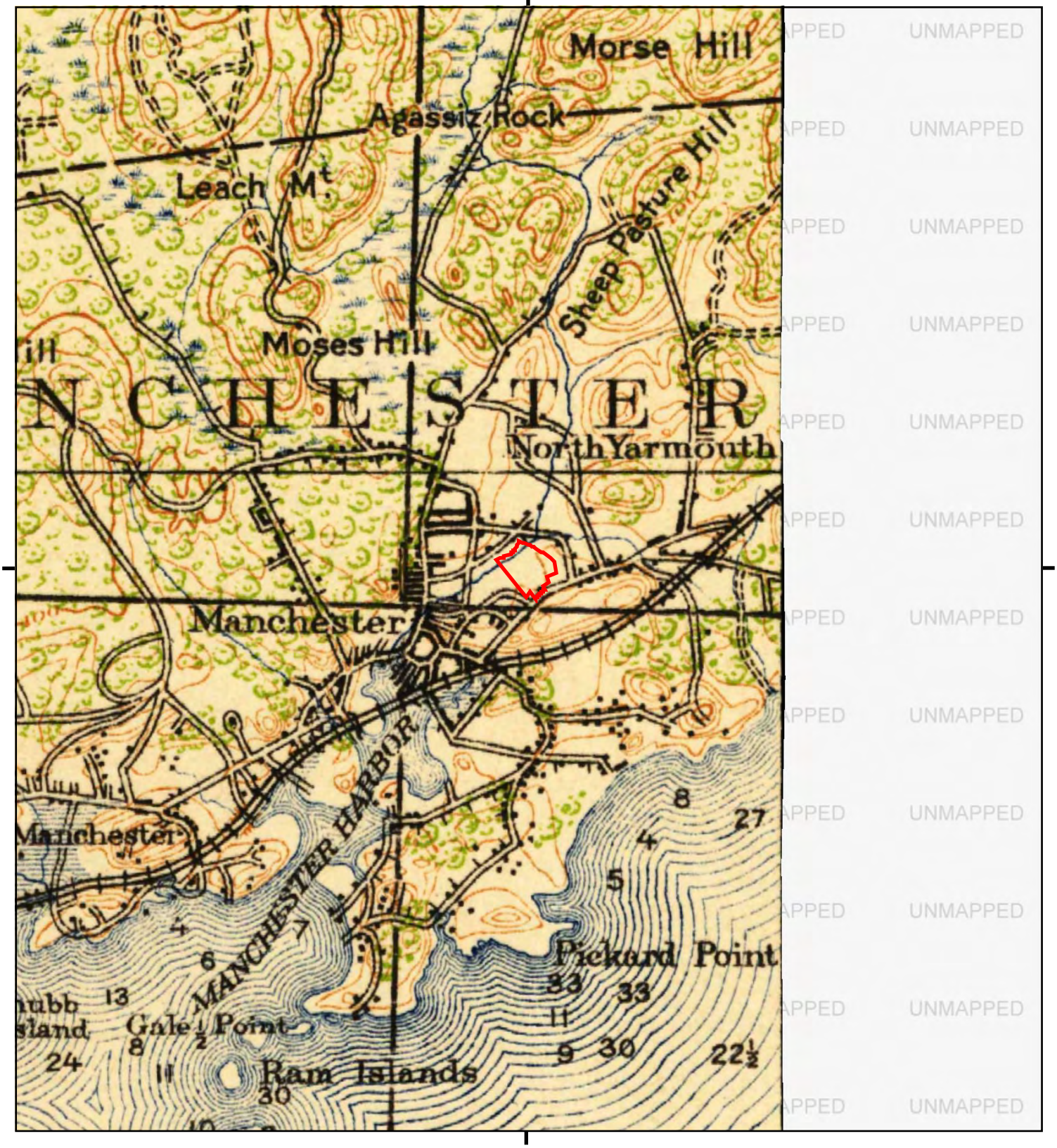
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Cape Ann, 1943, 30-minute

SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

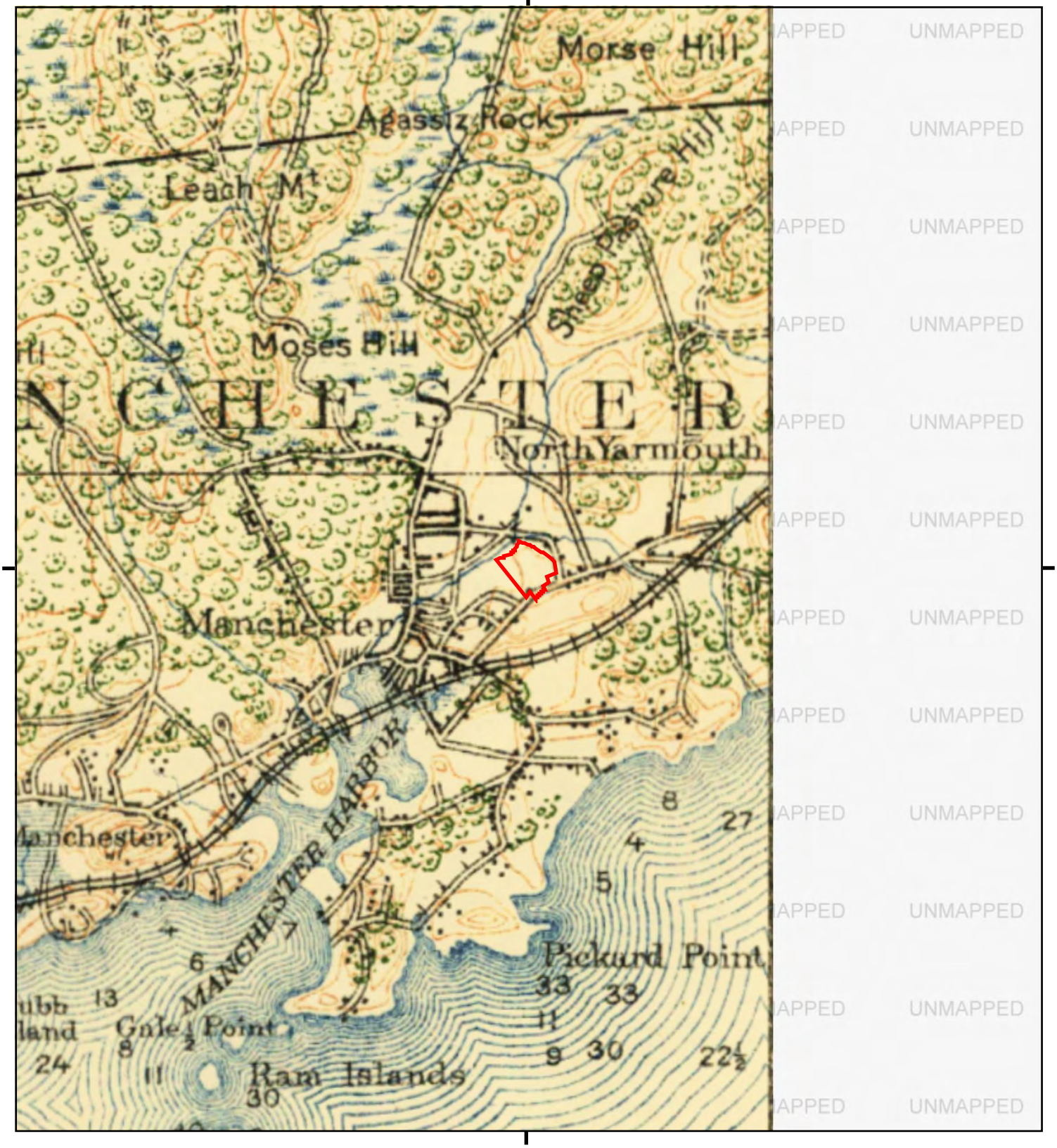
TP, Salem, 1919, 15-minute

SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N

Historical Topo Map

1915



This report includes information from the following map sheet(s).

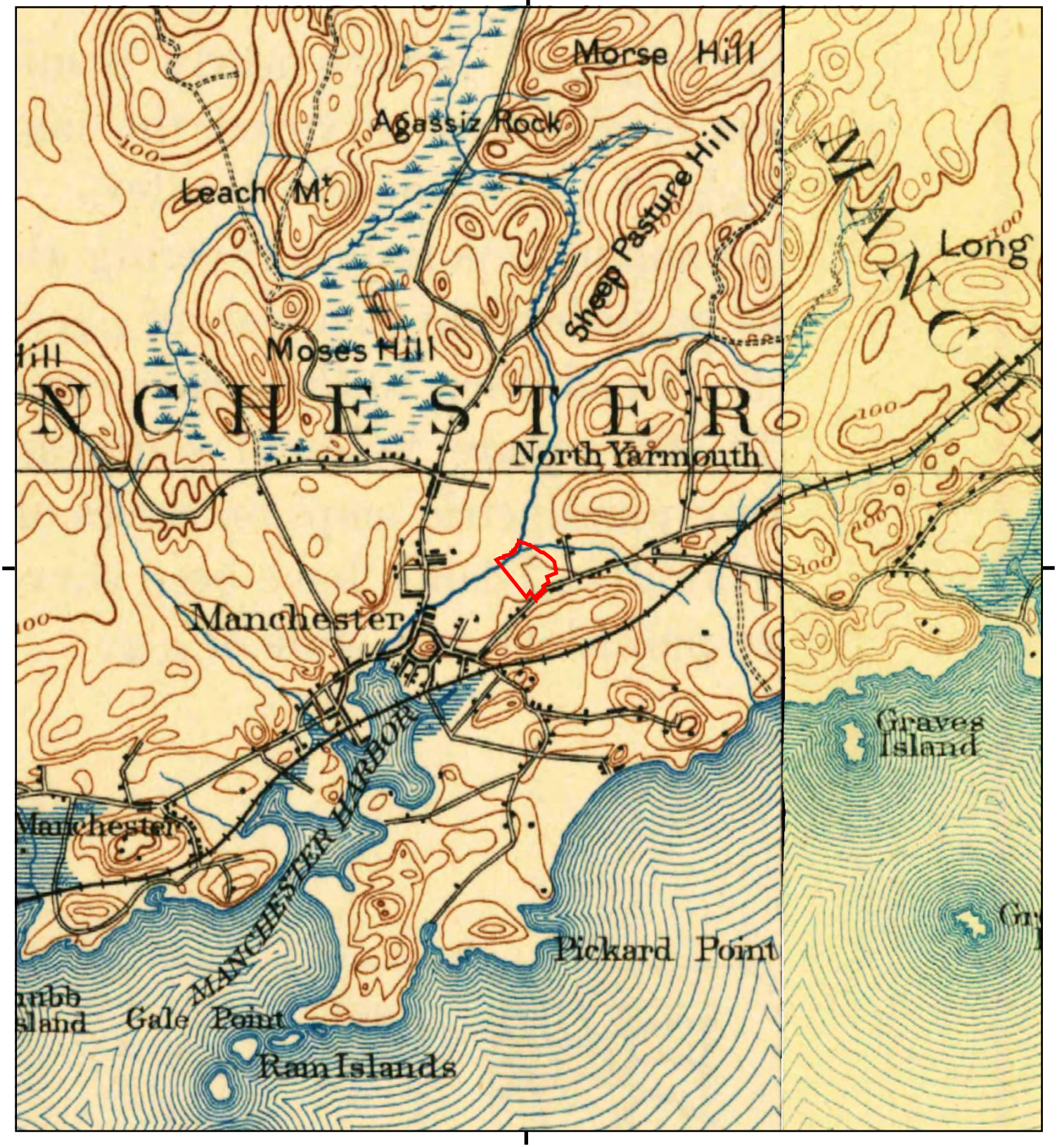
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, SALEM, 1915, 15-minute

SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

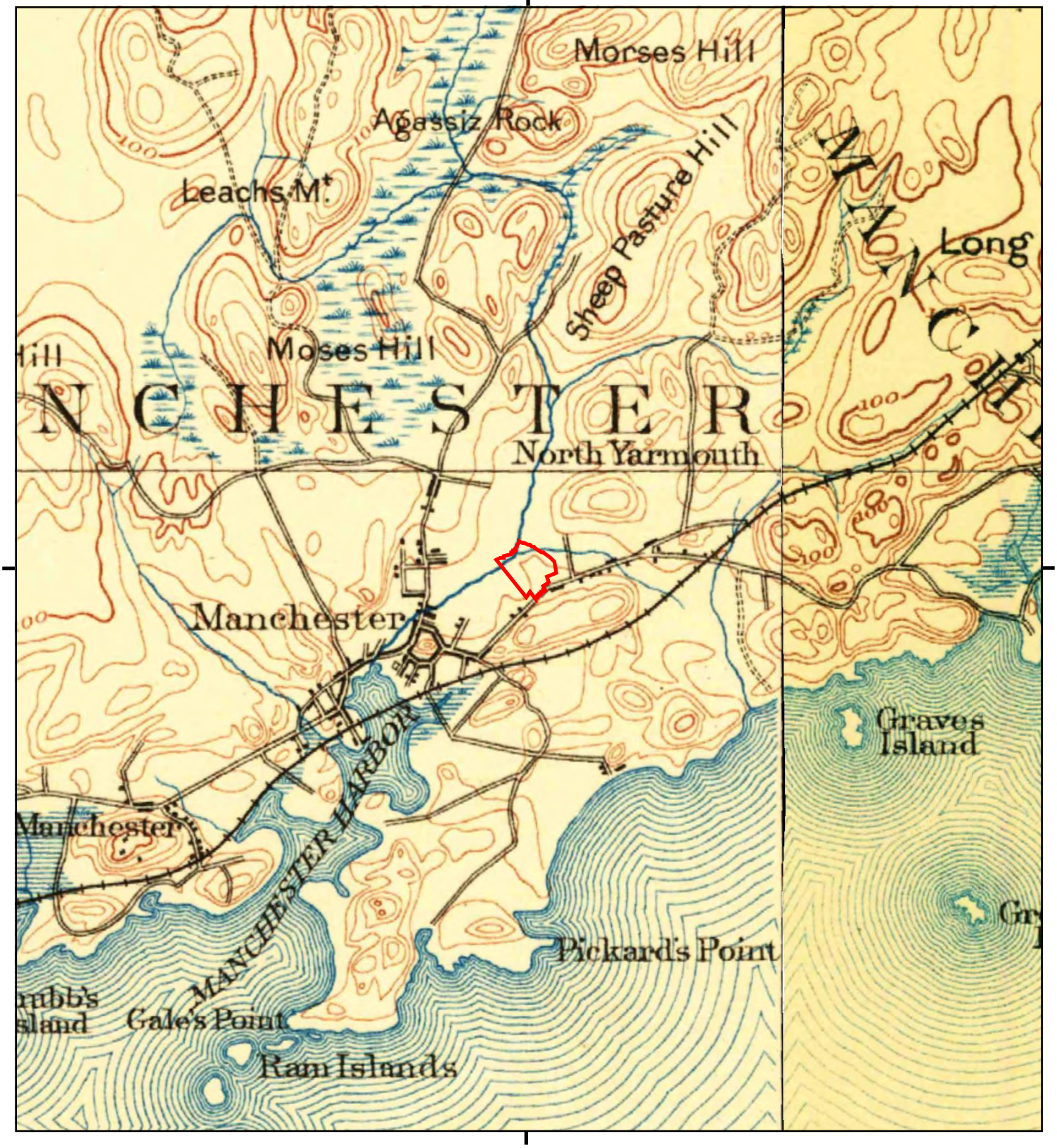
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Salem, 1893, 15-minute
NE, Gloucester, 1893, 15-minute

SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Salem, 1888, 15-minute
NE, Gloucester, 1888, 15-minute

SITE NAME: Manchester Memorial Elementary School
ADDRESS: 43 Lincoln St
Manchester, MA 01944
CLIENT: Mabbett & Assoc.

N

Manchester Memorial Elementary School

43 Lincoln St

Manchester, MA 01944

Inquiry Number: 8116131.8

September 22, 2025

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

09/22/25

Site Name:

Manchester Memorial Elementa
43 Lincoln St
Manchester, MA 01944
EDR Inquiry # 8116131.8

Client Name:

Mabbett & Assoc.
105 Central Street, Suite 4100
Stoneham, MA 02180
Contact: Cassidy Way

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2023	1"=500'	Flight Year: 2023	USDA/NAIP
2018	1"=500'	Flight Year: 2018	USDA/NAIP
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
1995	1"=500'	Acquisition Date: March 29, 1995	USGS/DOQQ
1986	1"=500'	Flight Date: April 01, 1986	USDA
1978	1"=500'	Flight Date: May 11, 1978	USGS
1972	1"=500'	Flight Date: May 13, 1972	USGS
1969	1"=500'	Flight Date: April 09, 1969	USGS
1960	1"=500'	Flight Date: May 19, 1960	USGS
1952	1"=500'	Flight Date: August 26, 1952	USDA
1938	1"=500'	Flight Date: November 10, 1938	USGS

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Disclaimer - Copyright and Trademark Notice

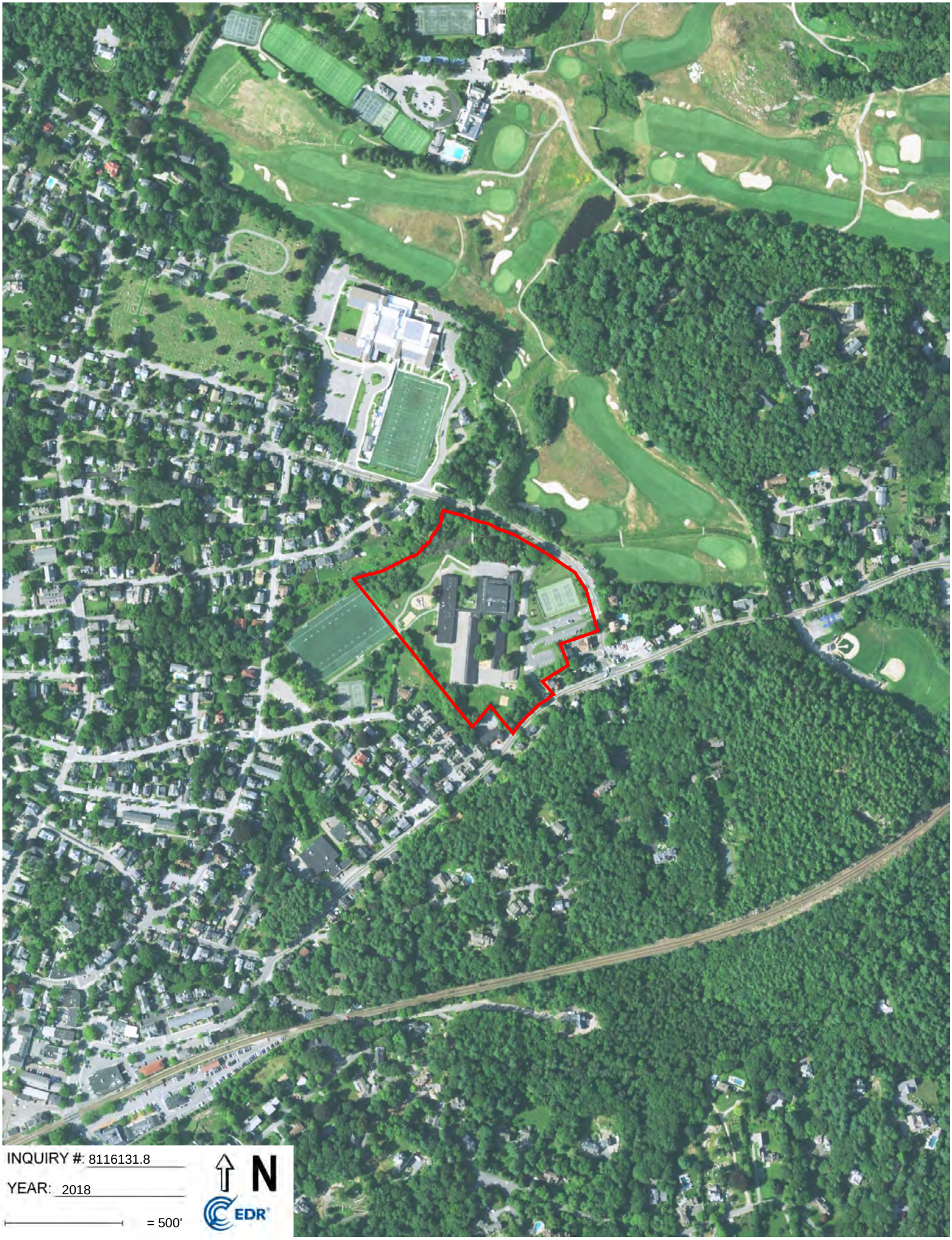
This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT.

Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2025 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.


INQUIRY #: 8116131.8
YEAR: 2023
= 500'
N
EDR


INQUIRY #: 8116131.8
YEAR: 2018
= 500'
N
EDR


INQUIRY #: 8116131.8
YEAR: 2014
= 500'
N
EDR


INQUIRY #: 8116131.8
YEAR: 2010
= 500'
N
EDR


INQUIRY #: 8116131.8
YEAR: 1995
= 500'
N
EDR


INQUIRY #: 8116131.8
YEAR: 1986
= 500'
N
EDR


INQUIRY #: 8116131.8
YEAR: 1978
= 500'
N
EDR


INQUIRY #: 8116131.8
YEAR: 1972
= 500'
N
EDR


INQUIRY #: 8116131.8
YEAR: 1969
= 500'
N
EDR


INQUIRY #: 8116131.8
YEAR: 1960
= 500'
N
EDR


INQUIRY #: 8116131.8
YEAR: 1952
= 500'
N
EDR


INQUIRY #: 8116131.8
YEAR: 1938
= 500'
N
EDR

Manchester Memorial Elementary School
43 Lincoln St
Manchester, MA 01944

Inquiry Number: 8116131.5
September 24, 2025

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. **NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT.** Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2023 by Environmental Data Resources, LLC. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, LLC, or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	*Target Street*	*Cross Street*	*Source*
2022	☑	☑	EDR Digital Archive
2014	☑	☑	Cole Information
2010	☑	☑	Cole Information
2005	☑	☑	Cole Information
2000	☑	☑	Cole Information
1995	☑	☑	Cole Information
1992	☑	☑	Cole Information
1989	☑	☑	Cole Criss-Cross Directory
1984	☑	☑	Cole Criss-Cross Directory
1975	☑	☑	Cole Criss-Cross Directory
1970	☑	☑	Cole Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

43 Lincoln St
Manchester, MA 01944

Year	*CD Image*	*Source*
LINCOLN ST		
2022	pg A2	EDR Digital Archive
2014	pg A6	Cole Information
2010	pg A8	Cole Information
2005	pg A10	Cole Information
2000	pg A12	Cole Information
1995	pg A14	Cole Information
1992	pg A16	Cole Information
1989	pg A18	Cole Criss-Cross Directory
1984	pg A21	Cole Criss-Cross Directory
1975	pg A23	Cole Criss-Cross Directory
1970	pg A25	Cole Criss-Cross Directory
1970	pg A26	Cole Criss-Cross Directory

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*
SUMMER ST		
2022	pg. A4	EDR Digital Archive
2014	pg. A7	Cole Information
2010	pg. A9	Cole Information
2005	pg. A11	Cole Information
2000	pg. A13	Cole Information
1995	pg. A15	Cole Information
1992	pg. A17	Cole Information
1989	pg. A19	Cole Criss-Cross Directory
1989	pg. A20	Cole Criss-Cross Directory
1984	pg. A22	Cole Criss-Cross Directory
1975	pg. A24	Cole Criss-Cross Directory
1970	pg. A27	Cole Criss-Cross Directory

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LINCOLN ST 2022

29	GRACE VASTA-CARR
31	THOMAS SMEALLIE
32	JACQUELINE OTTERBEIN
33	CHRISTOPHER GOODRICH
34	SUZANNE CALDWELL
35	JAMES O'BRIEN
	LEANNE O'BRIEN
	MAISIE O'BRIEN
	MARYANNE O'BRIEN
	MATTHEW O'BRIEN
36	ADAM GAMELIN
	ANDREA SLAVEN
	ANN HARRISON
	ANTON GIEDT
	CARMEN OCHOA
	DAN LUNDERGAN
	ELIN GRIESBACH
	ESSEX ELEMENTARY
	ESSEX ELEMENTARY SCHOOL
	JOSEPH JANACK
	KATHY MEINELT
	MANCHESTER - ESSEX REGIONAL HIGH SCHOOL
	MANCHESTER BY THE SEA TOWN
	MANCHESTER ESSEX REG MID HS
	MANCHESTER ESSEX REG SCHOOL DISTRICT
	MANCHESTER ESSEX REGIONAL HIGH SCHOOL
	MANCHESTER ESSEX REGIONAL SCHOOL DISTRICT
	MANCHESTER ESSEX REGIONAL SD
	MANCHESTER PUBLIC SCHOOLS
	MANCHESTER-ESSEX REGIONAL HIGH SCHOOL
	MANCHESTER-ESSEX REGIONAL SCHOOL DISTRICT
	MER MIDDLE SCHOOL
	MICHELLE MAGANA
	PAMELA BOURDOIN
	PATRICIA PUALISI
	SARAH LYNCH
	STEVE KWIATEK
	TOWN OF ESSEX
	VIDULA PLANTE
	WILLIAM NOVAK
37	ANDREW BROWN
	ELIZABETH BROWN
39	SUSAN COSTELLO
	TIMOTHY CARTER
41	NICHOLAS CHAREAS
43	JACK MARA
	LILLIAN MUISE
	MANCHESTER MEMORIAL ELEMENTARY SCHOOL
	MEMORIAL SCHOOL
67	CLIFF BAKER

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LINCOLN ST 2022 (Cont'd)

67	DANIEL HOUDE
	MANCHESTER ELECTRIC LLC
68	MARK CLARK
69	DANIEL HOUDE
	DANIEL R HOUDE
	HOUDE DANIEL MANCHESTER ELETRIC
	MANCHESTER ELECTRIC CO
	TINA MCWILLIAMS
70	SONIA DEYOUNG
	STEPHEN DEYOUNG
	URSULA DEYOUNG

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

SUMMER ST 2022

56	DIANE LINDQUIST
	MARIE LINDQUIST
	PAPER HANGING UNLIMITED
58	ELLEN FLATLEY
60	DON HARRIS
	JM CONSULTING INC
	SUMMIT RES
65	JOAN WARE
	WAI TAM
66	BECKY JUNRONG-XU
	GAYLE PINSTEIN
	LAMB LAWRENCE A DR
	LAWRENCE A LAMB
	LAWRENCE LAMB
	MANCHESTER CONSULTING GROUP
	MANCHESTER HEALING ARTS CENTER
	MANCHESTER VETERINARY CLINIC
	MARTZ, SOPHIA K DDS
	MICHAEL DOYLE
	PROFESSIONAL GROUP
	SOPHIA MARTZ
	SOPHIAK MARTZ
	WINNING SOLUTIONS INC
68	ANN GUYER
	BONNEVILLE DESIGN
	BREAD LIFE CHRISTIAN BOOK STR
	LISA BONNEVILLE
	LUISA COLLINS
74	CHLOE MARSALA
	GEOTANGENT
	SERGIO FANTINI
75	BENJAMIN HAYDEN
76	ANDREW FREED
	ANDREW J FREED
	CLIFFORD HUGHES
	CN ASSOCIATES
	CRYSTAL FRERE
	DRUMLIN CO
	HEAD ASSOCIATES INC
	JONATHAN LEAVITT
	JOSEPH WELCH
	JSM TECHNOLOGY
	KATHY MCMANUS
	LIVEPERSON INC
	MANCHESTER CRICKET
	MICHAEL MASCIOLI MUSCLE THERAPY
	SHANNON SCHUYLER
	SHANNONS TEAM
	WELCH JOSEPH
	WILD APPLE HOMES LLC

SUMMER ST 2022 (Cont'd)

77	MIRIAM BAKER
	ROBERT BAKER
85	TYLER GAROFALO
86	JIMMY SHELL
	JUDITH SUDDUTH
	STEPHEN FLYNN
87	BREUKER DESIGN
	PAUL STREMPLE
	REMKO BREUKER
90	KAILEY BACHMAN
	MICHAEL BACHMAN
	TYLER BACHMAN
92	CAROLINE WOOD
	GARY WOOD
	JENNIFER ALLISON
	JEREMY BEAZLIE
	MCKENZIE LOVE
	SUSAN LOVE
93	DANIEL MADIGAN
	JANE SCULLY
	PATRICK SCULLY
	SAMUEL GOFF
	WILLIAM ROWE
	WILLIAM SCULLY
95	JONATHAN HURLEY
96	LOCAL KEYS IN CAR IN MANCHESTER MA
	MANCHESTER GAS AND SERVICE
	SECOND SUMMER NINETY SIX
	SHIMON KOHEN
100	CARLA CHALHOUB
	YAACOUB FADEL
102	LYDIA BUCHERT
	SCOTT BUCHERT
103	CLAIRE DEPEW
	COLLEEN DEPEW
	DAVID DEPEW
	MOLLY DEPEW
106	CHANDLER ALDRICH
	DARRELL ALDRICH
	LIAM ALDRICH
	RUBY ALDRICH
107	DRAYTON MARTIN
	SAMUEL MARTIN
109	ANNE MCSWEENEY
	CHARLES MCSWEENEY
110	AIDAN LYONS
	BRYNN LYONS
	JEFF LYONS
	JUDITH LYONS
	MICHAEL LYONS

Target Street	Cross Street	Source
✓	-	Cole Information

LINCOLN ST 2014

29	VASTA, GRACE J
31	OCCUPANT UNKNOWN,
32	MENENDEZ, MARIA A
33	VAGO, GEORGE
34	HOLSOMBACK, JAMES M
35	OBRIEN, JAMES P
36	MANCHESTER ESSEX REGIONAL SCHOOL DIS
37	BROWN, PAUL P
39	COSTELLO, RICHARD J
41	GREENSLET, BETH A
43	MANCHESTER ESSEX REGIONAL SCHOOL DIS
67	HOUDE, LAUREN A
	LARSEN, JOLENE
	MANCHESTER ELECTRIC LLC
	OCCUPANT UNKNOWN,
68	CLARK, ELIZABETH M
69	OCCUPANT UNKNOWN,
	VITA, DONNA M
70	DEYOUNG, COLIN G

Target Street	Cross Street	Source
-	✓	Cole Information

SUMMER ST 2014

55	SADLER, KRISTINE
56	ANDREOU, MARIOS N
	FINGER, ELIZABETH C
	OCCUPANT UNKNOWN,
58	FLATLEY, ELLEN F
60	SUMMIT RES
65	OCCUPANT UNKNOWN,
66	LAMB LAWRENCE A DR
	LEAVITT, JONATHAN B
	MANCHESTER ANIMAL HOSPITAL
	MANCHESTER HEALING ARTS CENTER
	MARTZ SOPHIA
	MARTZ, SOPHIA K
	WINNING SOLUTIONS
	WINNING SOLUTIONS INC
68	BONNEVILLE DESIGN
74	MARSALA, JOE M
	OCCUPANT UNKNOWN,
	STOWELL, LYDA C
75	DWYER, LAURA A
76	ENCOUNTER CARE SOLUTIONS
	FREED ANDREW J ATTY AT LAW
	JOLIN LOBSTER INC
	KNEELAND, THOMAS
	UNION CAPITAL PARTNERS
77	BAKER, ROBERT T
79	JONES, ARCHIBALD H
85	PURSER-HASKELL, SUSAN P
86	BACHRY, PETER
	DOHERTY, STEVE
	MUSTAFA, LALE
	SUDDITH, JUDITH E
87	BREUKER DESIGN ARCHITECTURE DESIGNE
	BREUKER, REMKO
90	BACHMAN, MICHAEL K
92	OCCUPANT UNKNOWN,
	WOOD, GARY A
93	OCCUPANT UNKNOWN,
	SCULLY, WILLIAM
95	DOTT, ALAN R
96	SECOND SUMMER 96
97	BURGESS, RODNEY C
100	PORTER, DOUGLAS M
101	OCCUPANT UNKNOWN,
102	WILSON, LLOYD E
103	HAMMOND, JAMES L
106	ALDRICH, DARRELL E
107	OCCUPANT UNKNOWN,
109	MCSWEENEY, CHARLES E
110	DENONCOUR, JEFFREY M

Target Street	Cross Street	Source
✓	-	Cole Information

LINCOLN ST 2010

29	VASTA-CARR, GRACE J
32	MENENDEZ, MARIA A
33	VAGO, GEORGE
34	HOLSOMBACK, JAMES M
35	GRIMES, JAMES
36	TLT CONSTRUCTION
37	BROWN, DEAN P
39	COSTELLO, RICHARD J
41	GREENSLET, BETH A
43	MEMORIAL SCHOOL
67	LARSEN, JOLENE
	STORM, CHRISTIAN R
68	CLARK, MARK A
69	HOYLE, DENISE M
	VITA, DONNA M
70	DEYOUNG, COLIN G

Target Street	Cross Street	Source
-	✓	Cole Information

SUMMER ST 2010

56	FINGER, ANDREA K
58	FLATLEY, ELLEN F
60	RSA REALTY INC
65	WARE, HUGH C
66	BROWN, ORESTES G
	MANCHESTER CONSULTING GROUP
	MANCHESTER HEALING ARTS CTR
	MANCHESTER VETERINARY CLINIC
	MARTZ SOPHIA K DDS
	WINNING SOLUTIONS INC
68	BONNEVILLE DESIGN
74	MARSALA, JOE M
	STOWELL, LYDA C
76	COMPANYSTUFFCOM
	DRUMLIN COMPANIES
	FREED ANDREW J
	LINDLAND, STEVE
	LIVE PERSON INC
	SERVICE INTELLECT INC
77	BAKER, ROBERT T
79	JONES, ARCHIBALD H
85	PURSER-HASKELL, SUSAN P
86	DORIA, JOYCE
	SUDDITH, JUDITH E
87	BREUKER DESIGN
	BREUKER, REMKO
90	BACHMAN, MICHAEL K
92	DENMAN, MATT E
	WOOD, GARY A
93	SCULLY, PATRICK
95	BULLARD, JUDITH A
	DOTT, ALAN R
96	SECOND SUMMER 96
97	BURGESS, RODNEY C
102	WILSON, LLOYD E
103	HAMMOND, JAMES L
106	ALDRICH, DARRELL E
109	POLESE, ALBERT L
110	DENONCOUR, JEFFREY M

Target Street	Cross Street	Source
✓	-	Cole Information

LINCOLN ST 2005

29	VASTACARR, GRACE J
32	KELLER, JOAN L
33	VAGO, GEORGE
34	HOLSOMVACK, JAMES M
35	DONAHUE, M
37	BROWN, DEAN P
39	COSTELLO, RICHARD J
41	GREENSLET, BETH A
67	LARSEN, LARRY L
	MANCHESTER ELECTRIC CO
	STORM, CHRISTIAN R
68	CLARK, MARK A
70	GARCIA-MATA, ALEXANDRA

Target Street	Cross Street	Source
-	✓	Cole Information

SUMMER ST 2005

56	WIELGORECKI, SARAH M
58	FLATLEY, ELLEN F
60	SULLIVAN, ERECK
65	WARE, HUGH C
66	CERCONE & BROWN LLC
	DREAMTIME WELLNESS
	LAMB, LAWRENCE A
	MANCHESTER VETERINARY CLINIC
	WINNING SOLUTIONS INC
68	BONNEVILLE DESIGN
74	MARSALA, JOE L
	STOWELL, LYDA C
76	ADVANCED HEALTH TECHNOLOGIES INC
	LOGUE TIMOTHY J INSURANCE AGENCY
	LOMBARDI, JOSEPH W
	MALLON TRAVEL SERVICES INC
77	BAKER, ROBERT T
79	JONES, ARCHIBALD H
85	PURSER-HASKELL, SUSAN P
86	COONEY, JAMES P
	SUDDITH, JUDITH E
87	BREUKER, REMKO
90	SULLIVAN, CATHERINE P
92	DENMAN, MATT E
	WOOD, GARY F
93	SCULLY, PATRICK
95	DOTT, ALAN R
	VICKERY, GWEN R
97	BURGESS, RODNEY C
100	PORTER, DOUGLAS M
101	BURGESS, DONALD E
102	WILSON, LLOYD E
103	EATON, THEODORE H
106	ALDRICH, DARRELL E
107	HYDE, PARK T
109	MCSWEENEY, CHARLES E
110	DENONCOUR, JEFFREY M

Target Street	Cross Street	Source
✓	-	Cole Information

LINCOLN ST 2000

29	VASTA, CARR G
32	MILLS, DONNA
	POMERVILLE, R
33	DUNLEAVY, JEFFREY
	LANE, FRED R
34	NICKERSON, CARL V
35	MAIJENSKI, GEORGE T
37	BROWN, SOPHIE
39	COSTELLO, RICHARD J
41	GREENSLET, ROGER F
67	LARSEN, LARRY
	STORM, SUSAN R
68	CLARK, E M
70	GARCIA-MATA, A

Target Street	Cross Street	Source
-	✓	Cole Information

SUMMER ST 2000

56	PARISI, NICHOLA G
58	FLATLEY, ELLEN
60	FLATLEY FRANCIS L
	FLATLEY FRANCIS L ATTORNEY
	RSA REALTY INCORPORATED
65	WARE, HUGH C
66	BERKSHIRE COMPUTER PRODUCTS
	BT TYMNET INCORPORATED
	EUROCONSULT
	LAMB LAWRENCE A DR
	MANCHESTER CONSULTING GROUP
	MANCHESTER HEALING ARTS CENTER
	MANCHESTER VETERINARY CLINIC
	SG INDUSTRIES INCORPORATED
68	BONNEVILLE DESIGN
74	MARSALA, JOE
75	CARROLL, THOMAS H
76	ADVANCED HEALTH TECHNOLOGIES INCORPORATED
	DRUMLIN COMPANIES
	LINSCO PRIVATE LEDGER
	LOGUE TIMOTHY J INSURANCE AGENCY
	MIDDLESEX TRAVEL SERVICE INCORPORATED
	MORGAN COMPANIES
	SONES, ABBEY
85	PURSER, HASKELL S
86	SIMPSON, DEBORAH J
	SUDDUTH, JUDY
90	GIDDENS, MARY N
92	MCDONOUGH, FRANCIS J
	PARLIN, E C
	WOOD, GARY
93	SCULLY, WILLIAM
95	BLACKWOOD, WILLIAM
	GANTT, NATT
96	BAILEYS SERVICE STATION
97	BURGESS, RODNEY C
100	DANGELMAYER, BOB
	WILLIAMS, MIKKI D
101	BURGESS, DONALD E
102	WILSON, LLOYD
106	PARKER, M C
107	DODGE, STEVEN B
109	MCSWEENEY, CHARLES J
	POLESE, MARCIA
110	DENONCOUR, JEFFREY M

Target Street	Cross Street	Source
✓	-	Cole Information

LINCOLN ST 1995

31	CULLINANE, PAUL B
	HACKETT, SHARON
32	FENNESSY, TERENCE & LORI
33	CROWLEY, CORNELIUS
	LANE, FRED R
34	NICKERSON, CARL V
35	MAIJENSKI, GEO T
37	BROWN, SOPHIE
39	COSTELLO, RICHARD J
41	GREENSLET, B A
	GREENSLET, ROGER F
67	ELEMENTAL MICROANALYSIS LTD
	LARSEN, LARRY
	STORM, S R
68	CLARK, E M
69	ESTES, ANDREW C
	FRONTIER CONSTRUCTION CO INC
	SMITH, MARJORIE
70	DEYOUNG, STEPHEN W
	GARCIA-MATA, ALEXANDRA

Target Street	Cross Street	Source
-	✓	Cole Information

SUMMER ST 1995

56	PARISI, NICHOLAS G
	WIELGORECKI, ZYGMOND
58	FLATLEY, ELLEN
60	ANDREWS, THOS
	FLATLEY, FRANCIS L
	FLATLEY, FRANCIS L, ATTY
	RSA REALTY INC
	VALERIO, MARK
65	WARE, HUGH CABOT
66	BT TYMNET INC
	COYNE, ROBT
	EUROCONSULT
	LAMB, LAWRENCE A
	MANCHESTER VETERINARY CLINIC
	RETIREMENT RESOURCE GROUP INC
	SECRET GARDEN SEAMSTRESS
	ZAIMES TAE KWON DO ACADEMY INC
68	BARRETT STEVEN, PHYS
	BOETTCHER, J A
	CONRAD, TERRY
	MCLAUGLIN, SCOTT J
75	CARROLL, THOS H
76	ACCESS SEMICONDUCTORS INTERNATIONAL INC
	COX, DUNCAN B, JR
	DBC COMMUNICATIONS INC
	FOX CONSULTING GROUP
	LOGUE, TIMOTHY J INSURANCE AGENCY
	MANCHESTER PSYCHIATRIC ASSOCIATES
	PAUL MURRAY CO
	SEWARD, LYNN, CPA
	TECHNOLOGY MANAGEMENT INTERNATIONAL INC
85	DIJANNI, JOS T
86	KILEY, MOIRA
	MAUGHAN, DONALD
	SYMDEX SYSTEMS LTD
90	COOK, JAMIE & BRENDAN
	O'NEILL, K J
93	SCULLY, PATRICK
	SCULLY, WM
95	ARNAUD, CAROL T
	BLACKWOOD, WM
96	BAILEY'S SERV STA
97	BURGESS, RODNEY C
100	WILLIAMS, MIKKI D
101	BURGESS, DONALD E
102	WILSON, LLOYD & RUTH
103	GAMBLE, ROBT & DAWN
106	MALARKEY, TIMOTHY
110	DENONCOUR, JEFFREY M & LAURA

Target Street	Cross Street	Source
✓	-	Cole Information

LINCOLN ST 1992

31	CULLINANE, PAUL B
32	BALDWIN, G & M
33	CROWLEY, CORNELIUS
	LANE, FRED R
34	NICKERSON, CARL V
35	MAIJENSKI, GEO T
37	BROWN, SOPHIE
39	COSTELLO, RICHARD J
41	GREENSLET, B A
	GREENSLET, ROGER F
67	BUGOS, MARK R
	ELEMENTAL MICROANALYSIS LTD
	LARSEN, LARRY
68	CLARK, E M
69	FARMER ROOFING
70	APPLETON, JOHN & SARAH

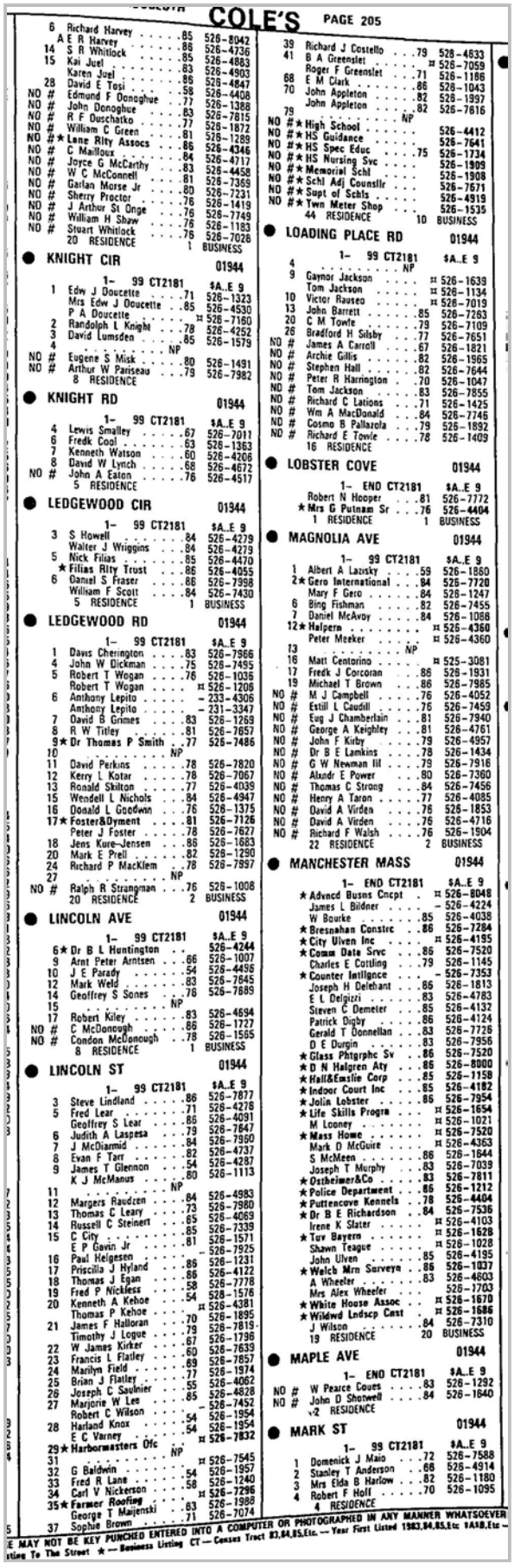
Target Street	Cross Street	Source
-	✓	Cole Information

SUMMER ST 1992

56	WIELGORECKI, ZYGMOND
58	FLATLEY, ELLEN
60	FLATLEY, FRANCIS L PC
	FLATLEY, FRANCIS L, ATTY
	SAMOLCHUK, JAS
65	WARE, HUGH CABOT
66	EUROCONSULT
	GATEWAZE INC
	QUINTUM CO
	TRIMTAB FACTOR THE
68	BARRETT STEVEN, PHYS
	MCLAUGLIN, SCOTT J
75	CARROLL, THOS H
76	COHEN, JEFFREY L, CPA
	LIDDELL COMPANY THE
	LOGUE, TIMOTHY J INSURANCE AGENCY
	PAUL MURRAY CO
	SEWARD, LYNN, CPA
77	BAKER, ROBT
86	HEIMANN, JOHN B
	MELVIN, WM, JR
90	COOK, JAMIE & BRENDAN
	O'NEILL, K J
92	CLARK, WENDY H & PAUL B
	CLARK, WENDY H & PAUL B-CHILDRENS TELEPH
	SMITH, STEPHEN C
93	SCULLY, E
	SCULLY, WM
95	ARNAUD, CAROL T
	BLACKWOOD, WM
96	BAILEY'S SERV STA
97	BURGESS, RODNEY C
100	DEMCHAK-WILLIAMS, M
101	BURGESS, DONALD E
102	WILSON ELECTRIC
	WILSON, LLOYD & RUTH
103	GAMBLE, ROBT & DAWN
106	HERRICK, MARTIN L, JR
110	DENONCOUR, JEFFREY M & LAURA

Target Street	Cross Street	Source
✔	-	Cole Criss-Cross Directory

LINCOLN ST 1989



COLE'S PAGE 205

6 Richard Harvey .85 526-8042
A E R Harvey 526-8042
14 S R Whitlock .86 526-4736
15 Kai Juel .85 526-4883
Karen Juel .83 526-4903
28 David E Tosi .86 526-4847
NO # Edmund F Donoghue .58 526-4408
NO # John Donoghue .77 526-1388
NO # R F Duschatko .83 526-7815
NO # William C Green .77 526-1872
NO #★ Lane Rlty Assocs .81 526-1289
NO # C Mailloux .86 526-4346
NO # Joyce G McCarthy .84 526-4717
NO # W C McConnell .83 526-4458
NO # Garlan Morse Jr .81 526-7369
NO # Sherry Proctor .80 526-7231
NO # J Arthur St Onge .76 526-1419
NO # William H Shaw .76 526-7749
NO # Stuart Whitlock .76 526-1183
20 RESIDENCE .75 526-7028
1 BUSINESS

KNIGHT CIR 01944

1- 99 CT2181 $A..E 9

1 Edw J Doucette .71 526-1323
Mrs Edw J Doucette .85 526-4530
P A Doucette 526-7160
2 Randolph L Knight .78 526-4252
3 David Lumsden .85 526-1579
4 NP
NO # Eugene S Misk .80 526-1491
NO # Arthur W Pariseau .79 526-7982
8 RESIDENCE

KNIGHT RD 01944

1- 99 CT2181 $A..E 9

4 Lewis Smalley .67 526-7011
6 Fredk Cool .63 526-1363
7 Kenneth Watson .60 526-4206
8 David W Lynch .68 526-4672
NO # John A Eaton .76 526-4517
5 RESIDENCE

LEDGEWOOD CIR 01944

1- 99 CT2181 $A..E 9

3 S Howell .84 526-4279
Walter J Wriggins .84 526-4279
5 Nick Filias .85 526-4470
★ Filias Rlty Trust .86 526-4055
6 Daniel S Fraser .86 526-7998
Wilsam F Scott .84 526-7430
5 RESIDENCE 1 BUSINESS

LEDGEWOOD RD 01944

1- 99 CT2181 $A..E 9

1 Davis Cherington .83 526-7966
4 John W Dickman .75 526-7495
5 Robert T Wogan .76 526-1036
Robert T Wogan 526-1206
6 Anthony Lepito - 233-4306
Anthony Lepito - 231-3347
7 David B Grimes .83 526-1269
8 R W Titley .81 526-7657
9★ Dr Thomas P Smith .77 525-7486
10 NP
11 David Perkins .78 526-7820
12 Kerry L Kotar .78 526-7067
13 Ronald Skilton .77 526-4039
15 Wendell L Nichols .84 526-4947
16 Donald L Goodwin .76 526-1375
17★ Foster&Dyment .81 526-7126
Peter J Foster .78 526-7627
18 Jens Kure-Jensen .86 526-1683
20 Mark E Prell .82 526-1290
24 Richard P MacKlem .78 526-7997
27 NP
NO # Ralph R Strangman .76 526-1008
20 RESIDENCE 2 BUSINESS

LINCOLN AVE 01944

1- 99 CT2181 $A..E 9

6★ Dr B L Huntington 526-4244
9 Arnt Peter Arntsen .66 526-1007
10 J E Parady .54 526-4498
12 Mark Weld .83 526-7645
14 Geoffrey S Sones .78 526-7889
15 NP
17 Robert Kiley .83 526-4694
NO # C McDonough .86 526-1727
NO # Condon McDonough .78 526-1565
8 RESIDENCE 1 BUSINESS

LINCOLN ST 01944

1- 99 CT2181 $A..E 9

3 Steve Lindland .86 526-7877
5 Fred Lear .71 526-4278
Geoffrey S Lear .86 526-4091
6 Judith A Laspesa .79 526-7647
7 J McDiarmid .84 526-7960
8 Evan F Tarr .82 526-4737
9 James T Glennon .54 526-4287
K J McManus .80 526-1113
11 NP
12 Margers Raudzen .84 526-4983
13 Thomas C Leary .73 526-7980
14 Russell C Steinert .65 526-4069
15 C City .85 526-7339
E P Davin Jr .81 526-1571
16 Paul Helgesen - 526-7925
17 Priscilla J Hyland .86 526-1231
18 Thomas J Egan .86 526-4122
19 Fred P Nickless .58 526-7778
20 Kenneth A Kehoe .54 526-1576
Thomas P Kehoe 526-4381
21 James F Halloran .70 526-1895
Timothy J Logue .79 526-7819
22 W James Kirker .60 526-1796
23 Francis L Flatley .69 526-7639
24 Marilyn Field .77 526-7857
25 Brian J Flatley .55 526-1574
26 Joseph C Saulnier .85 526-4062
27 Marjorie W Lee - 526-4828
Robert C Wilson .54 526-7452
28 Harland Knox .54 526-1954
E C Varney 526-1954
29★ Harbormasters Ofc 526-7832
31 NP
32 G Baldwin .54 526-7545
33 Fred R Lane .58 526-1957
34 Carl V Nickerson 526-1240
35★ Farmer Roofing 526-7296
George T Majenski .63 526-1988
37 Sophie Brown .71 526-7074
39 Richard J Costello .79 526-4533
41 B A Greenslet 526-7059
Roger F Greenslet .71 526-1186
68 E M Clark .86 526-1043
70 John Appleton .82 526-1397
John Appleton .82 526-7816
79 NP
NO #★ High School 526-4412
NO #★ HS Guidance 526-7641
NO #★ HS Spec Educ .75 526-1734
NO #★ HS Nursing Svc 526-1909
NO #★ Memorial Schl 526-1908
NO #★ Schl Adj Counsllr 526-7671
NO #★ Supt of Schls 526-4919
NO #★ Twn Meter Shop 526-1535
44 RESIDENCE 10 BUSINESS

LOADING PLACE RD 01944

1- 99 CT2181 $A..E 9

4 NP
9 Gaynor Jackson 526-1639
Tom Jackson 526-1134
10 Victor Rauseo 526-7019
13 John Barrett .85 526-7263
20 C M Towle .79 526-7109
26 Bradford H Silsby .77 526-7651
NO # James A Carroll .67 526-1821
NO # Archie Gillis .82 526-1965
NO # Stephen Hall .82 526-7644
NO # Peter R Harrington .70 526-1047
NO # Tom Jackson .83 526-7855
NO # Richard C Lations .71 526-1425
NO # Wm A MacDonald .84 526-7746
NO # Cosmo B Pallazola .79 526-1892
NO # Richard E Towle .78 526-1409
16 RESIDENCE

LOBSTER COVE 01944

1- END CT2181 $A..E 9

Robert N Hooper .81 526-7772
★ Mrs G Putnam Sr .76 526-4404
1 RESIDENCE 1 BUSINESS

MAGNOLIA AVE 01944

1- 99 CT2181 $A..E 9

1 Albert A Lazisky .59 526-1860
2★ Gero International .84 525-7720
Mary F Gero .84 526-1247
6 Bing Fishman .82 526-7455
7 Daniel McAvoy .84 526-1088
12★ Halpern 525-4360
Peter Meeker 526-4360
13 NP
16 Matt Centorino 525-3081
17 Fredk J Corcoran .86 526-1931
19 Michael T Brown .86 526-7985
NO # M J Campbell .76 526-4052
NO # Estill L Caudill .76 526-7459
NO # Eug J Chamberlain .81 526-7940
NO # George A Keighley .81 526-4761
NO # John F Kirby .79 526-4957
NO # Dr B E Lamkins .78 526-1434
NO # G W Newman III .79 526-7916
NO # Alexdr E Power .80 526-7360
NO # Thomas C Strong .84 526-7456
NO # Henry A Taron .77 526-4085
NO # David A Virden .76 526-1853
NO # David A Virden .76 526-4716
NO # Richard F Walsh .76 526-1904
22 RESIDENCE 2 BUSINESS

MANCHESTER MASS 01944

1- END CT2181 $A..E 9

★ Advncd Busns Cncpt 526-8048
James L Bildner - 526-4224
W Bourke .85 526-4038
★ Bresnahan Constrc .86 526-7284
★ City Ulven Inc 526-4195
★ Comm Data Srvc .86 526-7520
Charles E Cottling .79 526-1145
★ Counter Intllgnce - 526-7353
Joseph H Delehant .86 526-1813
E L Delgizzi .83 526-4783
Steven C Demeter .85 526-4132
Patrick Digby .86 526-4124
Gerald T Donnellan .83 526-7726
D E Durgin .83 526-7956
★ Glass Phtgrphc Sv .86 526-7520
★ D N Halgren Aty .85 526-8000
★ Hall&Emslie Corp .85 526-1158
★ Indoor Court Inc .85 526-4182
★ Jolla Lobster .86 526-7954
★ Life Skills Progra 526-1654
M Looney 526-1021
★ Mass Home 526-7520
Mark D McGuire 526-4363
S McMeen .86 526-1644
Joseph T Murphy .83 526-7039
★ Ostheimer&Co .83 526-7811
★ Police Department .86 526-1212
★ Puttencove Kennels .78 526-4404
★ Dr B E Richardson .84 526-7536
Irene K Slater 526-4103
★ Tuv Bayern 526-1628
Shawn Teague 526-1028
John Ulven .85 526-4195
★ Welch Mrn Surveyn .86 526-1037
A Wheeler .83 526-4803
Mrs Alex Wheeler 526-1703
★ White House Assoc 526-1670
★ Wildwd Lndscp Cnst 526-1686
J Wilson .84 526-7310
19 RESIDENCE 20 BUSINESS

MAPLE AVE 01944

1- END CT2181 $A..E 9

NO # W Pearce Coues .83 526-1292
NO # John D Shotwell .84 526-1640
2 RESIDENCE

MARK ST 01944

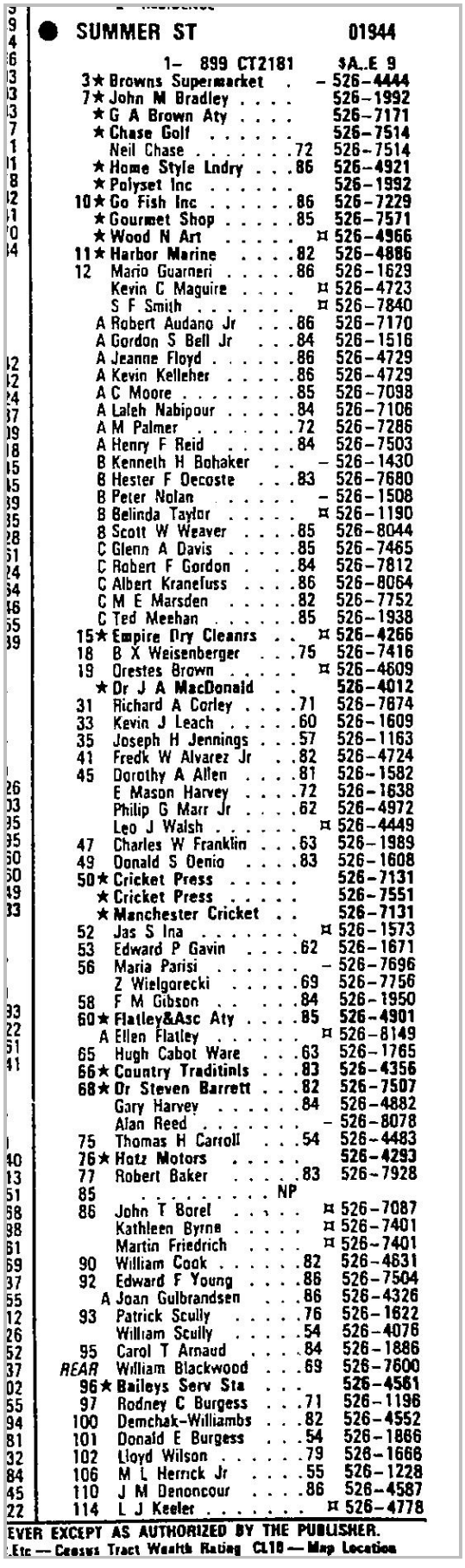
1- 99 CT2181 $A..E 9

1 Domenick J Maio .72 526-7588
2 Stanley T Anderson .66 526-4914
3 Mrs Elda B Harlow .82 526-1180
4 Robert F Holf .70 526-1095
4 RESIDENCE

E MAY NOT BE KEY PUNCHED ENTERED INTO A COMPUTER OR PHOTOGRAPHED IN ANY MANNER WHATSOEVER
stings To The Street ★ — Business Listing CT — Census Tract 83,84,85,Etc. — Year First Listed 1983,84,85,Etc ¤A&B,Etc —

Target Street	Cross Street	Source
-	✓	Cole Criss-Cross Directory

SUMMER ST 1989



SUMMER ST **01944**

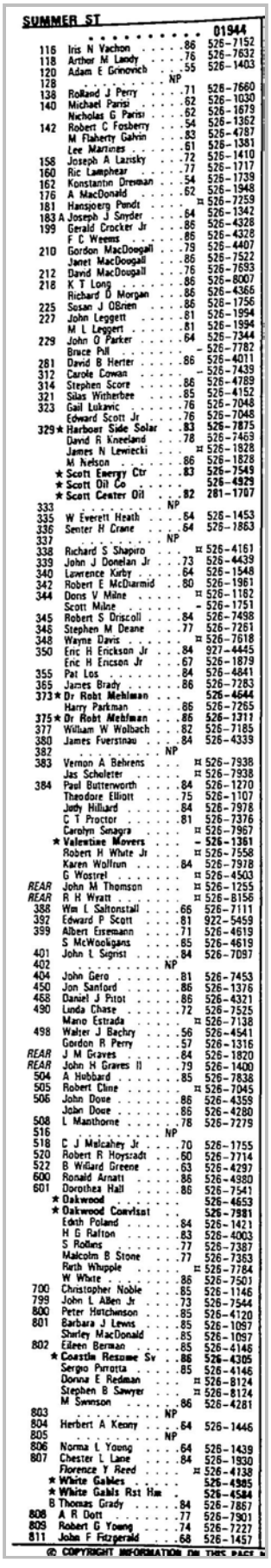
1– 899 CT2181 SA..E 9

3★ Browns Supermarket . – 526–4444
7★ John M Bradley 526–1992
★ G A Brown Aty 526–7171
★ Chase Golf 526–7514
Neil Chase 72 526–7514
★ Home Style Lndry . . .86 526–4921
★ Polyset Inc 526–1992
10★ Go Fish Inc 86 526–7229
★ Gourmet Shop 85 526–7571
★ Wood N Art . . . . . ¤ 526–4966
11★ Harbor Marine 82 526–4886
12 Mario Guarneri 86 526–1629
Kevin C Maguire . . . . ¤ 526–4723
S F Smith . . . . . ¤ 526–7840
A Robert Audano Jr . . .86 526–7170
A Gordon S Bell Jr . . .84 526–1516
A Jeanne Floyd 86 526–4729
A Kevin Kelleher 86 526–4729
A C Moore 85 526–7098
A Laleh Nabipour 84 526–7106
A M Palmer 72 526–7286
A Henry F Reid 84 526–7503
B Kenneth H Bohaker . . – 526–1430
B Hester F Decoste . . .83 526–7680
B Peter Nolan . . . . . – 526–1508
B Belinda Taylor . . . . . ¤ 526–1190
B Scott W Weaver 85 526–8044
C Glenn A Davis 85 526–7465
C Robert F Gordon . . .84 526–7812
C Albert Kranefuss 86 526–8064
C M E Marsden 82 526–7752
C Ted Meehan 85 526–1938
15★ Empire Dry Cleanrs . . ¤ 526–4266
18 B X Weisenberger . . .75 526–7416
19 Orestes Brown . . . . . ¤ 526–4609
★ Dr J A MacDonald . . 526–4012
31 Richard A Corley 71 526–7874
33 Kevin J Leach 60 526–1609
35 Joseph H Jennings . . .57 526–1163
41 Fredk W Alvarez Jr . .82 526–4724
45 Dorothy A Allen 81 526–1582
E Mason Harvey 72 526–1638
Philip G Marr Jr 62 526–4972
Leo J Walsh . . . . . ¤ 526–4449
47 Charles W Franklin . . .63 526–1989
49 Donald S Oenio 83 526–1608
50★ Cricket Press 526–7131
★ Cricket Press 526–7551
★ Manchester Cricket . . 526–7131
52 Jas S Ina . . . . . ¤ 526–1573
53 Edward P Gavin 62 526–1671
56 Maria Parisi . . . . . – 526–7696
Z Wielgorecki 69 526–7756
58 F M Gibson 84 526–1950
60★ Flatley&Asc Aty 85 526–4901
A Ellen Flatley . . . . . ¤ 526–8149
65 Hugh Cabot Ware . . .63 526–1765
66★ Country Traditinls . . .83 526–4356
68★ Dr Steven Barrett . . .82 526–7507
Gary Harvey 84 526–4882
Alan Reed . . . . . – 526–8078
75 Thomas H Carroll . . .54 526–4483
76★ Hotz Motors 526–4293
77 Robert Baker 83 526–7928
85 . . . . . NP
86 John T Borel . . . . . ¤ 526–7087
Kathleen Byrne . . . . . ¤ 526–7401
Martin Friedrich . . . . ¤ 526–7401
90 William Cook 82 526–4631
92 Edward F Young 86 526–7504
A Joan Gulbrandsen . . .86 526–4326
93 Patrick Scully 76 526–1622
William Scully 54 526–4076
95 Carol T Arnaud 84 526–1886
REAR William Blackwood . . .69 526–7600
96★ Baileys Serv Sta . . . 526–4561
97 Rodney C Burgess . . .71 526–1196
100 Demchak–Williambs . . .82 526–4552
101 Donald E Burgess . . .54 526–1866
102 Lloyd Wilson 79 526–1666
106 M L Herrick Jr 55 526–1228
110 J M Denoncour 86 526–4587
114 L J Keeler . . . . . ¤ 526–4778

EVER EXCEPT AS AUTHORIZED BY THE PUBLISHER.
Etc — Census Tract Wealth Rating CL18 — Map Location

Target Street	Cross Street	Source
-	✓	Cole Criss-Cross Directory

SUMMER ST 1989



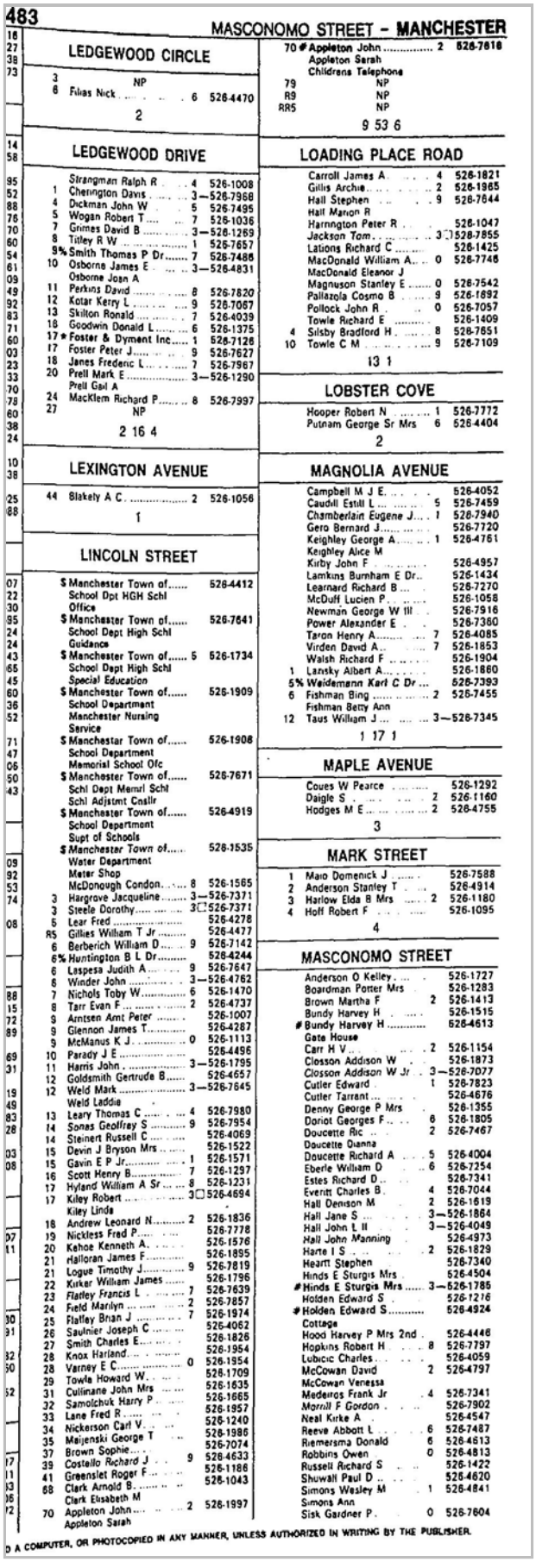
SUMMER ST

			01944
116	Iris N Vachon	86	526-7152
118	Arthur M Landy	76	526-7632
120	Adam E Grinovich	55	526-1403
128		NP	
138	Rolland J Perry	71	526-7660
140	Michael Parisi	62	526-1030
	Nicholas G Parisi	62	526-1879
142	Robert C Fosberry	54	526-1362
	M Flaherty Galvin	83	526-4787
	Lee Martines	61	526-1381
158	Joseph A Lazisky	72	526-1410
160	Ric Lamphear	77	526-1717
162	Konstantin Dresman	54	526-1739
176	A MacDonald	62	526-1948
181	Hanspoerg Pundt	H	526-7259
183 A	Joseph J Snyder	64	526-1342
199	Gerald Crocker Jr	86	526-4328
	F C Weems	86	526-4328
210	Gordon MacDougall	79	526-4407
	Janet MacDougall	86	526-7522
212	David MacDougall	76	526-7593
218	K T Long	86	526-8007
	Richard D Morgan	86	526-4366
225	Susan J OBrien	86	526-1756
227	John Leggett	81	526-1994
	M L Leggett	81	526-1994
229	John O Parker	64	526-7344
	Bruce Pitt	-	526-7782
281	David B Herter	86	526-4011
312	Carole Cowan	-	526-7439
314	Stephen Score	86	526-4789
321	Silas Witherbee	85	526-4152
323	Gail Lukavic	76	526-7048
	Edward Scott Jr	76	526-7048
329 ★	**Harbour Side Solar**	**83**	**526-7875**
	David R Kneeland	78	526-7469
	James N Lewiecki	H	526-1828
	M Nelson	86	526-1828
	★ **Scott Energy Ctr**	**83**	**526-7549**
	★ **Scott Oil Co**		**526-4929**
	★ **Scott Center Oil**	**82**	**281-1707**
333		NP	
335	W Everett Heath	84	526-1453
336	Senter H Crane	64	526-1863
337		NP	
338	Richard S Shapiro	H	526-4161
339	John J Donelan Jr	73	526-4439
340	Lawrence Kirby	64	526-1548
342	Robert E McDiarmid	80	526-1961
344	Doris V Milne	H	526-1182
	Scott Milne	-	526-1751
345	Robert S Driscoll	84	526-7498
346	Stephen M Deane	77	526-7261
348	Wayne Davis	H	526-7618
350	Eric H Erickson Jr	84	927-4445
	Eric H Ericson Jr	67	526-1879
355	Pat Los	84	526-4841
365	James Brady	86	526-7283
373 ★	**Dr Robt Mehlman**		**526-4644**
	Harry Parkman	86	526-7265
375 ★	**Dr Robt Mehlman**	**86**	**526-1311**
377	William W Wolbach	82	526-7185
380	James Fverstnau	84	526-4339
382		NP	
383	Vernon A Behrens	H	526-7938
	Jas Scholeter	H	526-7938
384	Paul Butterworth	84	526-1270
	Theodore Elliott	75	526-1107
	Judy Hilliard	84	526-7978
	C T Proctor	81	526-7376
	Carolyn Senagra	H	526-7967
	★ **Valentine Movers**	-	**526-1361**
	Robert H White Jr	H	526-7558
	Karen Wolfrum	84	526-7978
	G Wostrel	H	526-4503
REAR	John M Thomson	H	526-1255
REAR	R H Wyatt	H	526-8156
388	Wm L Saltonstall	66	526-7111
392	Edward P Scott	81	922-5459
399	Albert Eisemann	71	526-4619
	S McWooligans	85	526-4619
401	John L Sigrist	84	526-7097
402		NP	
404	John Gero	81	526-7453
450	Jon Sanford	86	526-1376
458	Daniel J Pitot	86	526-4321
490	Linda Chase	72	526-7525
	Mario Estrada	H	526-7138
498	Walter J Bachry	56	526-4541
	Gordon R Perry	57	526-1316
REAR	J M Graves	84	526-1820
REAR	John H Graves II	79	526-1400
504	A Hubbard	85	526-7838
505	Robert Cline	H	526-7045
506	John Dove	86	526-4359
	John Dove	86	526-4280
508	L Manthorne	78	526-7279
516		NP	
518	C J Mulcahey Jr	70	526-1755
520	Robert R Hoyszadt	60	526-7714
522	B Willard Greene	63	526-4297
600	Ronald Arnatt	86	526-4980
601	Dorothea Hall	86	526-7541
	★ **Oakwood**		**526-4653**
	★ **Oakwood Convlsnt**		**526-7981**
	Edith Poland	84	526-1421
	H G Rafton	83	526-4003
	S Rollins	77	526-7387
	Malcolm B Stone	77	526-7363
	Ruth Whipple	H	526-7784
	W White	86	526-7501
700	Christopher Noble	85	526-1146
799	John L Allen Jr	73	526-7544
800	Peter Hutchenson	85	526-4120
801	Barbara J Lewis	85	526-1097
	Shirley MacDonald	85	526-1097
802	Eileen Berman	85	526-4146
	★ **Constln Resume Sv**	**86**	**526-4305**
	Sergio Parrotta	85	526-4146
	Donna E Redman	H	526-8124
	Stephen B Sawyer	H	526-8124
	M Swinson	86	526-4281
803		NP	
804	Herbert A Kenny	64	526-1446
805		NP	
806	Norma L Young	64	526-1439
807	Chester L Lane	84	526-1930
	Florence Y Reed	H	526-4138
	★ **White Gables**		**526-4985**
	★ **White Gabls Rst Hm**		**526-4584**
	B Thomas Grady	84	526-7857
808	A R Dott	77	526-7901
809	Robert G Young	74	526-7227
811	John F Fitzgerald	68	526-1457

© COPYRIGHT INFORMATION ON THIS PAGE

Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

LINCOLN ST 1984



483

MASCONOMO STREET - MANCHESTER

LEDGEWOOD CIRCLE

3 NP
6 Filias Nick 6 526-4470

2

LEDGEWOOD DRIVE

Strangman Ralph R . . . 4 526-1008
1 Chenington Davis . . . . 3—526-7968
4 Dickman John W . . . 5 526-7495
5 Wogan Robert T 7 526-1036
7 Grimes David B . . . . . 3—526-1269
8 Titley R W 1 525-7657
9% Smith Thomas P Dr 7 526-7486
10 Osborne James E . . . . 3—526-4831
Osborne Joan A
11 Perkins David 8 526-7820
12 Kotar Kerry L 9 526-7067
13 Skilton Ronald 7 526-4039
16 Goodwin Donald L 6 526-1375
17 * Foster & Dyment Inc 1 526-7126
17 Foster Peter J 9 526-7627
18 James Frederic L 7 526-7967
20 Prell Mark E . . . . . 3—526-1290
Prell Gail A
24 MacKlem Richard P 8 526-7997
27 NP

2 16 4

LEXINGTON AVENUE

44 Blakely A C 2 526-1056

1

LINCOLN STREET

$ Manchester Town of 526-4412
School Dpt HGH Schl
Office
$ Manchester Town of 526-7641
School Dept High Schl
Guidance
$ Manchester Town of 5 526-1734
School Dept High Schl
Special Education
$ Manchester Town of 526-1909
School Department
Manchester Nursing
Service
$ Manchester Town of 526-1908
School Department
Memorial School Ofc
$ Manchester Town of 526-7671
Schl Dept Memrl Schl
Schl Adjstmt Cnsltr
$ Manchester Town of 526-4919
School Department
Supt of Schools
$ Manchester Town of 526-1535
Water Department
Meter Shop
McDonough Condon 8 526-1565
3 Hargrove Jacqueline . . . . . 3—526-7371
3 Steele Dorothy . . . . . 3☐526-7371
5 Lear Fred 526-4278
RS Gillies William T Jr 526-4477
6 Berberich William D 9 526-7142
6% Huntington B L Dr 526-4244
6 Laspesa Judith A 9 526-7647
6 Winder John . . . . . 3—526-4762
7 Nichols Toby W 6 526-1470
8 Tarr Evan F 2 526-4737
9 Arntsen Amt Peter 526-1007
9 Glennon James T 526-4287
9 McManus K J 0 526-1113
10 Parady J E 526-4496
11 Harris John . . . . . 3—526-1795
12 Goldsmith Gertrude B 526-4657
12 Weld Mark . . . . . 3—526-7645
Weld Laddie
13 Leary Thomas C 4 526-7980
14 Sonas Geoffrey S 9 526-7954
14 Steinert Russell C 526-4069
15 Devin J Bryson Mrs 526-1522
15 Gavin E P Jr 1 526-1571
16 Scott Henry B 7 526-1297
17 Hyland William A Sr 8 526-1231
17 Kiley Robert . . . . . 3☐526-4694
Kiley Linda
18 Andrew Leonard N 2 526-1836
19 Nickless Fred P 526-7778
20 Kehoe Kenneth A 526-1576
21 Halloran James F 526-1895
21 Logue Timothy J 9 526-7819
22 Kirker William James 526-1796
23 Flatley Francis L 7 526-7639
24 Field Marilyn 2 526-7857
25 Flatley Brian J 7 526-1974
26 Saulnier Joseph C 526-4062
27 Smith Charles E 526-1826
28 Knox Harland 0 526-1954
28 Varney E C 526-1954
29 Towle Howard W 526-1709
31 Cullinane John Mrs 526-1635
32 Samolchuk Harry P 526-1665
33 Lane Fred R 526-1957
34 Nickerson Carl V 526-1240
35 Maijenski George T 526-1986
37 Brown Sophie 526-7074
39 Costello Richard J 9 526-4633
41 Greenslet Roger F 526-1186
68 Clark Arnold B 526-1043
Clark Elisabeth M
70 Appleton John 2 526-1997
Appleton Sarah

70 # Appleton John 2 526-7818
Appleton Sarah
Childrens Telephone
79 NP
R9 NP
RR5 NP

9 53 6

LOADING PLACE ROAD

Carroll James A 4 526-1821
Gillis Archie 2 526-1965
Hall Stephen 9 526-7644
Hall Marion R
Harrington Peter R 526-1047
Jackson Tom . . . . . 3☐528-7855
Lations Richard C 526-1425
MacDonald William A 0 526-7746
MacDonald Eleanor J
Magnuson Stanley E 0 526-7542
Pallazola Cosmo B 9 526-1892
Pollock John R 0 526-7057
Towle Richard E 526-1409
4 Silsby Bradford H 8 526-7651
10 Towle C M 9 526-7109

13 1

LOBSTER COVE

Hooper Robert N 1 526-7772
Putnam George Sr Mrs 6 526-4404

2

MAGNOLIA AVENUE

Campbell M J E 526-4052
Caudell Estill L 5 526-7459
Chamberlain Eugene J 1 526-7940
Gero Bernard J 526-7720
Keighley George A 1 526-4761
Keighley Alice M
Kirby John F 526-4957
Lamkins Burnham E Dr 526-1434
Learnard Richard B 526-7270
McDuff Lucien P 526-1058
Newman George W III 526-7916
Power Alexander E 526-7360
Taron Henry A 7 526-4085
Virden David A 7 526-1853
Walsh Richard F 526-1904
1 Lazisky Albert A 526-1880
5% Weidemann Karl C Dr 526-7393
6 Fishman Bing 2 525-7455
Fishman Betty Ann
12 Taus William J . . . . . 3—526-7345

1 17 1

MAPLE AVENUE

Coues W Pearce 526-1292
Daigle S 2 526-1160
Hodges M E 2 526-4755

3

MARK STREET

1 Maio Domenick J 526-7588
2 Anderson Stanley T 526-4914
3 Harlow Elda B Mrs 2 526-1180
4 Hoff Robert F 526-1095

4

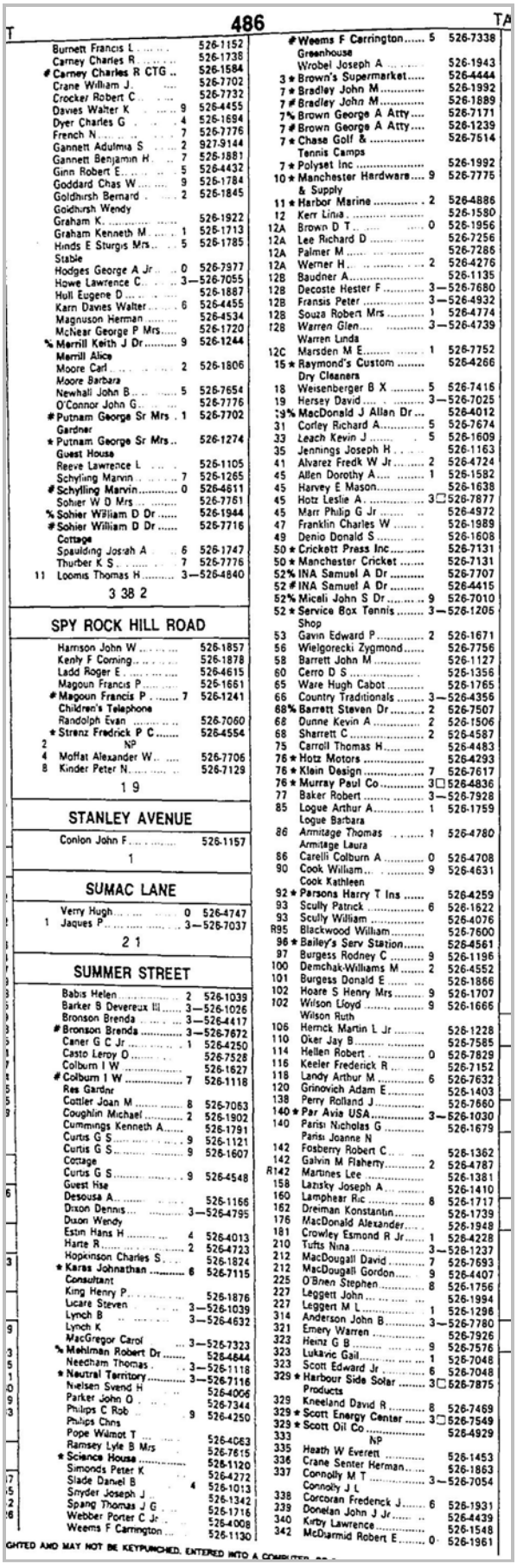
MASCONOMO STREET

Anderson O Kelley 526-1727
Boardman Potter Mrs 526-1283
Brown Martha F 2 526-1413
Bundy Harvey H 526-1515
Bundy Harvey H 526-4613
Gate House
Carr H V 2 526-1154
Closson Addison W 526-1873
Closson Addison W Jr . . . . . 3—526-7077
Cutler Edward 1 526-7823
Cutler Tarrant 526-4676
Denny George P Mrs 526-1355
Doriot Georges F 6 526-1805
Doucette Ric 2 526-7467
Doucette Dianna
Doucette Richard A 5 526-4004
Eberle William D 6 526-7254
Estes Richard D 526-7341
Everitt Charles B 4 526-7044
Hall Denison M 2 526-1619
Hall Jane S . . . . . 3—526-1864
Hall John L II . . . . . 3—526-4049
Hall John Manning 526-4973
Harte I S 2 526-1829
Heartt Stephen 526-7340
Hinds E Sturgis Mrs 526-4504
Hinds E Sturgis Mrs . . . . . 3—526-1785
Holden Edward S 526-1216
Holden Edward S 526-4924
Cottage
Hood Harvey P Mrs 2nd 526-4446
Hopkins Robert H 8 526-7797
Lubicic Charles 526-4059
McCowan David 2 526-4797
McCowan Venessa
Medeiros Frank Jr 4 526-7341
Morrill F Gordon 526-7902
Neal Kirke A 526-4547
Reeve Abbott L 6 526-7487
Riemersma Donald 6 526-4613
Robbins Owen 0 526-4813
Russell Richard S 526-1422
Shuwalt Paul D 526-4620
Simons Wesley M 1 526-4841
Simons Ann
Sisk Gardner P 0 526-7604

D A COMPUTER, OR PHOTOCOPIED IN ANY MANNER, UNLESS AUTHORIZED IN WRITING BY THE PUBLISHER.

Target Street	Cross Street	Source
-	✓	Cole Criss-Cross Directory

SUMMER ST 1984



486

Burnett Francis L ... 526-1152
Carney Charles R ... 526-1738
Carney Charles R CTG ... 526-1584
Crane William J ... 526-7702
Crocker Robert C ... 526-7732
Davies Walter K ... 9 526-4455
Dyer Charles G ... 4 526-1694
French N ... 7 526-7776
Gannett Adulmia S ... 2 927-9144
Gannett Benjamin H ... 7 526-1881
Ginn Robert E ... 5 526-4432
Goddard Chas W ... 9 526-1784
Goldhirsh Bernard ... 2 526-1845
Goldhirsh Wendy
Graham K ... 526-1922
Graham Kenneth M ... 1 526-1713
Hinds E Sturgis Mrs ... 5 526-1785
Stable
Hodges George A Jr ... 0 526-7977
Howe Lawrence C ... 3—526-7055
Hull Eugene D ... 526-1867
Karn Davies Walter ... 6 526-4455
Magnuson Herman ... 526-4534
McNear George P Mrs ... 526-1720
% Merrill Keith J Dr ... 9 526-1244
Merrill Alice
Moore Carl ... 2 526-1806
Moore Barbara
Newhall John B ... 5 526-7654
O'Connor John G ... 526-7776
Putnam George Sr Mrs ... 1 526-7702
Gardner
* Putnam George Sr Mrs ... 526-1274
Guest House
Reeve Lawrence L ... 526-1105
Schyling Marvin ... 7 526-1265
Schylling Marvin ... 0 526-4611
Sohier W D Mrs ... 526-7761
% Sohier William D Dr ... 526-1944
# Sohier William D Dr ... 526-7716
Cottage
Spaulding Josiah A ... 6 526-1747
Thurber K S ... 7 526-7776
11 Loomis Thomas H ... 3—526-4840

3 38 2

SPY ROCK HILL ROAD

Harrison John W ... 526-1857
Kenly F Corning ... 526-1878
Ladd Roger E ... 526-4615
Magoun Francis P ... 526-1661
Magoun Francis P ... 7 526-1241
Children's Telephone
Randolph Evan ... 526-7060
* Strenz Fredrick P C ... 526-4554
2 NP
4 Moffat Alexander W ... 526-7706
8 Kinder Peter N ... 526-7129

1 9

STANLEY AVENUE

Conlon John F ... 526-1157

1

SUMAC LANE

Verry Hugh ... 0 526-4747
1 Jaques P ... 3—526-7037

2 1

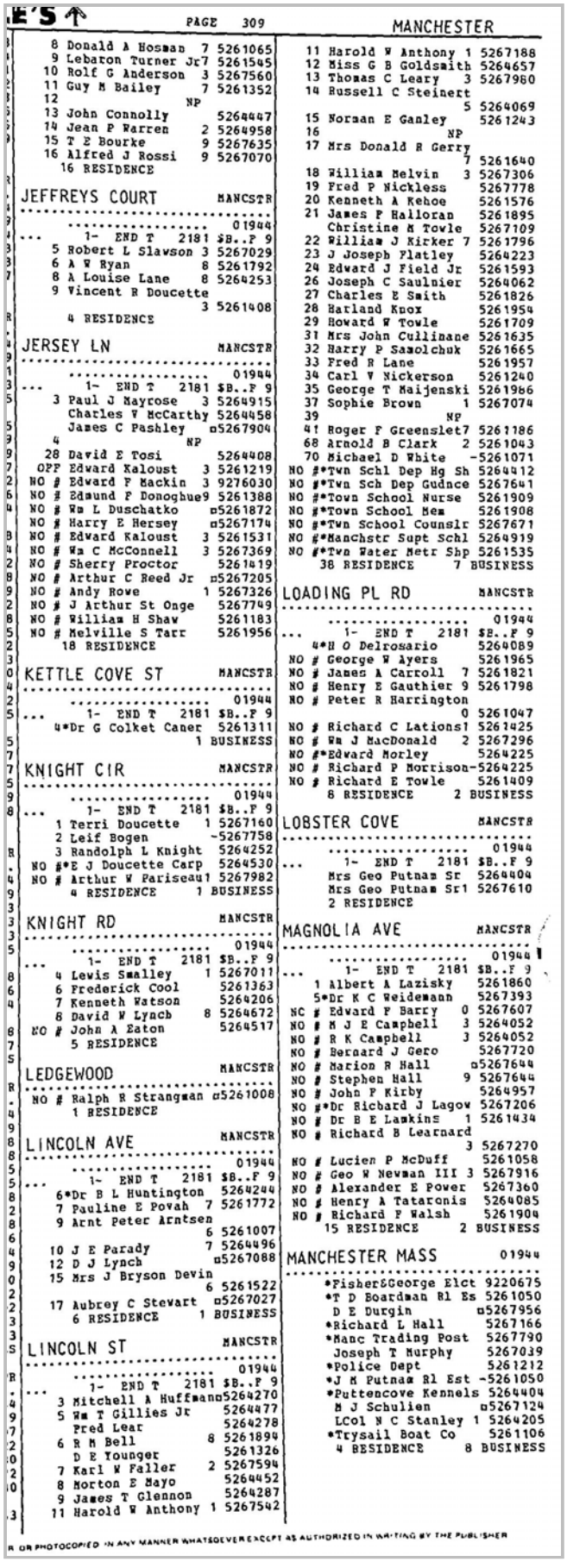
SUMMER STREET

Babis Helen ... 2 526-1039
Barker S Devereux III ... 3—526-1026
Bronson Brenda ... 3—526-4417
Bronson Brenda ... 3—526-7672
Caner G C Jr ... 1 526-4250
Casto Leroy O ... 526-7528
Colburn I W ... 526-1627
Colburn I W ... 7 526-1118
Res Gardne
Cottler Joan M ... 8 526-7063
Coughlin Michael ... 2 526-1902
Cummings Kenneth A ... 526-1791
Curtis G S ... 9 526-1121
Curtis G S ... 9 526-1607
Cottage
Curtis G S ... 9 526-4548
Guest Hse
Desousa A ... 526-1166
Dixon Dennis ... 3—526-4795
Dixon Wendy
Estin Hans H ... 4 526-4013
Harte R ... 2 526-4723
Hopkinson Charles S ... 526-1824
* Karas Johnathan ... 6 526-7115
Consultant
King Henry P ... 526-1876
Licare Steven ... 3—526-1039
Lynch B ... 3—526-4632
Lynch K
MacGregor Carol ... 3—526-7323
% Mehlman Robert Dr ... 526-4844
Needham Thomas ... 3—526-1118
* Neutral Territory ... 3—526-7116
Nielsen Svend H ... 526-4006
Parker John O ... 526-7344
Philips C Rob ... 9 526-4250
Philips Chris
Pope Wilmot T ... 526-4063
Ramsey Lyle B Mrs ... 526-7615
* Science House ... 526-1120
Simonds Peter K ... 526-4272
Slade Daniel B ... 4 526-1013
Snyder Joseph J ... 526-1342
Spang Thomas J G ... 526-1716
Webber Porter C Jr ... 526-4008
Weems F Carrington ... 526-1130
Weems F Carrington ... 5 526-7338
Greenhouse
Wrobel Joseph A ... 526-1943
3 * Brown's Supermarket ... 526-4444
7 * Bradley John M ... 526-1992
7 # Bradley John M ... 526-1889
7% Brown George A Atty ... 526-7171
7 # Brown George A Atty ... 526-1239
7 * Chase Golf & ... 526-7514
Tennis Camps
7 * Polyset Inc ... 526-1992
10 * Manchester Hardware ... 9 526-7775
& Supply
11 * Harbor Marine ... 2 526-4886
12 Kerr Lina ... 526-1580
12A Brown D T ... 0 526-1956
12A Lee Richard D ... 526-7256
12A Palmer M ... 526-7286
12A Werner H ... 2 526-4276
12B Baudner A ... 526-1135
12B Decoste Hester F ... 3—526-7680
12B Fransis Peter ... 3—526-4932
12B Souza Robert Mrs ... 1 526-4774
12B Warren Glen ... 3—526-4739
Warren Linda
12C Marsden M E ... 1 526-7752
15 * Raymond's Custom ... 526-4266
Dry Cleaners
18 Weisenberger B X ... 5 526-7416
19 Hersey David ... 3—526-7025
19% MacDonald J Allan Dr ... 526-4012
31 Corley Richard A ... 5 526-7674
33 Leach Kevin J ... 5 526-1609
35 Jennings Joseph H ... 526-1163
41 Alvarez Fredk W Jr ... 2 526-4724
45 Allen Dorothy A ... 1 526-1582
45 Harvey E Mason ... 526-1638
45 Hotz Leslie A ... 3□526-7877
45 Marr Philip G Jr ... 526-4972
47 Franklin Charles W ... 526-1989
49 Denio Donald S ... 526-1608
50 * Crickett Press Inc ... 526-7131
50 * Manchester Cricket ... 526-7131
52% INA Samuel A Dr ... 526-7707
52 # INA Samuel A Dr ... 526-4415
52% Micali John S Dr ... 9 526-7010
52 * Service Box Tennis ... 3—526-1205
Shop
53 Gavin Edward P ... 2 526-1671
56 Wielgorecki Zygmond ... 526-7756
58 Barrett John M ... 526-1127
60 Cerro D S ... 526-1356
65 Ware Hugh Cabot ... 526-1765
66 Country Traditionals ... 3—526-4356
68% Barrett Steven Dr ... 2 526-7507
68 Dunne Kevin A ... 2 526-1506
68 Sharrett C ... 2 526-4587
75 Carroll Thomas H ... 526-4483
76 * Hotz Motors ... 526-4293
76 * Klein Design ... 7 526-7617
76 * Murray Paul Co ... 3□526-4836
77 Baker Robert ... 3—526-7928
85 Logue Arthur A ... 1 526-1759
Logue Barbara
86 Armitage Thomas ... 1 526-4780
Armitage Laura
86 Carelli Colburn A ... 0 526-4708
90 Cook William ... 9 526-4631
Cook Kathleen
92 * Parsons Harry T Ins ... 526-4259
93 Scully Patrick ... 6 526-1622
93 Scully William ... 526-4076
R95 Blackwood William ... 526-7600
96 * Bailey's Serv Station ... 526-4561
97 Burgess Rodney C ... 9 526-1196
100 Demchak-Williams M ... 2 526-4552
101 Burgess Donald E ... 526-1866
102 Hoare S Henry Mrs ... 9 526-1707
102 Wilson Lloyd ... 9 526-1666
Wilson Ruth
106 Hernck Martin L Jr ... 526-1228
110 Oker Jay B ... 526-7585
114 Hellen Robert ... 0 526-7829
116 Keeler Frederick R ... 526-7152
118 Landy Arthur M ... 6 526-7632
120 Grinovich Adam E ... 526-1403
138 Perry Rolland J ... 526-7660
140 * Par Avia USA ... 3—526-1030
140 Parisi Nicholas G ... 526-1679
Parisi Joanne N
142 Fosberry Robert C ... 526-1362
142 Galvin M Flaherty ... 2 526-4787
R142 Martines Lee ... 526-1381
158 Lazisky Joseph A ... 526-1410
160 Lamphear Ric ... 8 526-1717
162 Dreiman Konstantin ... 526-1739
176 MacDonald Alexander ... 526-1948
181 Crowley Esmond R Jr ... 1 526-4228
210 Tufts Nina ... 3—526-1237
212 MacDougall David ... 7 526-7693
212 MacDougall Gordon ... 9 526-4407
225 O'Brien Stephen ... 8 526-1756
227 Leggett John ... 526-1994
227 Leggett M L ... 1 526-1296
314 Anderson John B ... 3—526-7780
321 Emery Warren ... 526-7926
323 Heinz G B ... 9 526-7576
323 Lukavic Gail ... 1 526-7048
323 Scott Edward Jr ... 6 526-7048
329 * Harbour Side Solar ... 3□526-7875
Products
329 Kneeland David R ... 8 526-7469
329 * Scott Energy Center ... 3□526-7549
329 * Scott Oil Co ... 526-4929
333 NP
335 Heath W Everett ... 526-1453
336 Crane Senter Herman ... 526-1863
337 Connolly M T ... 3—526-7054
Connolly J L
338 Corcoran Frederick J ... 6 526-1931
339 Donelan John J Jr ... 526-4439
340 Kirby Lawrence ... 526-1548
342 McDiarmid Robert E ... 0 526-1961

GHTED AND MAY NOT BE KEYPUNCHED, ENTERED INTO A COMPUTER

Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

LINCOLN ST 1975



E'S ↑ PAGE 309 MANCHESTER

8 Donald A Hosman 7 5261065
9 Lebaron Turner Jr 7 5261545
10 Rolf G Anderson 3 5267560
11 Guy M Bailey 7 5261352
12 NP
13 John Connolly 5264447
14 Jean P Warren 2 5264958
15 T E Bourke 9 5267635
16 Alfred J Rossi 9 5267070
16 RESIDENCE

JEFFREYS COURT MANCSTR
01944
... 1- END T 2181 $B..F 9
5 Robert L Slawson 3 5267029
6 A W Ryan 8 5261792
8 A Louise Lane 8 5264253
9 Vincent R Doucette 3 5261408
4 RESIDENCE

JERSEY LN MANCSTR
01944
... 1- END T 2181 $B..F 9
3 Paul J Mayrose 3 5264915
Charles W McCarthy 5264458
James C Pashley ¤5267904
4 NP
28 David E Tosi 5264408
OPF Edward Kaloust 3 5261219
NO # Edward F Mackin 3 9276030
NO # Edmund F Donoghue 9 5261388
NO # Wm L Duschatko ¤5261872
NO # Harry E Hersey ¤5267174
NO # Edward Kaloust 3 5261531
NO # Wm C McConnell 3 5267369
NO # Sherry Proctor 5261419
NO # Arthur C Reed Jr ¤5267205
NO # Andy Rowe 1 5267326
NO # J Arthur St Onge 5267749
NO # William H Shaw 5261183
NO # Melville S Tarr 5261956
18 RESIDENCE

KETTLE COVE ST MANCSTR
01944
... 1- END T 2181 $B..F 9
4*Dr G Colket Caner 5261311 1 BUSINESS

KNIGHT CIR MANCSTR
01944
... 1- END T 2181 $B..F 9
1 Terri Doucette 1 5267160
2 Leif Bogen -5267758
3 Randolph L Knight 5264252
NO #*E J Doucette Carp 5264530
NO # Arthur W Pariseau 1 5267982
4 RESIDENCE 1 BUSINESS

KNIGHT RD MANCSTR
01944
... 1- END T 2181 $B..F 9
4 Lewis Smalley 1 5267011
6 Frederick Cool 5261363
7 Kenneth Watson 5264206
8 David W Lynch 8 5264672
NO # John A Eaton 5264517
5 RESIDENCE

LEDGEWOOD MANCSTR
NO # Ralph R Strangman ¤5261008
1 RESIDENCE

LINCOLN AVE MANCSTR
01944
... 1- END T 2181 $B..F 9
6*Dr B L Huntington 5264244
7 Pauline E Povah 7 5261772
9 Arnt Peter Arntsen 6 5261007
10 J E Parady 7 5264496
12 D J Lynch ¤5267088
15 Mrs J Bryson Devin 6 5261522
17 Aubrey C Stewart ¤5267027
6 RESIDENCE 1 BUSINESS

LINCOLN ST MANCSTR
01944
... 1- END T 2181 $B..F 9
3 Mitchell A Huffmann 5264270
5 Wm T Gillies Jr 5264477
Fred Lear 5264278
6 R M Bell 8 5261894
D E Younger 5261326
7 Karl W Faller 2 5267594
8 Morton E Mayo 5264452
9 James T Glennon 5264287
11 Harold W Anthony 1 5267542
11 Harold W Anthony 1 5267188
12 Miss G B Goldsmith 5264657
13 Thomas C Leary 3 5267980
14 Russell C Steinert 5 5264069
15 Norman E Ganley 5261243
16 NP
17 Mrs Donald R Gerry 7 5261640
18 William Melvin 3 5267306
19 Fred P Nickless 5267778
20 Kenneth A Kehoe 5261576
21 James P Halloran 5261895
Christine M Towle 5267109
22 William J Kirker 7 5261796
23 J Joseph Flatley 5264223
24 Edward J Field Jr 5261593
26 Joseph C Saulnier 5264062
27 Charles E Smith 5261826
28 Harland Knox 5261954
29 Howard W Towle 5261709
31 Mrs John Cullinane 5261635
32 Harry P Samolchuk 5261665
33 Fred R Lane 5261957
34 Carl V Nickerson 5261240
35 George T Maijenski 5261986
37 Sophie Brown 1 5267074
39 NP
41 Roger F Greenslet 7 5261186
68 Arnold B Clark 2 5261043
70 Michael D White -5261071
NO #*Twn Schl Dep Hg Sh 5264412
NO #*Twn Sch Dep Gudnce 5267641
NO #*Town School Nurse 5261909
NO #*Town School Mem 5261908
NO #*Twn School Counslr 5267671
NO #*Manchstr Supt Schl 5264919
NO #*Twn Water Metr Shp 5261535
38 RESIDENCE 7 BUSINESS

LOADING PL RD MANCSTR
01944
... 1- END T 2181 $B..F 9
4*H O Delrosario 5264089
NO # George W Ayers 5261965
NO # James A Carroll 7 5261821
NO # Henry E Gauthier 9 5261798
NO # Peter R Harrington 0 5261047
NO # Richard C Lations 1 5261425
NO # Wm J MacDonald 2 5267296
NO #*Edward Morley 5264225
NO # Richard P Morrison -5264225
NO # Richard E Towle 5261409
8 RESIDENCE 2 BUSINESS

LOBSTER COVE MANCSTR
01944
... 1- END T 2181 $B..F 9
Mrs Geo Putnam Sr 5264404
Mrs Geo Putnam Sr 1 5267610
2 RESIDENCE

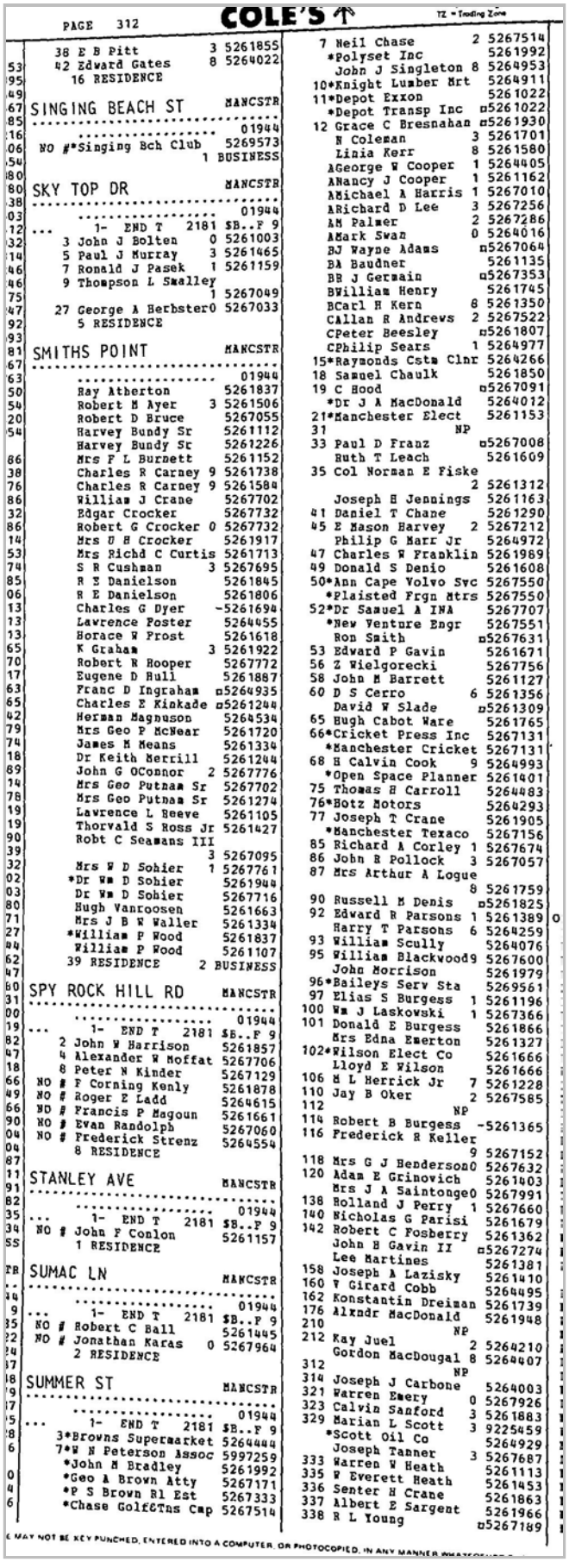
MAGNOLIA AVE MANCSTR
01944
... 1- END T 2181 $B..F 9
1 Albert A Lazisky 5261860
5*Dr K C Weidemann 5267393
NC # Edward F Barry 0 5267607
NO # M J E Campbell 3 5264052
NO # R K Campbell 3 5264052
NO # Bernard J Gero 5267720
NO # Marion R Hall ¤5267644
NO # Stephen Hall 9 5267644
NO # John P Kirby 5264957
NO #*Dr Richard J Lagow 5267206
NO # Dr B E Lamkins 1 5261434
NO # Richard B Learnard 3 5267270
NO # Lucien P McDuff 5261058
NO # Geo W Newman III 3 5267916
NO # Alexander E Power 5267360
NO # Henry A Tataronis 5264085
NO # Richard F Walsh 5261904
15 RESIDENCE 2 BUSINESS

MANCHESTER MASS 01944
*Fisher&George Elct 9220675
*T D Boardman Rl Es 5261050
D E Durgin ¤5267956
*Richard L Hall 5267166
*Manc Trading Post 5267790
Joseph T Murphy 5267039
*Police Dept 5261212
*J M Putnam Rl Est -5261050
*Puttencove Kennels 5264404
M J Schulien ¤5267124
LCol N C Stanley 1 5264205
*Trysail Boat Co 5261106
4 RESIDENCE 8 BUSINESS

R OR PHOTOCOPIED IN ANY MANNER WHATSOEVER EXCEPT AS AUTHORIZED IN WRITING BY THE PUBLISHER

Target Street	Cross Street	Source
-	✓	Cole Criss-Cross Directory

SUMMER ST 1975



PAGE 312 **COLE'S** TZ = Trading Zone

38 E B Pitt 3 5261855
42 Edward Gates 8 5264022
16 RESIDENCE

SINGING BEACH ST MANCSTR
01944
NO #*Singing Bch Club 5269573
1 BUSINESS

SKY TOP DR MANCSTR
01944
1- END T 2181 $B..F 9
3 John J Bolten 0 5261003
5 Paul J Murray 3 5261465
7 Ronald J Pasek 1 5261159
9 Thompson L Smalley 1 5267049
27 George A Herbster0 5267033
5 RESIDENCE

SMITHS POINT MANCSTR
01944
Ray Atherton 5261837
Robert M Ayer 3 5261506
Robert D Bruce 5267055
Harvey Bundy Sr 5261112
Harvey Bundy Sr 5261226
Mrs F L Burnett 5261152
Charles R Carney 9 5261738
Charles R Carney 9 5261584
William J Crane 5267702
Edgar Crocker 5267732
Robert G Crocker 0 5267732
Mrs U H Crocker 5261917
Mrs Richd C Curtis 5261713
S R Cushman 3 5267695
R E Danielson 5261845
R E Danielson 5261806
Charles G Dyer -5261694
Lawrence Foster 5264455
Horace W Frost 5261618
K Graham 3 5261922
Robert N Hooper 5267772
Eugene D Hull 5261887
Franc D Ingraham ¤5264935
Charles E Kinkade ¤5261244
Herman Magnuson 5264534
Mrs Geo P McNear 5261720
James M Means 5261334
Dr Keith Merrill 5261244
John G OConnor 2 5267776
Mrs Geo Putnam Sr 5267702
Mrs Geo Putnam Sr 5261274
Lawrence L Reeve 5261105
Thorvald S Ross Jr 5261427
Robt C Seamans III 3 5267095
Mrs W D Sohier 1 5267761
*Dr Wm D Sohier 5261944
Dr Wm D Sohier 5267716
Hugh Vanroosen 5261663
Mrs J B W Waller 5261334
*William P Wood 5261837
William P Wood 5261107
39 RESIDENCE 2 BUSINESS

SPY ROCK HILL RD MANCSTR
01944
1- END T 2181 $B..F 9
2 John W Harrison 5261857
4 Alexander W Moffat 5267706
8 Peter N Kinder 5267129
NO # F Corning Kenly 5261878
NO # Roger E Ladd 5264615
NO # Francis P Magoun 5261661
NO # Evan Randolph 5267060
NO # Frederick Strenz 5264554
8 RESIDENCE

STANLEY AVE MANCSTR
01944
1- END T 2181 $B..F 9
NO # John F Conlon 5261157
1 RESIDENCE

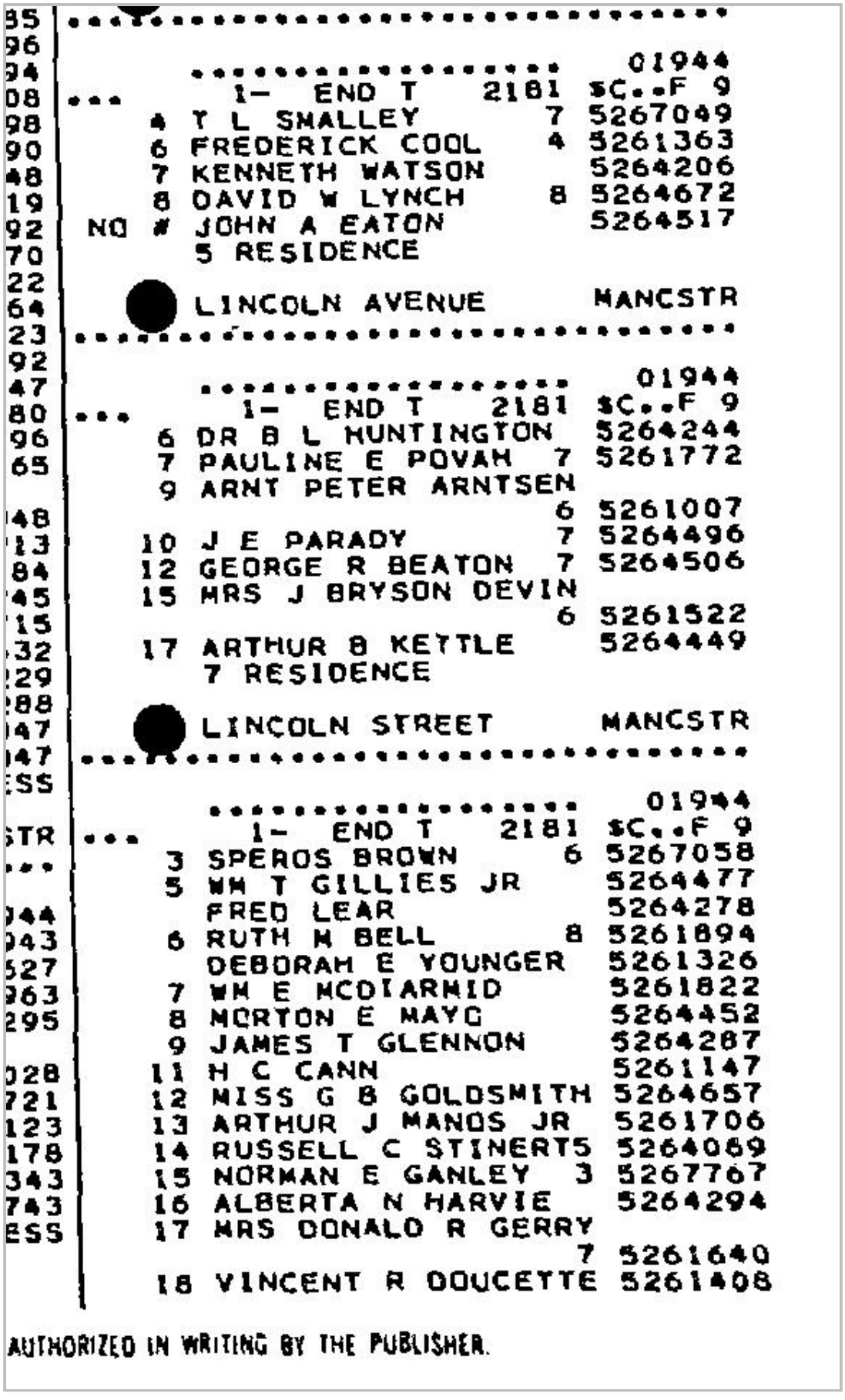
SUMAC LN MANCSTR
01944
1- END T 2181 $B..F 9
NO # Robert C Ball 5261445
NO # Jonathan Karas 0 5267964
2 RESIDENCE

SUMMER ST MANCSTR
01944
1- END T 2181 $B..F 9
3*Browns Supermarket 5264444
7*W N Peterson Assoc 5997259
*John M Bradley 5261992
*Geo A Brown Atty 5267171
*P S Brown Rl Est 5267333
*Chase Golf&Tns Cmp 5267514
7 Neil Chase 2 5267514
*Polyset Inc 5261992
John J Singleton 8 5264953
10*Knight Lumber Mrt 5264911
11*Depot Exxon 5261022
*Depot Transp Inc ¤5261022
12 Grace C Bresnahan ¤5261930
N Coleman 3 5261701
Linia Kerr 8 5261580
AGeorge W Cooper 1 5264405
ANancy J Cooper 1 5261162
AMichael A Harris 1 5267010
ARichard D Lee 3 5267256
AM Palmer 2 5267286
AMark Swan 0 5264016
BJ Wayne Adams ¤5267064
BA Baudner 5261135
BB J Germain ¤5267353
BWilliam Henry 5261745
BCarl H Kern 8 5261350
CAllan R Andrews 2 5267522
CPeter Beesley ¤5261807
CPhilip Sears 1 5264977
15*Raymonds Csta Clnr 5264266
18 Samuel Chaulk 5261850
19 C Hood ¤5267091
*Dr J A MacDonald 5264012
21*Manchester Elect 5261153
31 NP
33 Paul D Franz ¤5267008
Ruth T Leach 5261609
35 Col Norman E Fiske 2 5261312
Joseph H Jennings 5261163
41 Daniel T Chane 5261290
45 E Mason Harvey 2 5267212
Philip G Marr Jr 5264972
47 Charles W Franklin 5261989
49 Donald S Denio 5261608
50*Ann Cape Volvo Svc 5267550
*Plaisted Frgn Mtrs 5267550
52*Dr Samuel A INA 5267707
*New Venture Engr 5267551
Ron Smith ¤5267631
53 Edward P Gavin 5261671
56 Z Wielgorecki 5267756
58 John M Barrett 5261127
60 D S Cerro 6 5261356
David W Slade ¤5261309
65 Hugh Cabot Ware 5261765
66*Cricket Press Inc 5267131
*Manchester Cricket 5267131
68 H Calvin Cook 9 5264993
*Open Space Planner 5261401
75 Thomas H Carroll 5264483
76*Botz Motors 5264293
77 Joseph T Crane 5261905
*Manchester Texaco 5267156
85 Richard A Corley 1 5267674
86 John R Pollock 3 5267057
87 Mrs Arthur A Logue 8 5261759
90 Russell M Denis ¤5261825
92 Edward R Parsons 1 5261389
Harry T Parsons 6 5264259
93 William Scully 5264076
95 William Blackwood9 5267600
John Morrison 5261979
96*Baileys Serv Sta 5269561
97 Elias S Burgess 1 5261196
100 Wm J Laskowski 1 5267366
101 Donald E Burgess 5261866
Mrs Edna Emerton 5261327
102*Wilson Elect Co 5261666
Lloyd E Wilson 5261666
106 H L Herrick Jr 7 5261228
110 Jay B Oker 2 5267585
112 NP
114 Robert B Burgess -5261365
116 Frederick R Keller 9 5267152
118 Mrs G J Henderson0 5267632
120 Adam E Grinovich 5261403
Mrs J A Saintonge0 5267991
138 Rolland J Perry 1 5267660
140 Nicholas G Parisi 5261679
142 Robert C Fosberry 5261362
John H Gavin II ¤5267274
Lee Martines 5261381
158 Joseph A Lazisky 5261410
160 W Girard Cobb 5264495
162 Konstantin Dreiman 5261739
176 Alxndr MacDonald 5261948
210 NP
212 Kay Juel 2 5264210
Gordon MacDougal 8 5264407
312 NP
314 Joseph J Carbone 5264003
321 Warren Emery 0 5267926
323 Calvin Sanford 3 5261883
329 Marian L Scott 3 9225459
*Scott Oil Co 5264929
Joseph Tanner 3 5267687
333 Warren W Heath 5261113
335 W Everett Heath 5261453
336 Senter H Crane 5261863
337 Albert E Sargent 5261966
338 R L Young ¤5267189

E MAY NOT BE KEY PUNCHED, ENTERED INTO A COMPUTER, OR PHOTOCOPIED, IN ANY MANNER WHATSOEVER

Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

LINCOLN ST 1970



```
                                                    01944
      1-  END T   2181                          $C..F 9
    4 T L SMALLEY                             7 5267049
    6 FREDERICK COOL                          4 5261363
    7 KENNETH WATSON                            5264206
    8 DAVID W LYNCH                           8 5264672
NO  # JOHN A EATON                              5264517
      5 RESIDENCE

      LINCOLN AVENUE                          MANCSTR

                                                    01944
      1-  END T   2181                          $C..F 9
    6 DR B L HUNTINGTON                         5264244
    7 PAULINE E POVAH                         7 5261772
    9 ARNT PETER ARNTSEN
                                              6 5261007
   10 J E PARADY                              7 5264496
   12 GEORGE R BEATON                         7 5264506
   15 MRS J BRYSON DEVIN
                                              6 5261522
   17 ARTHUR B KETTLE                           5264449
      7 RESIDENCE

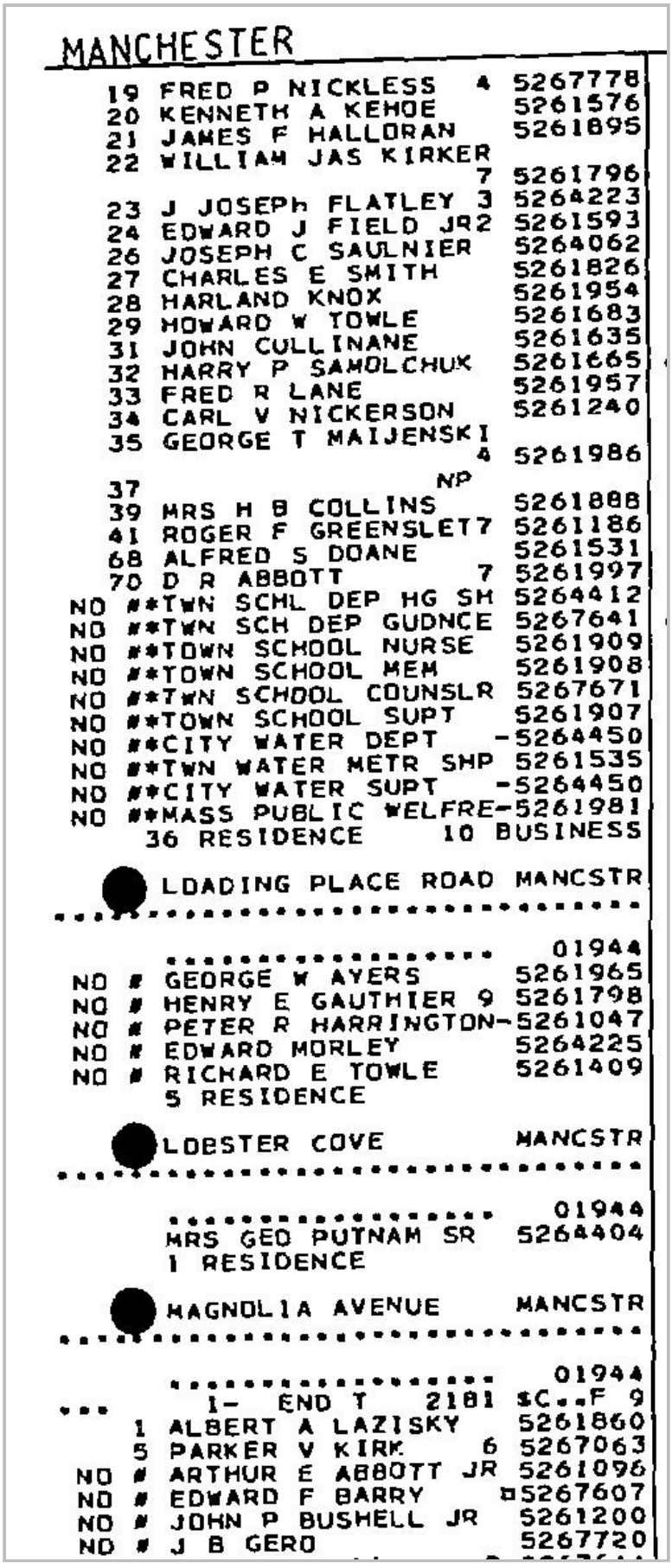
      LINCOLN STREET                          MANCSTR

                                                    01944
      1-  END T   2181                          $C..F 9
    3 SPEROS BROWN                            6 5267058
    5 WM T GILLIES JR                           5264477
      FRED LEAR                                 5264278
    6 RUTH M BELL                             8 5261894
      DEBORAH E YOUNGER                         5261326
    7 WM E MCDIARMID                            5261822
    8 NORTON E MAYO                             5264452
    9 JAMES T GLENNON                           5264287
   11 H C CANN                                  5261147
   12 MISS G B GOLDSMITH                        5264657
   13 ARTHUR J MANOS JR                         5261706
   14 RUSSELL C STINERTS                        5264069
   15 NORMAN E GANLEY                        3 5267767
   16 ALBERTA N HARVIE                          5264294
   17 MRS DONALD R GERRY
                                              7 5261640
   18 VINCENT R DOUCETTE                        5261408
```

AUTHORIZED IN WRITING BY THE PUBLISHER.

Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

LINCOLN ST 1970



MANCHESTER

19 FRED P NICKLESS 4 5267778
20 KENNETH A KEHOE 5261576
21 JAMES F HALLORAN 5261895
22 WILLIAM JAS KIRKER 7 5261796
23 J JOSEPh FLATLEY 3 5264223
24 EDWARD J FIELD JR2 5261593
26 JOSEPH C SAULNIER 5264062
27 CHARLES E SMITH 5261826
28 HARLAND KNOX 5261954
29 HOWARD W TOWLE 5261683
31 JOHN CULLINANE 5261635
32 HARRY P SAMOLCHUK 5261665
33 FRED R LANE 5261957
34 CARL V NICKERSON 5261240
35 GEORGE T MAIJENSKI 4 5261986
37 NP
39 MRS H B COLLINS 5261888
41 ROGER F GREENSLET7 5261186
68 ALFRED S DOANE 5261531
70 D R ABBOTT 7 5261997
NO **TWN SCHL DEP HG SH 5264412
NO **TWN SCH DEP GUDNCE 5267641
NO **TOWN SCHOOL NURSE 5261909
NO **TOWN SCHOOL MEM 5261908
NO **TWN SCHOOL COUNSLR 5267671
NO **TOWN SCHOOL SUPT 5261907
NO **CITY WATER DEPT -5264450
NO **TWN WATER METR SHP 5261535
NO **CITY WATER SUPT -5264450
NO **MASS PUBLIC WELFRE-5261981
36 RESIDENCE 10 BUSINESS

LOADING PLACE ROAD MANCSTR

01944
NO # GEORGE W AYERS 5261965
NO # HENRY E GAUTHIER 9 5261798
NO # PETER R HARRINGTON-5261047
NO # EDWARD MORLEY 5264225
NO # RICHARD E TOWLE 5261409
5 RESIDENCE

LOBSTER COVE MANCSTR

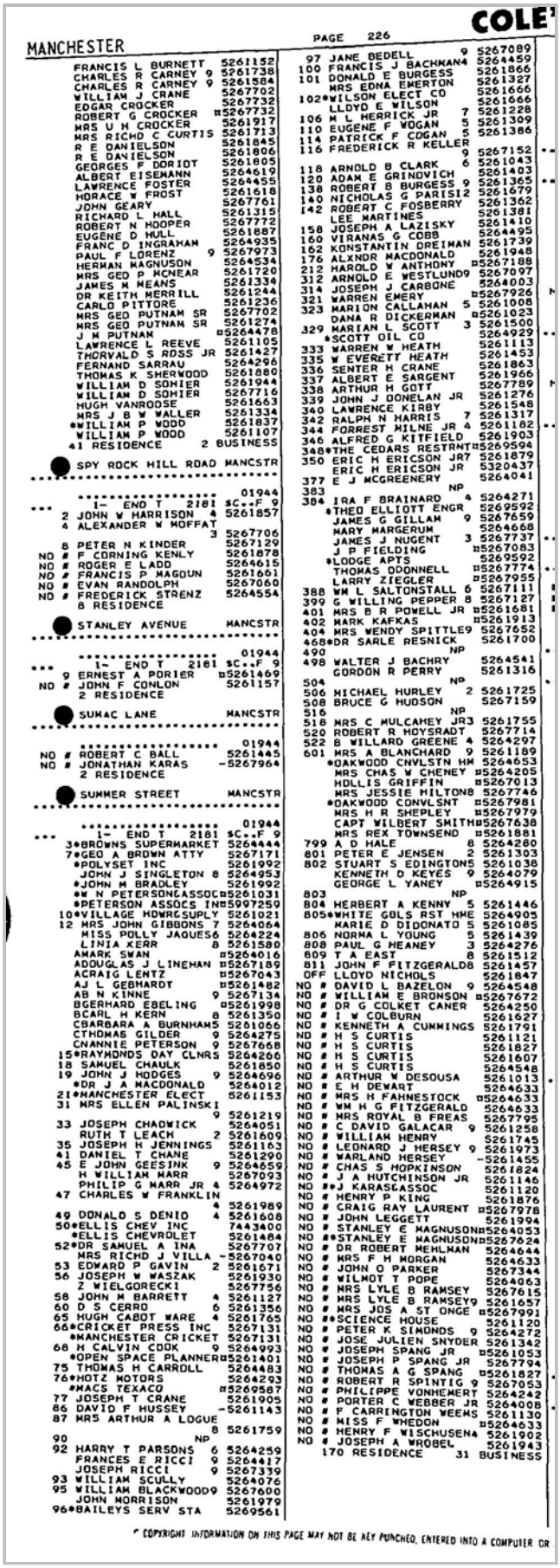
01944
MRS GEO PUTNAM SR 5264404
1 RESIDENCE

MAGNOLIA AVENUE MANCSTR

01944
1- END T 2181 $C..F 9
1 ALBERT A LAZISKY 5261860
5 PARKER V KIRK 6 5267063
NO # ARTHUR E ABBOTT JR 5261096
NO # EDWARD F BARRY 5267607
NO # JOHN P BUSHELL JR 5261200
NO # J B GERO 5267720

Target Street	Cross Street	Source
-	✓	Cole Criss-Cross Directory

SUMMER ST 1970



MANCHESTER PAGE 226 COLE'

FRANCIS L BURNETT 5261152
CHARLES R CARNEY 9 5261738
CHARLES R CARNEY 9 5261584
WILLIAM J CRANE 5267702
EDGAR CROCKER 5267732
ROBERT G CROCKER ¤5267732
MRS U H CROCKER 5261917
MRS RICHD C CURTIS 5261713
R E DANIELSON 5261845
R E DANIELSON 5261806
GEORGES F DORIOT 5261805
ALBERT EISEMANN 5264619
LAWRENCE FOSTER 5264455
HORACE W FROST 5261618
JOHN GEARY 5267761
RICHARD L HALL 5261315
ROBERT N HOOPER 5267772
EUGENE D HULL 5261887
FRANC D INGRAHAM 5264935
PAUL F LORENZ 9 5267973
HERMAN MAGNUSON 5264534
MRS GEO P MCNEAR 5261720
JAMES M MEANS 5261334
DR KEITH MERRILL 5261244
CARLO PITTORE 5261236
MRS GEO PUTNAM SR 5267702
MRS GEO PUTNAM SR 5261274
J M PUTNAM ¤5264478
LAWRENCE L REEVE 5261105
THORVALD S ROSS JR 5261427
FERNAND SARRAU 5264296
THOMAS K SHERWOOD 5261880
WILLIAM D SOHIER 5261944
WILLIAM D SOHIER 5267716
HUGH VANROOSE 5261663
MRS J B W WALLER 5261334
*WILLIAM P WOOD 5261837
WILLIAM P WOOD 5261107
41 RESIDENCE 2 BUSINESS

SPY ROCK HILL ROAD MANCSTR

01944
1- END T 2181 $C..F 9
2 JOHN W HARRISON 4 5261857
4 ALEXANDER W MOFFAT 3 5267706
8 PETER N KINDER 5267129
NO # F CORNING KENLY 5261878
NO # ROGER E LADD 5264615
NO # FRANCIS P MAGOUN 5261661
NO # EVAN RANDOLPH 5267060
NO # FREDERICK STRENZ 5264554
8 RESIDENCE

STANLEY AVENUE MANCSTR

01944
1- END T 2181 $C..F 9
9 ERNEST A PORIER ¤5261469
NO # JOHN F CONLON 5261157
2 RESIDENCE

SUMAC LANE MANCSTR

01944
NO # ROBERT C BALL 5261445
NO # JONATHAN KARAS -5267964
2 RESIDENCE

SUMMER STREET MANCSTR

01944
1- END T 2181 $C..F 9
3*BROWNS SUPERMARKET 5264444
7*GEO A BROWN ATTY 5267171
*POLYSET INC 5261992
JOHN J SINGLETON 8 5264953
*JOHN M BRADLEY 5261992
*W N PETERSONGASSOC ¤5261031
*PETERSON ASSOCS IN ¤5997259
10*VILLAGE HDWRESUPLY 5261021
12 MRS JOHN GIBBONS 7 5264064
MISS POLLY JAQUES6 5264224
LINIA KERR 8 5261580
AMARK SWAN ¤5264016
ADOUGLAS J LINEHAN ¤5267189
ACRAIG LENTZ ¤5267043
AJ L GEBHARDT ¤5261482
AB N KINNE 9 5267134
BGERHARD EBELING ¤5261998
BCARL H KERN 8 5261350
CBARBARA A BURNHAM5 5261066
CTHOMAS GILDER 9 5264275
CNANNIE PETERSON 9 5267668
15*RAYMONDS DAY CLNRS 5264266
18 SAMUEL CHAULK 5261850
19 JOHN J HODGES 9 5264696
*DR J A MACDONALD 5264012
21*MANCHESTER ELECT 5261153
31 MRS ELLEN PALINSKI 9 5261219
33 JOSEPH CHADWICK 5264051
RUTH T LEACH 2 5261609
35 JOSEPH H JENNINGS 5261163
41 DANIEL T CHANE 5261290
45 E JOHN GEESINK 9 5264659
H WILLIAM MARR 5267093
PHILIP G MARR JR 4 5264972
47 CHARLES W FRANKLIN 4 5261989
49 DONALD S DENIO 4 5261608
50*ELLIS CHEV INC 7443400
*ELLIS CHEVROLET 5261484
52*DR SAMUEL A INA 5267707
MRS RICHD J VILLA -5267040
53 EDWARD P GAVIN 2 5261671
56 JOSEPH W WASZAK 5261930
Z WIELGORECKI 5267756
58 JOHN M BARRETT 4 5261127
60 D S CERRO 6 5261356
65 HUGH CABOT WARE 4 5261765
66*CRICKET PRESS INC 5267131
*MANCHESTER CRICKET 5267131
68 H CALVIN COOK 9 5264993
*OPEN SPACE PLANNER ¤5261401
75 THOMAS H CARROLL 5264483
76*HOTZ MOTORS 5264293
*MACS TEXACO ¤5269587
77 JOSEPH T CRANE 5261905
86 DAVID F HUSSEY -5261143
87 MRS ARTHUR A LOGUE 6 5261759
90 NP
92 HARRY T PARSONS 6 5264259
FRANCES E RICCI 9 5264417
JOSEPH RICCI 9 5267339
93 WILLIAM SCULLY 5264076
95 WILLIAM BLACKWOOD9 5267600
JOHN MORRISON 5261979
96*BAILEYS SERV STA 5269561
97 JANE BEDELL 9 5267089
100 FRANCIS J BACHMAN4 5264459
101 DONALD E BURGESS 5261866
MRS EDNA EMERTON 5261327
102*WILSON ELECT CO 5261666
LLOYD E WILSON 5261228
106 M L HERRICK JR 7 5261309
110 EUGENE F WOGAN 5 5261386
114 PATRICK F COGAN 5
116 FREDERICK R KELLER 9 5267152 ••
118 ARNOLD B CLARK 6 5261043
120 ADAM E GRINOVICH 5261403
138 ROBERT B BURGESS 9 5261365 ••
140 NICHOLAS G PARISI2 5261679
142 ROBERT C FOSBERRY 5261362
LEE MARTINES 5261381
158 JOSEPH A LAZISKY 5261410
160 VIRANAS G COBB 5264495
162 KONSTANTIN DREIMAN 5261739
176 ALXNDR MACDONALD 5261948
212 HAROLD W ANTHONY ¤5267188
312 ARNOLD E WESTLUND9 5267097
314 JOSEPH J CARBONE 5264003 N
321 WARREN EMERY ¤5267926
323 MARION CALLAHAN 5 5261008
DANA R DICKERMAN ¤5261023
329 MARIAN L SCOTT 3 5261500
*SCOTT OIL CO 5264929 ••
333 WARREN W HEATH 5261113
335 W EVERETT HEATH 5261453
336 SENTER H CRANE 5261863
337 ALBERT E SARGENT 5261966
338 ARTHUR H GOTT 5267789 N
339 JOHN J DONELAN JR 5261276
340 LAWRENCE KIRBY 5261548
342 RALPH N HARRIS 7 5261317
344 FORREST MILNE JR 4 5261182 ••
346 ALFRED G KITFIELD 5261903
348*THE CEDARS RESTRNT ¤5269594
350 ERIC H ERICSON JR7 5261879
ERIC H ERICSON JR 5320437
377 E J MCGREENERY 5264041
383 NP
384 IRA F BRAINARD 4 5264271
*THEO ELLIOTT ENGR 5269592
JAMES G GILLAM 9 5267659
MARY MARGERUM 5264668
JAMES J NUGENT 3 5267737 ••
J P FIELDING ¤5267083
*LODGE APTS 5269592
THOMAS ODONNELL ¤5267774 •
LARRY ZIEGLER ¤5267955
388 WM L SALTONSTALL 6 5267111
399 G WILLING PEPPER 8 5267127
401 MRS B R POWELL JR ¤5261681
402 MARK KAFKAS ¤5261913
404 MRS WENDY SPITTLE9 5267652
468*DR SARLE RESNICK 5261700
490 NP •
498 WALTER J BACHRY 5264541
GORDON R PERRY 5261316
504 NP •
506 MICHAEL HURLEY 2 5261725
508 BRUCE G HUDSON 5267159
516 NP
518 MRS C MULCAHEY JR3 5261755
520 ROBERT R HOYSRADT 5267714
522 B WILLARD GREENE 4 5264297
601 MRS A BLANCHARD 9 5261189
*OAKWOOD CNVLSTN HM 5264653
MRS CHAS W CHENEY ¤5264205
HOLLIS GRIFFIN ¤5267013
MRS JESSIE MILTON8 5267746
*OAKWOOD CONVLSNT ¤5267981
MRS H R SHEPLEY ¤5267979
CAPT WILBERT SMITH ¤5267638
MRS REX TOWNSEND ¤5261881
799 A D HALE 8 5264280
801 PETER E JENSEN 2 5261303
802 STUART S EDINGTON5 5261038
KENNETH D KEYES 9 5261079
GEORGE L YANEY ¤5264915
803 NP
804 HERBERT A KENNY 5 5261446
805*WHITE GDLS RST HME 5264905
MARIE D DIDONATO 5 5261085
806 NORMA L YOUNG 5 5261439
808 PAUL G HEANEY 3 5266276
809 T A EAST 8 5261512
811 JOHN F FITZGERALD8 5261457
OFF LLOYD NICHOLS 5261847
NO # DAVID L BAZELON 9 5264548
NO # WILLIAM E BRONSON ¤5267672
NO # DR G COLKET CANER 5264250
ND # I W COLBURN 5261627
ND # KENNETH A CUMMINGS 5261791
ND # H S CURTIS 5261121
ND # H S CURTIS 5261827
ND # H S CURTIS 5261607
ND # H S CURTIS 5264548
ND # ARTHUR W DESOUSA 5261013 •
NO # E H DEWART 5264633
NO # MRS H FAHNESTOCK ¤5264633
NO # WM H G FITZGERALD 5264633
NO # MRS ROYAL B FREAS 5267795
NO # C DAVID GALACAR 9 5261258
NO # WILLIAM HENRY 5261745
NO # LEONARD J HERSEY 9 5261973
NO # WARLAND HERSEY -5261455
NO # CHAS S HOPKINSON 5261824
NO # J A HUTCHINSON JR 5261146
NO #*J KARASSASSOC 5261120
NO # HENRY P KING 5261876
NO # CRAIG RAY LAURENT ¤5267978
NO # JOHN LEGGETT 5261994
NO # STANLEY E MAGNUSON ¤5264053
NO #*STANLEY E MAGNUSON ¤5267624
NO # DR ROBERT MEHLMAN 5264644
NO # MRS F H MORGAN 5264633
NO # JOHN O PARKER 5267344
NO # WILMOT T POPE 5264063
NO # MRS LYLE B RAMSEY 5267615
NO # MRS LYLE B RAMSEY9 5261657
NO # MRS JOS A ST ONGE ¤5267991
NO #*SCIENCE HOUSE 5261120
NO # PETER K SIMONDS 9 5264272
NO # JOSE JULIEN SNYDER 5261342
NO # JOSEPH SPANG JR ¤5261053
NO # JOSEPH P SPANG JR 5267794
NO # THOMAS A G SPANG ¤5261827 •
NO # ROBERT R SPINTIG 9 5267053
NO # PHILIPPE VONHEMERT 5264242
NO # PORTER C WEBBER JR 5264008 •
NO # F CARRINGTON WEEMS 5261130
NO # MISS F WHEDON ¤5264633
NO # HENRY F WISCHUSEN4 5261902
NO # JOSEPH A WROBEL 5261943
170 RESIDENCE 31 BUSINESS

* COPYRIGHT INFORMATION ON THIS PAGE MAY NOT BE KEY PUNCHED, ENTERED INTO A COMPUTER OR

Manchester Memorial Elementary School

43 Lincoln St

Manchester, MA 01944

Inquiry Number: 8116131.3

September 23, 2025

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

09/23/25

Site Name:

Manchester Memorial Elementa
43 Lincoln St
Manchester, MA 01944
EDR Inquiry # 8116131.3

Client Name:

Mabbett & Assoc.
105 Central Street, Suite 4100
Stoneham, MA 02180
Contact: Cassidy Way

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Mabbett & Assoc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 146A-41AF-9064

PO # NA

Project R2025131.001.004

Maps Provided:

1958
1941
1921

Sanborn® Library search results

Certification #: 146A-41AF-9064

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

Mabbett & Assoc. (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT. Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2025 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1958 Source Sheets



Volume 1, Sheet 2
1958



Volume 1, Sheet 7
1958



Volume 1, Sheet 9
1958

1941 Source Sheets



Volume 1, Sheet 7
1941



Volume 1, Sheet 9
1941

1921 Source Sheets



Volume 1, Sheet 9
1921

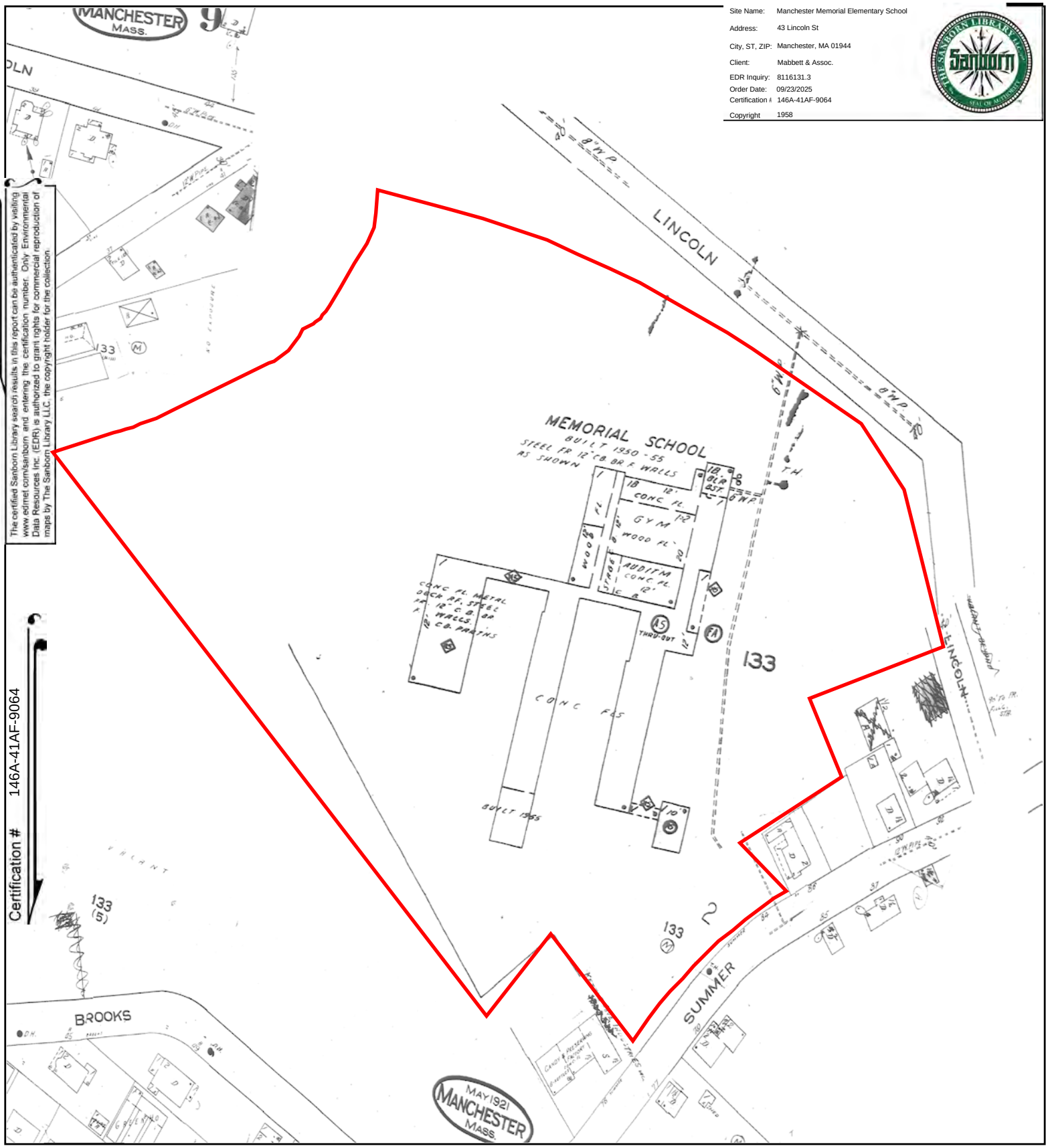


Volume 1, Sheet 7
1921

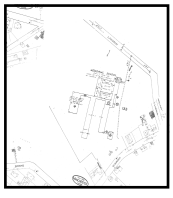
Site Name: Manchester Memorial Elementary School
Address: 43 Lincoln St
City, ST, ZIP: Manchester, MA 01944
Client: Mabbett & Assoc.
EDR Inquiry: 8116131.3
Order Date: 09/23/2025
Certification #: 146A-41AF-9064
Copyright 1958

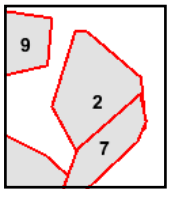
The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

Certification # 146A-41AF-9064



This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.





Volume 1, Sheet 9
Volume 1, Sheet 7
Volume 1, Sheet 2

0 Feet 150 300 600

N

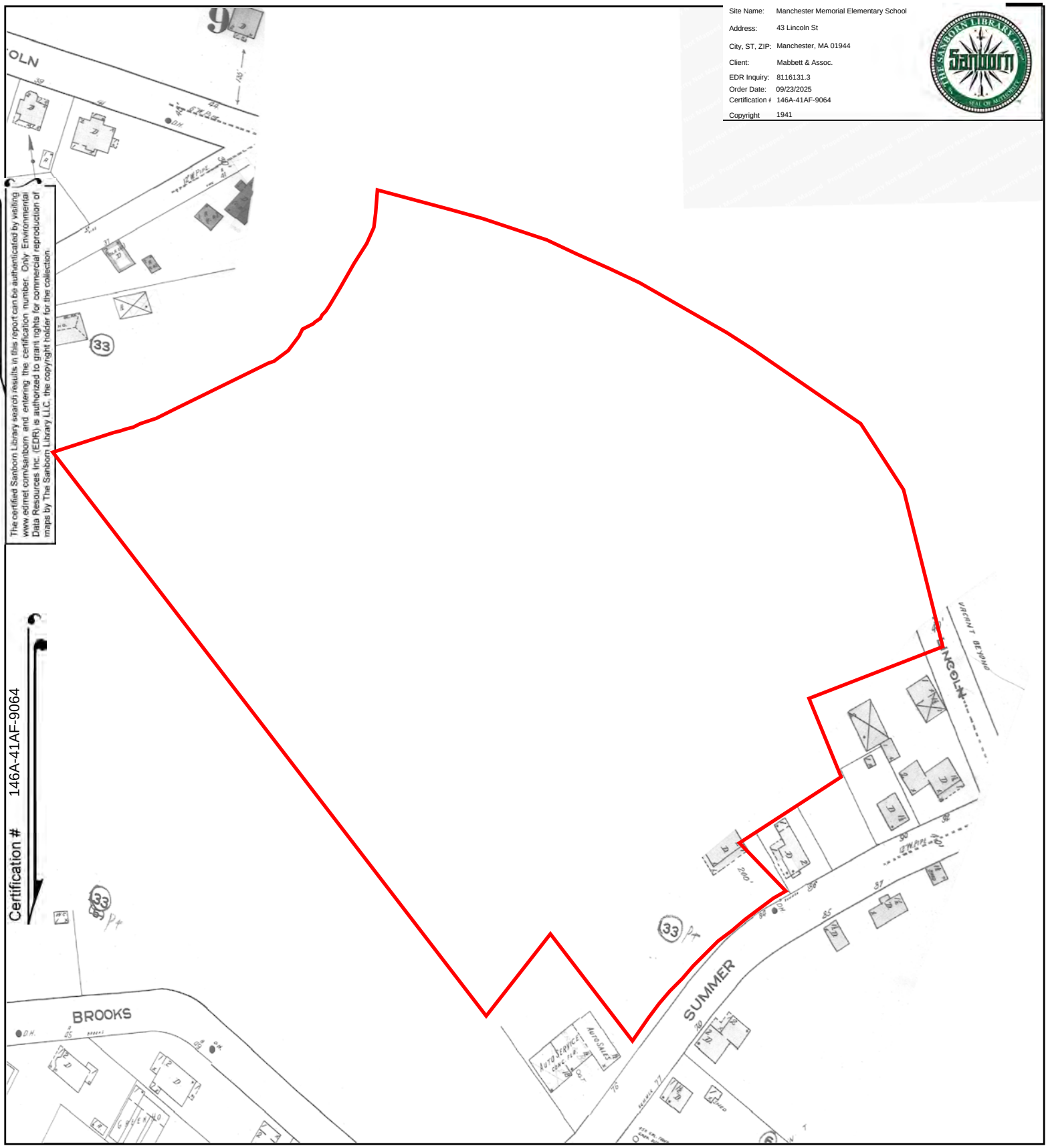
Certified Sanborn® Map

1941

Site Name: Manchester Memorial Elementary School
Address: 43 Lincoln St
City, ST, ZIP: Manchester, MA 01944
Client: Mabbett & Assoc.
EDR Inquiry: 8116131.3
Order Date: 09/23/2025
Certification #: 146A-41AF-9064
Copyright 1941

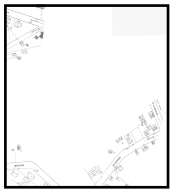
The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

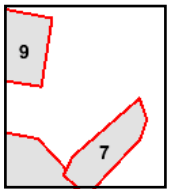
Certification # 146A-41AF-9064



This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600





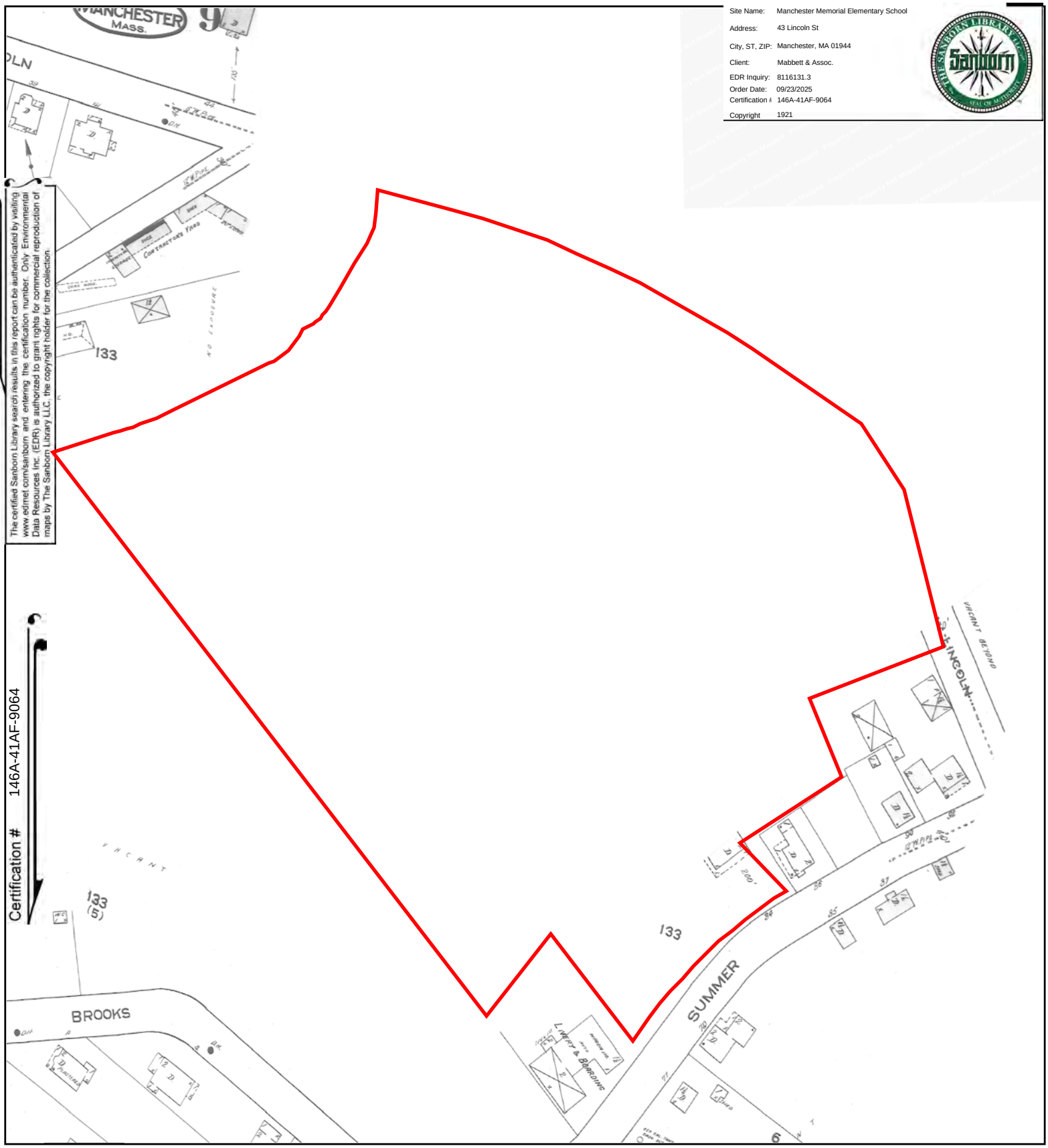
Volume 1, Sheet 9
Volume 1, Sheet 7

N

Site Name: Manchester Memorial Elementary School
Address: 43 Lincoln St
City, ST, ZIP: Manchester, MA 01944
Client: Mabbett & Assoc.
EDR Inquiry: 8116131.3
Order Date: 09/23/2025
Certification #: 146A-41AF-9064
Copyright 1921

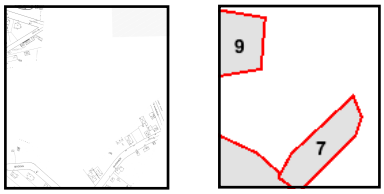
The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

Certification # 146A-41AF-9064



This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600



Volume 1, Sheet 7
Volume 1, Sheet 9

N

ASTM PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

30 Apple Street
Essex, MA 01929

October 2025

Prepared For:

Manchester Essex Regional School District
36 Lincoln Street
Manchester-by-the-Sea, MA 01944

Under Contract To:

JCJ Architecture
120 Huyshope Avenue, Suite 400
Hartford, CT 06106

Mabbett & Associates, Inc. **www.mabbett.com**
105 Central Street, Suite 4100
Stoneham, MA 02180-1260
T. 781-275-6050
F. 781-954-5155
Massachusetts | Virginia | Rhode Island | New York

© 2025, Mabbett & Associates, Inc.

ACKNOWLEDGEMENT

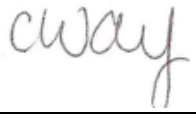
Mabbett & Associates, Inc. (Mabbett®) prepared this ASTM International *Standard Practice for Phase I Environmental Site Assessments E1527-21* Phase I Environmental Site Assessment (Phase I ESA) of the approximately 11.5-acre subject property identified as 30 Apple Street in Essex, Essex County, Massachusetts. Mabbett prepared this report under subcontract to JCJ Architecture (JCJ) for the Essex Elementary School Architectural Feasibility Study .

This Phase I ESA has been prepared for use by JCJ and the Manchester Essex Regional School District. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; Mabbett does not accept any responsibility for the consequences of such use(s). Furthermore, reliance by any party not identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to Mabbett.

Mabbett prepared this Phase I ESA report using reasonable efforts to identify Recognized Environmental Conditions (RECs) associated with hazardous substances or petroleum products in, on, or at the subject property. Findings contained within this report are based on information collected from observations made on the day of the subject property reconnaissance and from reasonably ascertainable information obtained from selected public agencies and other referenced sources.

Mabbett declares that, to the best of our professional knowledge and belief, the Mabbett staff who performed this Phase I ESA meet the definition of *Environmental Professional* as defined in §312.10 of 40 Code of Federal Regulations (CFR) 312, and these Mabbett staff have the specific qualifications based on education, training, and experience to assess a *property* of its nature, history, and setting. Mabbett has developed and performed all of the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

This Phase I ESA Report has been prepared by:



Mabbett & Associates, Inc.
Cassidy Way, QEP, CHMM
Project Environmental Scientist/Project Manager

This Phase I ESA Report has been internally reviewed and approved for submittal by:



Mabbett & Associates, Inc.
Michael L. Bloom, PG, CPG
Practice Lead, Site Assessment & Restoration, Northeast

CEW/MLB

TABLE OF CONTENTS

SECTION **PAGE**

EXECUTIVE SUMMARY **ES-1**

1.0 INTRODUCTION **1**

1.1 Purpose 1

1.2 Detailed Scope of Services 2

1.3 Significant Assumptions 2

1.4 Limitations and Exceptions 2

1.5 Special Terms and Conditions (User Reliance) 3

2.0 SUBJECT PROPERTY DESCRIPTION **4**

2.1 Location and Legal Description 4

2.2 Current Use and Improvements at the Subject Property 4

2.3 Surrounding Area General Characteristics 4

2.4 Physical Setting 4

2.4.1 Topography 4

2.4.2 Geology 4

2.4.3 Wetlands and Surface Water 4

2.4.4 Groundwater 5

2.4.5 Flood Zone 5

2.4.6 Soils 5

3.0 SITE RECONNAISSANCE **6**

3.1 Methodology 6

3.2 Observations of Subject Property Improvements 6

3.2.1 Exterior Observations 6

3.2.2 Stormwater 6

3.2.3 Roads/Parking 6

3.2.4 Heating and Cooling Sources 7

3.2.5 Sanitary Sewerage 7

3.2.6 Water Supply 7

3.3 Underground Storage Tanks 7

3.4 Aboveground Storage Tanks 7

3.5 Hazardous Substance Use, Storage, and Disposal 7

3.6 Non-Hazardous Solid Wastes and Disposal 7

3.7 Electrical Equipment and Polychlorinated Biphenyls (PCBs) 7

3.8 Stained Surfaces and Distressed Vegetation 7
3.9 Underground Structures 7
3.10 Per- and Poly-fluoroalkyl Substances (PFAS) 7
4.0 USER PROVIDED INFORMATION 9
4.1 Owner, Property Manager, and Occupant Information 9
4.2 Title Records 9
4.3 Environmental Permits and/or Violations 9
4.4 Specialized Knowledge or Experience of the Owner 9
4.5 Significant Valuation Reduction for Environmental Issues 9
4.6 Reason for Performing Phase I ESA 9
4.7 Other Owner-Provided Documents 9
5.0 RECORDS AND DATABASE REVIEW 10
5.1 Standard Environmental Records 10
5.1.1 Findings for the Subject Property 11
5.1.2 Findings for Adjoining and Surrounding Properties 11
5.1.3 Aerial Photographs 13
5.1.4 Historical USGS Topographic Maps 13
5.1.5 Historical City Directories 13
5.1.6 Sanborn Fire Insurance Maps 14
5.1.7 Municipal Records 14
5.1.8 Other Historical Sources 14
6.0 SUBSURFACE VAPOR MIGRATION 15
7.0 INTERVIEWS 16
8.0 OTHER ENVIRONMENTAL CONDITIONS 17
8.1 Lead Based Paint 17
8.2 Asbestos Containing Materials 17
9.0 CONCLUSIONS AND RECOMMENDATIONS 18
10.0 REFERENCES 19

TABLES

Table 5-1 10
Table 5-2 11
Table 7-1 16

FIGURES

Figure 1-1 Subject Property Locus Map
Figure 1-2 Subject Property Plan

APPENDICES

Appendix A Supporting Documents
- Property Record Card
- USFWS Wetlands Map
- FIRMette Panel
- MassDEP Phase I Site Assessment Map
- NRCS Web Soil Survey Map
- Town of Essex Records

Appendix B Photograph Log
Appendix C Environmental Site Assessment User Questionnaire
Appendix D Database Search Report: EDR Radius Map™ Report with GeoCheck®
Appendix E Additional EDR Reports:
- Historical USGS Topography Maps
- Historical Aerial Photographs
- Historical City Directories
- Certified Sanborn Map Report

LIST OF ACRONYMS

AAI	All Appropriate Inquiries
AOC	Area of Concern
AST	Aboveground Storage Tank
ASTM	ASTM International
BER	Business Environmental Risk
bgs	Below Ground Surface
CFR	Code of Federal Regulations
COCs	Chemicals of Concern
DoD	Department of Defense
EDR	Environmental Data Resources, LLC
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FINDS	Facility Index System
ft	feet
LBP	Lead-Based Paint
LUST	Leaking Underground Storage Tank
MassDEP	Massachusetts Department of Environmental Protection
NonGen/NLR	Non-Generator/No Longer Reporting
NFPA	National Fire Protection Association
NR	Not Required
NWI	National Wetlands Inventory
PCB	Polychlorinated Biphenyl
PFAS	Per- and Polyfluoroalkyl Substances
QEP	Qualified Environmental Professional
RCRA	Resource Conservation and Recovery Act
RECs	Recognized Environmental Conditions
SHWS	State Hazardous Waste Site
TP	Target Property
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tank
VEC	Vapor Encroachment Condition

© 2025, Mabbett & Associates, Inc.

EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment (ESA) Report presents the results of non-intrusive environmental due diligence activities performed by Mabbett & Associates, Inc. (Mabbett) on behalf of JCJ Architecture (JCJ) to support the Manchester Essex Regional School District decision making regarding capital investments at Essex Elementary School. The subject property for this Phase I ESA is 30 Apple Street, which encompasses approximately 11.5 acres of land in Essex, Massachusetts.

Subject Property History and Description

The subject property is undeveloped and was used as agricultural land for many decades, including as a flower field. The subject property is currently a vacant, partially mowed field.

Surrounding Areas

The area surrounding the subject property consisted of primarily residential use land, but the northeast adjacent property consisted of the Essex Transfer Station and the former Essex Landing Landfill. According to the Essex Town Administrator, a new aboveground municipal fuel depot is planned to be installed on this property in the fall of 2025. Alewife Brook was present to the northwest of the subject property.

Conclusions

The Phase I ESA included a reconnaissance at the subject property by Mabbett on September 24, 2025. Mabbett obtained information about environmental conditions that could potentially be considered a Recognized Environmental Condition (REC); reviewed historical maps of the subject property and vicinity; interviewed Town Administrator Brendhan Zubricki, who was familiar with current and recent environmental history at the subject property; reviewed environmental database listings for the subject property and vicinity; performed a review of available files from the Massachusetts Department of Environmental Protection (MassDEP); and reviewed documents provided by the Town of Essex. This information was used to develop an opinion with regard to the presence or absence of RECs at the subject property.

The Phase I ESA findings are summarized in the following list:

- **RECs**

  The northeast adjacent property was identified as a municipal waste transfer station. According to historical information available, the Essex Landing landfill has historically been located at 30 Landing Road and encompasses approximately 14 acres of land. It was an unlined landfill with an incomplete cap status. A post-closure permit was issued in August 2004, and the post-closure use of the property as a DPW garage was approved. The Essex Landing landfill was identified within the MassDEP *Inactive & Closed Landfills & Dumping Grounds* document dated July 2025.

  According to Adam Sandahl of CMA Engineers, Inc., the town's landfill monitoring contractor, landfill inspections and landfill gas monitoring are performed at the landfill regularly, but there is no groundwater monitoring program for the landfill, and no groundwater monitoring wells have been installed at the landfill. Based on 2004 test pit logs that were reviewed, buried waste included wood, tires, stumps, glass, plastic, and other debris.

  It is unknown whether hazardous materials may also have been placed within this landfill and leeched into groundwater that flowed radially onto the subject property. As such, the historical presence of the Essex Landing landfill and its proximity to the subject property represents a REC.

© 2025, Mabbett & Associates, Inc.

- **Historical Recognized Environmental Conditions (HRECs)**

  No HRECS were identified on or affecting the subject property.

- **Controlled Recognized Environmental Conditions (CRECs)**

  No Controlled RECs were identified on or affecting the subject property.

- **Data Gaps**

  No significant data gaps were identified on or affecting the subject property.

- **Business Environmental Risks (BERs)**

  Pesticides: The subject property has been used for agricultural purposes for decades. According to the Essex Town Administrator, the subject property was a former flower field. As such, soil may have been impacted by the application of pesticides. Although pesticides do not constitute a REC under ASTM E1527-21 Section X1.1.4.3(4), the potential presence of pesticides in soils represents a BER due to the potential increased cost of soil management during future redevelopment of the subject property.

© 2025, Mabbett & Associates, Inc.

1.0 INTRODUCTION

This Phase I Environmental Site Assessment (ESA) report presents the results of non-intrusive environmental due diligence activities performed according to the ASTM International *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E1527-21) at the subject property, identified as the approximately 11.5-acre property at 30 Apple Street in Essex, Essex County, Massachusetts. A Subject Property Locus Map is provided as Figure 1-1. A Subject Property Plan is provided as Figure 1-2.

1.1 Purpose

The purpose of performing a Phase I ESA is to render an opinion, to the extent practical, as to whether current or historical evidence indicates the presence of Recognized Environmental Conditions (RECs) at the subject property. The Phase I ESA findings are intended to help KBA with decision making regarding potential environmental liabilities at the subject property. The Phase I ESA was completed following the guidelines of ASTM International Standard Practice E1527-21 (ASTM E1527-21), the United States Environmental Protection Agency's (USEPA) All Appropriate Inquiries (AAI) Rule, and industry standard practice. The following paragraphs describe the different types of RECs defined by ASTM E1527-21.

ASTM E1527-21 defines a REC as:

- the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment;
- the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or
- the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

The term REC is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment, and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

ASTM E1527-21 defines a Historical REC as:

> *"A previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (i.e., activity and use limitations or other property use limitations)."*

ASTM E1527-21 defines a Controlled REC as:

> *"A REC affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (i.e., activity and use limitations or other property use limitations)."*

ASTM E1527-21 defines a Business Environmental Risk (BER) as:

> *"A risk that can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to those environmental issues required to be investigated in this practice. Consideration of business environmental risk issues may involve addressing one or more non-scope considerations."*

Although the subject property is not considered "commercial real estate," the identification of BERs is considered relevant to this assessment because non-scope environmental concerns at the subject property could have cost implications on potential future development efforts by the Manchester Essex Regional School District.

1.2 Detailed Scope of Services

This Phase I ESA was completed with a level of care and skill ordinarily practiced by the environmental consulting professional currently providing similar services under comparable circumstances in accordance with the provisions of ASTM E1527-21. Any significant additions, deletions, or exceptions to ASTM E1527-21 are noted below, or in the corresponding sections of this report. The scope of this assessment included an evaluation of the following:

- Physical setting characteristics of the subject property through a review of referenced sources such as topographic maps and geologic, soils and hydrologic reports;
- Use of the subject property, adjoining properties, and surrounding area through a review of referenced historical sources such as land title records, fire insurance maps, city directories, aerial photographs, prior reports, and interviews;
- Observations regarding current usage and conditions include: the use, treatment, storage, disposal or generation of hazardous substances, petroleum products, hazardous wastes, nonhazardous solid wastes, and wastewater;
- Use of adjoining and surrounding area properties and the likely impact of known or suspected releases of hazardous substances or petroleum products from those properties in, on, or at the property;
- Information in referenced environmental agency databases and local environmental records, within the specified approximate minimum search distance from the subject property;
- Potential for subsurface vapor migration in, on, or at the subject property; and
- Potential PFAS at the subject property.

1.3 Significant Assumptions

No significant assumptions were made during the preparation of this Phase I ESA.

1.4 Limitations and Exceptions

Mabbett prepared this Phase I ESA report using reasonable efforts to identify RECs associated with hazardous substances or petroleum products in, on, or at the subject property. Findings contained within this report are based on information collected from observations made on the day of the site reconnaissance and from reasonably ascertainable information obtained from selected public agencies and other referenced sources.

No exceptions to ASTM E1527-21 were noted during this assessment.

The ASTM E1527-21 recognizes inherent limitations for Phase I ESAs, including, but not limited to:

- Uncertainty Not Eliminated: A Phase I ESA cannot wholly eliminate uncertainty regarding the potential for RECs associated with a property since no actual environmental samples are collected for analysis.
- Not Exhaustive: A Phase I ESA is not an exhaustive assessment of the environmental conditions on a property.
- Past Uses of the Property: A Phase I ESA does not require review of standard historical sources at less than five-year intervals. Therefore, past uses of the property may not be discovered.

Other limitations are as follows:

- The observations described in this report were made under the conditions stated herein. Observations were based solely upon the non-intrusive services described herein.

Users of this report may refer to ASTM E1527-21 for further information regarding these and other limitations.

Mabbett makes no representation or warranty that the past or current operations at the subject property are, or have been, in compliance with all applicable federal, state, and local laws, regulations, and codes. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Regardless of the findings stated in this report, Mabbett is not responsible for consequences or conditions arising from facts not fully disclosed to Mabbett during the assessment.

Per ASTM E1527-21, Section 6, User Responsibilities, the User of this assessment has specific obligations for performing tasks during this assessment that will help identify the possibility of RECs associated with the subject property. Failure by the User to fully comply with the requirements may impact their ability to use this report to help qualify for Landowner Liability Protections under the Comprehensive Environmental Response, Compensation, and Liability Act. Mabbett makes no representations or warranties regarding a User's qualification for liability protection under any federal, state, or local laws or regulations.

In accordance with ASTM E1527-21, this report is presumed to be valid for a 6-month period. If the report is older than 6 months, the following information must be updated for the report to be valid: (1) regulatory review, (2) subject property reconnaissance, (3) interviews, (4) specialized knowledge, and (5) environmental liens. Reports older than one year may not meet ASTM E1527-21 requirements and, therefore, the report must be updated to reflect current conditions and property-specific information. Other limitations and exceptions that are specific to the scope of this report may be found in the corresponding sections.

1.5 Special Terms and Conditions (User Reliance)

This report is for the use and benefit of and may be relied upon by the JCJ, the Manchester Essex Regional School District, or third parties authorized in writing by JCJ. Any third party agrees by accepting this report that any use or reliance on this report shall be limited by the exceptions and limitations in this report, and with the acknowledgment that actual subject property conditions may change with time, and that hidden conditions may exist at the property that were not discovered within the authorized scope of the assessment. Any use by or distribution of this report to third parties, without the express written consent of the JCJ, is at the sole risk and expense of such third party.

Mabbett makes no other representation to any third party except that it has used the degree of care and skill ordinarily exercised by environmental consultants in the preparation of the report and in the assembling of data and information related thereto. No other warranties are made to any third party, either express or implied.

2.0 SUBJECT PROPERTY DESCRIPTION

The subject property description was researched and developed by Mabbett representative Cassidy Way, QEP, CHMM, who meets ASTM's *Environmental Professional* qualification as defined in ASTM E1527-21 and who performed a site reconnaissance of the subject property on September 24, 2025. A Subject Property Locus map is provided as Figure 1-1. A detailed Subject Property Map depicting current subject property features is provided as Figure 1-2.

2.1 Location and Legal Description

30 Apple Street (the subject property) was identified by the Town of Essex Assessor as Parcel 142-8 and encompassed approximately 11.5 acres owned by the Town of Essex. The subject property was described as municipal vacant land by the Town of Essex.

2.2 Current Use and Improvements at the Subject Property

The subject property was undeveloped and consisted of grassy land that was mowed, a wooded area leading to Alewife Brook, and a wooden car port.

The subject property was accessible from Apple Street to the South and Landing Street to the north. Access to the subject property was not controlled, but access was restricted to the east and west via thick forested trees and shrubs.

2.3 Surrounding Area General Characteristics

The subject property was located in a rural area that was developed with farmland, residential neighborhoods, and the Essex Transfer Station. The land use adjacent to the subject property included the following:

North/Northeast: Essex Transfer Station, residential neighborhoods, and the Alewife Brook.

East: Residential.

South: Apple Street Farm and Residential neighborhoods.

West: Residential and the Alewife Brook.

2.4 Physical Setting

2.4.1 Topography

Based on the U.S. Geological Survey (USGS) 7.5-Minute Series Marblehead North Topographic Quadrangle map, dated 2024, the elevation of the ground surface at the subject property is approximately 10 to 50 feet above mean sea level. The subject property was sloped downwards toward the northwest. This information was confirmed during Mabbett's site reconnaissance on September 24, 2025.

2.4.2 Geology

According to the USGS Bedrock Geologic Map of Massachusetts, bedrock underlying the general area of the subject property was characterized as Beverly Syenite (SOcb), consisting of quartz-poor facies. No bedrock outcrops were observed at the subject property during Mabbett's site reconnaissance on September 24, 2025.

2.4.3 Wetlands and Surface Water

According to the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Map Viewer, accessed on September 17, 2025, wetlands were located on the northwestern portion of subject property. The wetlands map is included in Appendix A.

The NWI map showed the northwestern portion of the subject property included riverine habitat (Alewife Brook) and freshwater forested/shrub wetlands.

This information was confirmed during Mabbett's site reconnaissance on September 24, 2025.

2.4.4 Groundwater

Based on the elevation contour maps, regional topography, and the location of nearby water bodies, groundwater underlying the subject property is inferred to likely flow to the northwest towards Alewife Brook. Depth to groundwater at the subject property was approximately 6 feet below ground surface (bgs) at the subject property soil testing for a potential septic system in 2022.

Actual groundwater flow direction underlying the subject property may vary due to the topography, presence of underground utilities such as sewers, storm drains, and heterogeneous subsurface soil conditions. Measuring the actual depth to groundwater and flow direction is beyond the scope of an ASTM E1527-21 Phase I ESA.

2.4.5 Flood Zone

The subject property was located on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map FIRMette panels 25009C0293H and 25009CO431H dated July 8, 2025. According to FEMA, the northwestern corner of subject property where Alewife Brook was mapped was located within a special flood hazard area, or area with a one percent annual chance of flooding (Zone A/AE). This flood zone was Alewife Brook. The remainder of the subject property was located within an area of minimal flood hazard (Zone X). A copy of the FIRMette is provided in Appendix A.

2.4.6 Soils

The soil at the subject property underlying the buildings were classified by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service as Chatfield-Hollis Rock outcrop complex with 0 to 15 percent slopes (102C), Belgrade very fine sandy loam with 0 to 8 percent slopes (225B), Merrimac fine sandy loam with 0 to 3 percent slopes (254A), Fluvaquents, frequently flooded with 0 to 3 percent slopes (616A), Udorthents refuse substratum (652), and Melrose fine sandy loam with 3 to 8 percent slopes (714B). A copy of the USDA soil map is provided in Appendix A.

Subject property soils were covered with grass, brush, and trees during the site reconnaissance. No significant soil erosion or staining was noted during the site reconnaissance.

3.0 SITE RECONNAISSANCE

A site reconnaissance was performed to obtain information about environmental conditions at the subject property and at adjacent properties that could impact the subject property.

3.1 Methodology

On September 24, 2025, Mabbett representative Cassidy Way, QEP, CHMM, who meets the ASTM's *Environmental Professional* qualification, performed the site reconnaissance. Mabbett was given permission to walk the subject property unescorted.

Mabbett walked the subject property with the purpose of assessing potential RECs, BERs, and *de minimis* conditions. The site reconnaissance efforts consisted of making visual observations of conditions on the ground surface with a focus on identifying sumps, drains, improperly stored chemicals, and signs of chemical spills that may serve as a conduit between a future building and the environment or a potential environmental hazard. The methodology involved walking the entirety of the subject property. The focus of the site reconnaissance was on areas where hazardous substances or petroleum products are or may have been stored, used, treated, discharged, or disposed. Mabbett also observed the adjoining properties from public thoroughfares. No intrusive activities were performed during the site reconnaissance.

The following sections present a summary of observations made during the site reconnaissance. Representative photographs are provided in Appendix B.

3.2 Observations of Subject Property Improvements

3.2.1 Exterior Observations

The subject property consisted of undeveloped land that was formerly used as a flower farm. The subject property consisted of a mowed grass field, wooded areas on the sites of the parcel, and a small portion of the Alewife Brook. The subject property was heavily wooded towards the northwestern boundary that approached Alewife Brook, and around the boundary of the subject property. The subject property sloped steeply down towards the brook.

The only structure on the subject property was a car port located off of Apple Street. This carport stored a car, kayaks, a bicycle, and two ATVs. It was not ascertained who owned these vehicles. The Town of Essex was unaware of the presence of this car port and who was using it. Two trailers were also observed towards the Apple Street site entrance.

During the site reconnaissance, Mabbett encountered two individuals with metal detectors on the property. According to one of the men, they were looking for "artifacts." Previously found artifacts included objects such as coins and belt buckles. He was unaware of any improperly dumped objects at the subject property.

3.2.2 Stormwater

Stormwater was not managed onsite. Stormwater at the subject property is anticipated to infiltrate the subsurface or run off towards the roadways or Alewife Brook.

No pooling was observed at the subject property despite recent rainfall.

3.2.3 Roads/Parking

The subject property was accessible from Apple Street to the South (and Landing Street to the north?). No roadways or parking areas were present at the subject property.

3.2.4 Heating and Cooling Sources

The subject property was undeveloped and there was no historical evidence of heating and cooling systems at the subject property.

3.2.5 Sanitary Sewerage

The subject property was not connected to the municipal sewerage system. In May 2022, a *Soil Suitability Assessment for On-Site Sewage Disposal* was submitted to the Essex Board of Health. Groundwater was observed approximately 6 feet below grade surface in test pits. No evidence of an installed septic system was observed at the subject property.

3.2.6 Water Supply

The subject property was not connected to the municipal water supply system. Additionally, no potable water wells, irrigation wells, or monitoring wells were observed during the site reconnaissance.

3.3 Underground Storage Tanks

No evidence of underground storage tanks (USTs) was observed nor historically recorded for the subject property.

3.4 Aboveground Storage Tanks

No evidence of aboveground storage tanks (ASTs) was observed nor historically recorded for the subject property.

3.5 Hazardous Substance Use, Storage, and Disposal

The subject property did not maintain a designated hazardous waste storage area to temporarily store waste. No hazardous substances were observed during the site reconnaissance.

3.6 Non-Hazardous Solid Wastes and Disposal

No non-hazardous solid waste was generated nor improperly disposed of at the subject property during the site reconnaissance.

3.7 Electrical Equipment and Polychlorinated Biphenyls (PCBs)

Three pole mounted transformers were observed on Landing Road along the northern property boundary. These transformers were noted to be in good condition with no visible signs of leakage. Mabbett was unable to ascertain whether these transformers may have contained PCBs.

3.8 Stained Surfaces and Distressed Vegetation

Mabbett did not observe any stained surfaces or distressed vegetation during the site reconnaissance.

3.9 Underground Structures

Mabbett did not observe any underground structures at the subject property.

3.10 Per- and Poly-fluoroalkyl Substances (PFAS)

Mabbett conducted an assessment of potential sources of PFAS at or near the subject property. PFAS environmental contamination may come from a number of sources; including, but not limited to firefighting foam, waterproofing materials, wetting agents, and other industrial and consumer products. Department of Defense (DoD) facilities have also been associated with high levels of PFAS in groundwater due to training and firefighting activities, as well as other facility activities that are part of the DoD's mission. As a result, PFAS are nearly

ubiquitous and have been found in rainwater and encountered in many environments and media including groundwater, soils, surface water, sediment, and human and animal tissues.

Mabbett searched USEPA, and other sources for identified PFAS sites within and in vicinity of the subject property (USEPA, 2025; EWG, 2025; Northeastern, 2025). The closest known PFAS sites was the Essex Water Department (EWG). According to the Essex Water Quality Report, no PFAS were detected during quarterly 2024 sampling.

Mabbett found no reference to the use of PFAS-containing materials, historical fires, or firefighting responses at the subject property or adjacent properties. Mabbett found no specific potential sources of PFAS at the subject property or adjacent properties, or indications of past property uses associated with PFAS use from the historical data as summarized in Section 5.1.4 through 5.1.6 of this report. However, as it is unknown what was buried within the landfill north of the subject property, the former landfill can be considered a potential source of PFAS.

The available information reviewed by Mabbett did not identify historical releases of PFAS at the subject property; however, the presence of PFAS in soils and groundwater cannot be ruled out due to the potential presence of PFAS in the landfill north of the subject property.

4.0 USER PROVIDED INFORMATION

The following section summarizes the Phase I ESA User Questionnaire completed by the Essex Town Administrator, Brendhan Zubricki. The completed User Questionnaire is provided in Appendix C.

4.1 Owner, Property Manager, and Occupant Information

The subject property is owned and managed by the Town of Essex and is unoccupied.

4.2 Title Records

The Town Administrator was not aware of any deed restrictions, environmental land use restrictions, environmental liens, or activity and use limitations on file for the subject property.

4.3 Environmental Permits and/or Violations

The Town Administrator was not aware of any state- or municipal-issued violations for the subject property.

4.4 Specialized Knowledge or Experience of the Owner

The Town Administrator did not have any specialized knowledge of the subject property, apart from that the subject property was formerly a flower field and was used agriculturally for decades. Mr. Zubricki had no knowledge of the car port on the subject property, not who was actively using it.

Mr. Zubricki also indicated that the town DPW yard and transfer station abuts the property to the north and that a new aboveground municipal fuel depot is planned to be installed fall of 2025. This property had solid waste and recycling, as well as former landfill facilities.

4.5 Significant Valuation Reduction for Environmental Issues

The Town Administrator was not aware of significant valuation reduction due to environmental issues at the subject property, which is owned by the Town of Essex.

4.6 Reason for Performing Phase I ESA

This Phase I ESA is being completed in support of Manchester Essex Regional School District's study for the potential relocation of the elementary school to this property.

4.7 Other Owner-Provided Documents

No other owner-provided documents were available for Mabbett review.

5.0 RECORDS AND DATABASE REVIEW

Mabbett obtained and reviewed available environmental records for the subject property and adjoining properties. The records were reviewed to identify properties where chemical releases were reported to have occurred and to assess whether those releases create a REC at the subject property.

5.1 Standard Environmental Records

Mabbett contracted Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut, to conduct a search for available federal and state environmental records in compliance with ASTM E152721. EDR provided Mabbett with the database search results in an EDR Radius Report on September 17, 2025. EDR searched federal and state databases for records of properties with a history of a chemical release or chemical storage and located within the minimum search distance from the subject property as required by ASTM E1527-21. Records identified within these search distances from the subject property are summarized in Table 5-2. The databases for which no records were identified are presented in the full EDR report in Appendix D. The EDR report identified 3 "orphan" listings.

TABLE 5-1
Summary of Environmental Records Identified in the EDR Radius Report

Database	Records for the Subject Property	Search Distance (miles from the subject property)	Number of records within the search distance					Total Records Identified
			<1/8 mile	1/8 – 1/4 mile	1/4 – 1/2 mile	1/2 – 1 mile	>1 miles	
RCRA SQG	**0**	0.25	0	1	NR	NR	NR	**1**
RCRA VSQG	**0**	0.25	1	0	NR	NR	NR	**1**
MA SHWS	**0**	1.0	2	1	8	12	NR	**23**
MA LSWF/LF	**0**	0.50	1	0	0	NR	NR	**1**
MA LUST	**0**	0.50	0	0	1	NR	NR	**1**
MA INST CONTROL	**0**	0.50	1	0	0	NR	NR	**1**
ODI	**0**	0.50	1	0	0	NR	NR	**1**
MA RELEASE	**0**	0.125	2	NR	NR	NR	NR	**2**
RCRA NONGEN/NLR	**0**	0.25	0	1	NR	NR	NR	**1**
E MANIFEST	**0**	0.25	3	1	NR	NR	NR	**4**
MA HW GEN	**0**	0.25	1	2	NR	NR	NR	**3**
NY MANIFEST	**0**	0.25	0	1	NR	NR	NR	**1**
NJ MANIFEST	**0**	0.25	0	1	NR	NR	NR	**1**
PA MANIFEST	**0**	0.25	0	1	NR	NR	NR	**1**
MA MERCURY	**0**	0.50	1	0	0	NR	NR	**1**
Totals	**0**	--	13	9	9	12	0	**43**

NOTES:
TP = Target Property (the *subject property* per ASTM E1527-21)
NR = Not Required by ASTM E1527-21

5.1.1 Findings for the Subject Property

The subject property was not identified within the EDR report.

5.1.2 Findings for Adjoining and Surrounding Properties

Table 5-2 below describes properties identified in the EDR federal or state databases that are located within the ASTM E1527-21 search distances from the subject property or within a quarter mile of the subject property. Table 5-2 organizes findings by the EDR Map ID number.

As previously described in Section 2.4.3, groundwater flow at the subject property and immediate vicinity is inferred generally flow towards the northwest. Based on this groundwater flow direction, Mabbett was able to categorize the following properties identified in EDR databases as likely to be hydrologically upgradient, cross-gradient, or downgradient from the subject property. Contaminants released at upgradient or cross-gradient properties, and where the contaminants have reached groundwater, could have the potential to migrate in groundwater beyond the boundary of that property to reach the subject property. Contaminated groundwater that migrates beneath the subject property has the potential to impact environmental conditions.

Contaminants released to soil at upgradient or cross-gradient properties may migrate beyond the adjoining/surrounding property boundaries in sediment-laden stormwater. However, stormwater from these properties would not likely reach the subject property because of the many physical obstructions between the properties and the subject property; these obstacles include but are not limited to roads, curbs, and stormwater catch basins.

Contaminants released to groundwater at downgradient properties are assumed not to be a threat to environmental conditions at the subject property because the groundwater beneath these properties flows away from, and would not reach, the subject property.

TABLE 5-2
Records Identified in the EDR Radius Report

EDR Map ID(s)	Property Name(s) and Address	Database Listing(s)	Distance from Subject Property (feet)	Direction from Subject Property	Gradient Relative to Groundwater Flow in Area	REC? (Y/N)	Basis for REC Conclusion
1, 2	Essex DPW 27 Landing Road	HW GEN, RCRA-VSQG	Adjacent	NE	Upgradient	N	Wastes included ignitable waste; no violations found.
3, 4	Massachusetts Electric Company 42 Apple Street	E MANIFEST, SHWS, RELEASE	250 ft	SSE	Upgradient	N	Release of non-PCB mineral oil from transformer; Permanent Solution with No Conditions (PSNC) submitted July 2021.
5, 6, 7	Transfer Station 30 Landing Road	MERCURY, E MANIFEST	340 ft	NE	Downgradient	N	For collection and disposal of wastes.

TABLE 5-2
Records Identified in the EDR Radius Report

EDR Map ID(s)	Property Name(s) and Address	Database Listing(s)	Distance from Subject Property (feet)	Direction from Subject Property	Gradient Relative to Groundwater Flow in Area	REC? (Y/N)	Basis for REC Conclusion
8	Bothway Farm Southern Ave	SHWS, SWF/LF, INST CONTROL, RELEASE, ASBESTOS	340 ft	NE	Downgradient	N/Y	Release is associated with property approximately 4,500 feet SW. LF associated with north adjacent property is REC (see paragraphs below table).
9	Essex Sanitary Landfill Off Landing Road	ODI	480 ft	NNE	Downgradient	Y	See paragraphs below table.
10-15	Paul Russell & Co./Stephen Terhune Woodworking/Gullwing Service Co. Inc./Mark Richey Woodworking 106 Western Ave	MANIFEST, RCRA-SQG, US AIRS, FINDS, ECHO, E MANIFEST, HW GEN, RCRA NonGEN/NLR	1,081 ft	WSW	Upgradient	N	No reported releases.
16	60 Western Ave	SHWS, RELEASE	1,282 ft	NNW	Downgradient	N	Class A-2 RAO submitted for fuel oil release in 2001.

The north adjacent property was identified as a municipal waste transfer station. According to historical information available, the Essex Landing landfill has historically been located on this property and encompasses approximately 14 acres of land. It was an unlined landfill with an incomplete cap status. A post-closure permit was issued in August 2004, and the post-closure use of the property as a DPW garage was approved. The landfill was identified within the MassDEP *Inactive & Closed Landfills & Dumping Grounds* document dated July 2025.

According to Adam Sandahl of CMA Engineers, Inc., the town's landfill monitoring contractor, landfill inspections and landfill gas monitoring are performed at the landfill regularly, but there is no groundwater monitoring program for the landfill, and no groundwater monitoring wells have been installed at the landfill. Based on 2004 test pit logs that were reviewed, buried waste included wood, tires, stumps, glass, plastic, and other debris.

It is unknown whether hazardous materials may also have been placed within this landfill and leeched into groundwater that may have flowed radially onto the subject property. As such, the historical presence of the Essex Landing landfill represents a REC.

5.1.3 Aerial Photographs

Mabbett reviewed aerial photographs provided by EDR of the subject property and surrounding area. Aerial photographs were available for the years 1938, 1952, 1965, 1969, 1972, 1978, 1986, 1995, 2010, 2014, 2018, and 2023. Historical Aerial Photographs are provided in Appendix E. Certain details of the aerial photographs were difficult to ascertain due to the resolution and/or wide scale of the aerial photographs.

In the earliest aerial photograph dated 1938, the subject property was undeveloped farmland. Alewife Brook was present in the northwestern portion of the subject property. The portion of the subject property not used for farmland was covered with trees. Nearby land uses included farmland and residential dwellings.

By 1952, a dirt road had been constructed through the subject property connecting Apple Street and Landing Road, which was under construction at this time. By 1965, the north adjacent property appeared to have been altered and land moved, possibly for a landfill.

By 1986, a structure had been constructed northeast adjacent to the subject property. By 2010, additional structures had been built north of the subject property to be used as the Town of Essex Transfer Station.

The review of aerial photographs did not definitively identify past uses indicating RECs in, on, or at the subject property or surrounding area, apart from the presence of the former landfill.

5.1.4 Historical USGS Topographic Maps

Historical USGS topographic maps provided by EDR were available for the subject property, adjoining areas, and the surrounding area for the years 1888, 1893, 1915, 1919, 1943, 1945, 1950, 1956, 1966, 1985, 1997, 2005, 2012, 2015, 2018, and 2021. The Historical Topo Map Report is included in Appendix E.

In the earliest topographic maps dated 1888 and 1893, the subject property was depicted as undeveloped with the Alewife Brook and wetlands mapped to the north. A railroad was present to the northwest of the subject property on the far side of Alewife Brook. No significant changes were noted at the subject property in the remaining topographic maps.

Changes noted in the vicinity of the subject property included residential development and the Construction of Landing Road to the north and Loland Farm Road to the southeast of the subject property. The railroad northwest of the subject property was no longer depicted by 1945.

The review of historical USGS topographic maps did not definitively identify past uses indicating RECs in, on, or at the subject property or surrounding area.

5.1.5 Historical City Directories

Historical City Directories provided by EDR were available for the subject property and for select addresses within the surrounding area for the years 191988, 1992, 1995, 2000, 2005, 2010, 2014, 2017, and 2020. A copy of the City Directory search is provided in Appendix E.

The subject property was unlisted in all available directories.

The Historical City Directory information did not definitively identify past uses indicating RECs in, on, or at the subject property or surrounding area.

5.1.6 Sanborn Fire Insurance Maps

Sanborn Fire Insurance maps were requested for the subject property from EDR but were not available for the subject property and surrounding areas. The Sanborn "Unmapped Property" document provided by EDR is provided in Appendix E.

5.1.7 Municipal Records

Mabbett requested current and historical environmentally pertinent information associated with the subject property from the Town of Essex in September 2025. Departments contacted included the Fire Department, Town Clerk, Board of Health, Assessor, and the Building Department.

In May 2022, a *Soil Suitability Assessment for On-Site Sewage Disposal* was submitted to the Essex Board of Health. Groundwater was observed approximately 6 feet below grade surface in test pits. No evidence of an installed septic system was observed at the subject property.

According to historical assessor's records, the subject property was previously owned by Elisabeth Frye. The property was identified as having a car port that was constructed in 1978 or 1979.

Files reviewed from the Board of Health and Town Assessor are included in Appendix A.

5.1.8 Other Historical Sources

Mabbett reviewed a historical atlas map of the Site published by Walker Lithograph & Publishing Co. in 1910. In 1910, the subject property also consisted of the land north of the subject property. It was reportedly owned by J.O. Low Est. Marshland was indicated as on the subject property or nearby, and the Boston & Maine Railroad was present northwest of the subject property.

No useful information was obtained from other historical atlases dated 1872 and 1884, where the subject property was depicted as undeveloped.

No other readily available historical sources were available for review.

6.0 SUBSURFACE VAPOR MIGRATION

Mabbett conducted a qualitative screening for potential Vapor Encroachment Conditions (VEC) that may affect the subject property. The screening used information about the current and historical usage of the subject property available from the EDR Radius Report to evaluate Chemicals of Concern (COCs), including petroleum hydrocarbons and non-petroleum chemicals. A copy of the EDR report is provided in Appendix D.

ASTM E 2600-10 defines an area of concern (AOC) with a minimum search radius of 1,760 feet (0.3 mile) from the subject property boundary when identifying properties contaminated with non-petroleum COCs that could potentially present a vapor intrusion risk at the subject property. For sites contaminated with petroleum hydrocarbon COCs, the AOC minimum search radius is 528 feet (0.1 mile) from the subject property boundary.

Mabbett considered the nature and extent of on-site and nearby sources of potential subsurface vapor migration by evaluating the current and historical usage of the subject property, the physical setting, and the regulatory agency database information (summarized in Section 5.0). To pose a vapor encroachment risk, releases must have contaminants that have migrated to groundwater, and the groundwater must have the potential to flow beneath the subject property. Additionally, the contaminant released must have the potential to migrate upward from groundwater to soil gas and then to the atmosphere.

Neither the subject property nor hydrologically upgradient or cross-gradient properties were identified as having releases of petroleum and non-petroleum COCs meeting these criteria within proximity to subject property. As such, the risk of vapor encroachment conditions existing at the subject property is considered low.

7.0 INTERVIEWS

Mabbett interviewed the individuals listed in Table 7-1 for information regarding environmental conditions at the subject property. Information from the interview is incorporated throughout this Phase I ESA.

TABLE 7-1
Interviews Completed for this Phase I ESA

Role	Name	Title/Company	Years in Current Role	Interview Type
Town Administrator	Brendhan Zubricki	Town of Essex	Unknown	Email correspondence, user questionnaire

8.0 OTHER ENVIRONMENTAL CONDITIONS

8.1 Lead Based Paint

Lead-based paint (LBP) was commonly used prior to their ban in 1978. As such, it is possible that LBP is present on surfaces that were painted prior to 1978. No painted surfaces were observed during Mabbett's site reconnaissance.

8.2 Asbestos Containing Materials

Asbestos has historically been used in a wide range of building materials, including roofing shingles, ceiling and floor tiles, paper products, pipe insulation, asbestos cement products, and more. No suspected ACM was observed during Mabbett's site reconnaissance.

9.0 CONCLUSIONS AND RECOMMENDATIONS

Mabbett performed a Phase I ESA of the subject property at 30 Apple Street in Essex, Essex County, Massachusetts in conformance with the scope and limitations of ASTM E1527-21. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report.

This Phase I ESA Report presents the results of non-intrusive environmental due diligence activities performed by Mabbett on behalf of the JCJ and the Town of Essex to support decision making about architectural feasibility at Essex Elementary School. The subject property for this Phase I ESA encompasses approximately 11.5 acres of land.

The Phase I ESA findings are summarized as follows:

- **Recognized Environmental Conditions (RECs)**

  The northeast adjacent property was identified as a municipal waste transfer station. According to historical information available, the Essex Landing landfill has historically been located at 30 Landing Road and encompasses approximately 14 acres of land. It was an unlined landfill with an incomplete cap status. A post-closure permit was issued in August 2004, and the post-closure use of the property as a DPW garage was approved. The Essex Landing landfill was identified within the MassDEP *Inactive & Closed Landfills & Dumping Grounds* document dated July 2025.

  According to Adam Sandahl of CMA Engineers, Inc., the town's landfill monitoring contractor, landfill inspections and landfill gas monitoring are performed at the landfill regularly, but there is no groundwater monitoring program for the landfill, and no groundwater monitoring wells have been installed at the landfill. Based on 2004 test pit logs that were reviewed, buried waste included wood, tires, stumps, glass, plastic, and other debris.

  It is unknown whether hazardous materials may also have been placed within this landfill and leeched into groundwater that flowed radially onto the subject property. As such, the historical presence of the Essex Landing landfill and its proximity to the subject property represents a REC.

- **Historical Recognized Environmental Conditions (HRECs)**

  No HRECS were identified on or affecting the subject property.

- **Controlled Recognized Environmental Conditions (CRECs)**

  No CRECs were identified on or affecting the subject property.

- **Data Gaps**

  No significant data gaps were identified during the completion of this Phase I ESA.

- **Business Environmental Risks (BERs)**

  Pesticides: The subject property has been used for agricultural purposes for decades. According to the Essex Town Administrator, the subject property was a former flower field. As such, soil may have been impacted by the application of pesticides. Although pesticides do not constitute a REC under ASTM E1527-21 Section X1.1.4.3(4), the potential presence of pesticides in soils represents a BER due to the potential increased cost of soil management during future redevelopment of the subject property.

10.0 REFERENCES

ASTM E1527-21 - Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

EDR Aerial Photo Decade Package, September 16, 2025, Inquiry 8109451.8.

EDR Certified Sanborn Map Report, September 16, 2025, Inquiry 8109451.3.

EDR City Directory Image Report, September 18, 2025, Inquiry 8109451.5.

EDR Historical Topo Map Report, September 16, 2025, Inquiry 8109451.4.

EDR Radius Map Report with GeoCheck, September 17, 2025, Inquiry 8109451.2s.

Environmental Working Group (EWG), 2023. PFAS Contamination in the U.S. map application. Accessed at https://www.ewg.org/interactive-maps/pfas_contamination/map/, October 2, 2025.

FEMA, Flood Map Service Center, FIRMette Tool, accessed at https://msc.fema.gov/portal/search, September 17, 2025.

MassDEP EEA Data Portal, https://eeaonline.eea.state.ma.us/portal#!/home.

Northeastern University, *PFAS Sites and Community Resources*, accessed at https://experience.arcgis.com/experience/12412ab41b3141598e0bb48523a7c940/page/Page-1/?views=Presumptive-Contamination, on October 2, 2025.

United States Department of Fish and Wildlife, 2018. Wetlands Mapper, accessed at https://www.fws.gov/wetlands/data/mapper.html, on September 17, 2025.

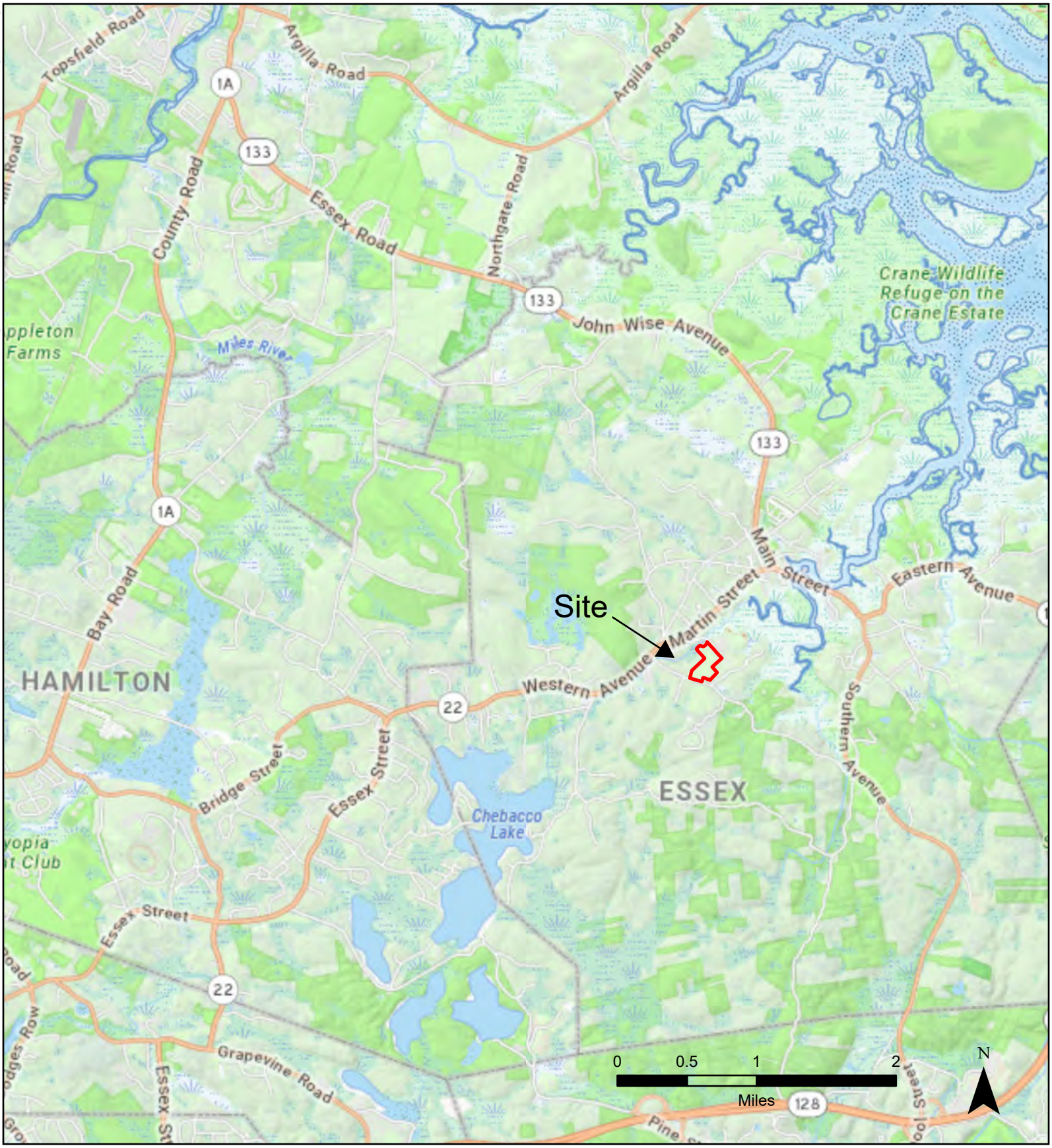
USEPA, accessed at https://awsedap.epa.gov/public/extensions/PFAS_Tools/PFAS_Tools.html, on October 2, 2025.

USGS Interactive Bedrock Map of the United States, accessed at https://mrdata.usgs.gov/geology/state/state.php?state=CA, on September 18, 2025.

USGS, 7.5 Minute Topographic Map, Marblehead North Quadrangle, accessed at https://store.usgs.gov/map-locator, on September 18, 2025.

FIGURES

C:\Users\EliBDining\Mabbett & Associates, Inc. (GCC)\Mabbett - Projects\Working Files\Design



Mabbett
Scientists | Engineers | Program Managers
105 Central Street, Suite 4100
Stoneham, MA 02180
T. (781) 275-6050
www.mabbett.com
©2025 Mabbett & Associates. Inc.

SITE LOCUS
30 APPLE STREET
ESSEX, MA 01929

FIGURE 1-1

Drawn By: EBD	Approved By: CEW
Projection: NAD 1983 StatePlane Massachusetts FIPS 2001 (Meters)	
Project Number: R2025131.001.005	Date: 9/22/2025

C:\Users\EliBDining\Mabbett & Associates, Inc. (GCC)\Mabbett - Projects\Working Files\Design



Mabbett
Scientists | Engineers | Program Managers
105 Central Street, Suite 4100
Stoneham, MA 02180
T. (781) 275-6050
www.mabbett.com
©2025 Mabbett & Associates. Inc.

SITE LAYOUT
30 APPLE STREET
ESSEX, MA 01929

FIGURE 1-2

Drawn By: EBD	Approved By: CEW
Projection: NAD 1983 StatePlane Massachusetts FIPS 2001 (Meters)	
Project Number: R2025131.001.005	Date: 10/21/2025

Notes:
MassGIS

APPENDIX A

SUPPORTING DOCUMENTS

142	8				1 of 1	**Essex**		Total Card	Total Parcel
MAP	LOT	SUB LOT	BUILDING	UNIT	CARD		APPRAISED:	260,500/	260,500
							USE VALUE:	260,500/	260,500
							ASSESSED:	260,500/	260,500

PROPERTY LOCATION

No	Alt No	Direction/Street/City
30		APPLE ST, Essex

OWNERSHIP

Unit #:

Owner 1:	TOWN OF ESSEX
Owner 2:	
Owner 3:	
Street 1:	30 MARTIN ST
Street 2:	
Twn/City:	ESSEX
St/Prov:	MA Cntry: Own Occ:
Postal:	01929 Type:

PREVIOUS OWNER

Owner 1:	FRYE, ELISABETH C TRUSTEE -
Owner 2:	THE BOTHSIDES REAL ESTATE TRUS -
Street 1:	31 APPLE ST
Twn/City:	ESSEX
St/Prov:	MA Cntry:
Postal:	01929

NARRATIVE DESCRIPTION

This Parcel contains 11.5 ACRES of land mainly classified as MNCPL VACANT.
DEED REF 41528-590 = $287,5

OTHER ASSESSMENTS

Code	Descrip/No	Amount	Com. Int

IN PROCESS APPRAISAL SUMMARY

Use Code	Land Size	Building Value	Yard Items	Land Value	Total Value
930	11.500		500	260,000	260,500
Total Card	11.500		500	260,000	260,500
Total Parcel	11.500		500	260,000	260,500

Source: Market Adj Cost | Total Value per SQ unit /Card: N/A | /Parcel: N/A

Legal Description

User Acct 1200

GIS Ref

GIS Ref

Insp Date 05/04/11

Entered Lot Size
Total Land: 11.5
Land Unit Type: AC

Parcel ID 142-8 !1109!

PREVIOUS ASSESSMENT

Tax Yr	Use	Cat	Bldg Value	Yrd Items	Land Size	Land Value	Total Value	Asses'd Value	Notes	Date
2025	930	FV		500	11.5	260,000	260,500		Year End Roll	12/16/2024
2025	930	NC		500	11.5	260,000	260,500		Year End Roll	11/16/2024
2024	950	FV		500	11.5	260,000	260,500		Year End Roll	12/28/2023
2023	073	PTCH		500	11.5	260,000	260,500	3,145	patch	3/15/2023
2023	073	FV		500	11.5	260,000	260,500	3,145	Year End Roll	1/18/2023
2022	073	FV		500	11.5	260,000	260,500	2,973	Year End Roll	1/10/2022
2021	073	FV		500	11.5	260,000	260,500	2,754	Year End Roll	12/28/2020
2020	713	FV		500	11.5	260,000	260,500	2,754	Year End Roll	1/6/2020

PRINT

Date	Time
09/24/25	09:09:30

LAST REV

Date	Time
07/23/24	10:04:07

pwright
1109

SALES INFORMATION

TAX DISTRICT

PAT ACCT.

Grantor	Legal Ref	Type	Date	Sale Code	Sale Price	V	Tst	Verif	Notes
FRYE, ELISABETH	41528-590	QC	4/20/2023	INVOLV CHARI	1,150,000	No	No		3 DEED REFERENCE
SHEWOOD, PETER	18576-0201		4/11/2002	CONVENIENCE	1	Yes	No		
FRYE, ALLEN F	16547-0531		9/6/2000	CONVENIENCE	1	Yes	No		
			1/1/1900			No	No		

USER DEFINED

Prior Id # 1:	33-24
Prior Id # 2:	
Prior Id # 3:	
Prior Id # 1:	
Prior Id # 2:	
Prior Id # 3:	
Prior Id # 1:	
Prior Id # 2:	
Prior Id # 3:	
ASR Map:	
Fact Dist:	
Reval Dist:	
Year:	
LandReason:	
BldReason:	
CivilDistrict:	
Ratio:	

BUILDING PERMITS

Date	Number	Descrip	Amount	C/O	Last Visit	Fed Code	F. Descrip	Comment

ACTIVITY INFORMATION

Date	Result	By	Name
5/4/2011	Measur+1Visi	BE	BE
6/10/2009	FIELD REVIEW	RD	RD
10/4/2006	FIELD REVIEW	JB	JB
11/28/2005	Measur+1Visi	LC	LC
10/27/2005	Measur+1Visi	LC	LC
6/15/1996	Measur+Liste	PV	PV
11/23/1987	Measur+1Visi	HS	HS

Sign: VERIFICATION OF VISIT NOT DATA __/__/__

PROPERTY FACTORS

Item	Code	Description	%	Item	Code	Description
Z				water		
o				Sewer		
n				Electri		
Census:				Exmpt		
Flood Haz:						
D	0	0	100	Topo		
s				Street		
t				Gas:		

LAND SECTION (First 7 lines only)

Use Code	Description	LUC Fact	No of Units	Depth / PriceUnits	Unit Type	Land Type	LT Factor	Base Value	Unit Price	Adj	Neigh	Neigh Influ	Neigh Mod	Infl 1	%	Infl 2	%	Infl 3	%	Appraised Value	Alt Class	%	Spec Land	J Code	Fact	Use Value	Notes
930	MNCPL VAC/		11.5		ACRES	SITE		0	20,000.	1.00	6									230,000						230,000	61A
930	MNCPL VAC/		150		FRONT FEE	SITE		0	200.	1.00	6									30,000						30,000	
930	MNCPL VAC/		0		SQUARE FE	AGRI		0	0.	0.00	6																

Total AC/HA: 11.50000 | Total SF/SM: 500940 | Parcel LUC: 930 MNCPL VACANT | Prime NB Desc SITE INDEX 6 | Total: 260,000 | Spl Credit | Total: 260,000

Disclaimer: This Information is believed to be correct but is subject to change and is not warranteed. Database: AssessPro - Essex pwright 2026

EXTERIOR INFORMATION

Type:
Sty Ht:
(Liv) Units: Total:
Foundation:
Frame:
Prime Wall:
Sec Wall: %
Roof Struct:
Roof Cover:
Color:
View / Desir:

GENERAL INFORMATION

Grade:
Year Blt: Eff Yr Blt:
Alt LUC: Alt %:
Jurisdict: Fact: .
Const Mod:
Lump Sum Adj:

INTERIOR INFORMATION

Avg Ht/FL:
Prim Int Wal
Sec Int Wall: %
Partition:
Prim Floors:
Sec Floors: %
Bsmnt Flr:
Subfloor:
Bsmnt Gar:
Electric:
Insulation:
Int vs Ext:
Heat Fuel:
Heat Type:
Heat Sys:
% Heated: % AC:
Solar HW: Central Vac:
% Com Wal % Sprinkled

BATH FEATURES

Full Bath		Rating:	
A Bath:		Rating:	
3/4 Bath:		Rating:	
A 3QBth		Rating:	
1/2 Bath:		Rating:	
A HBth:		Rating:	
OthrFix:		Rating:	

OTHER FEATURES

Kits:		Rating:	
A Kits:		Rating:	
Frpl:		Rating:	
WSFlue:		Rating:	

CONDO INFORMATION

Location:
Total Units:
Floor:
% Own:
Name:

DEPRECIATION

Phys Cond:	AV - Average	0.0 %
Functional:		%
Economic:		%
Special:		%
Override:		%
	Total:	0 %

CALC SUMMARY

Basic $ / SQ:	
Size Adj.:	1.00000000
Const Adj.:	8.00000000
Adj $ / SQ:	
Other Features:	0
Grade Factor:	
NBHD Inf:	1.00000000
NBHD Mod:	
LUC Factor:	1.00
Adj Total:	0
Depreciation:	0
Depreciated Total:	0

COMMENTS

PETER & LYDIA SHERWOOD. TRUSTEES OF LYDIA C F. SHERWOOD 2000 REVOCABLE. TRUST - 25% INTEREST. ELISABETH FRYE - 50% INT.. Elizabeth Frye passed away 1/1/22.

RESIDENTIAL GRID

1st Res Grid Desc: # Units

Level	FY	LR	DR	D	K	FR	RR	BR	FB	HB	L	O
Other												
Upper												
Lvl 2												
Lvl 1												
Lower												

Totals RMs: BRs: Baths: HB

REMODELING

Exterior:	
Interior:	
Additions:	
Kitchen:	
Baths:	
Plumbing:	
Electric:	
Heating:	
General:	

RES BREAKDOWN

No Unit	RMS	BRS	FL

Totals

COMPARABLE SALES

Rate	Parcel ID	Typ	Date	Sale Price

WtAv$/SQ: AvRate: Ind.Val

Juris. Factor: Before Depr: 0.00
Special Features: 0 Val/Su Net:
Final Total: 0 Val/Su SzAd

SKETCH

SUB AREA

Code	Description	Area - SQ	Rate - AV	Undepr Value

Net Sketched Area: Total:
Size Ad Gross Area FinArea

SUB AREA DETAIL

Sub Area	% Usbl	Descrip	% Type	Qu	# Ten

IMAGE

AssessPro Patriot Properties, Inc

MOBILE HOME

Make: Model: Serial # Year: Color:

SPEC FEATURES/YARD ITEMS

PARCEL ID 142-8

Code	Description	A	Y/S	Qty	Size/Dim	Qual	Con	Year	Unit Price	D/S	Dep	LUC	Fact	NB Fa	Appr Value	JCod	JFact	Juris. Value
MN	CP	D	Y	1	300.00	A	AV	1979	5.00	M	70	930			500			500

More: N Total Yard Items: 500 Total Special Featues: Total: 500

U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands



September 17, 2025

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

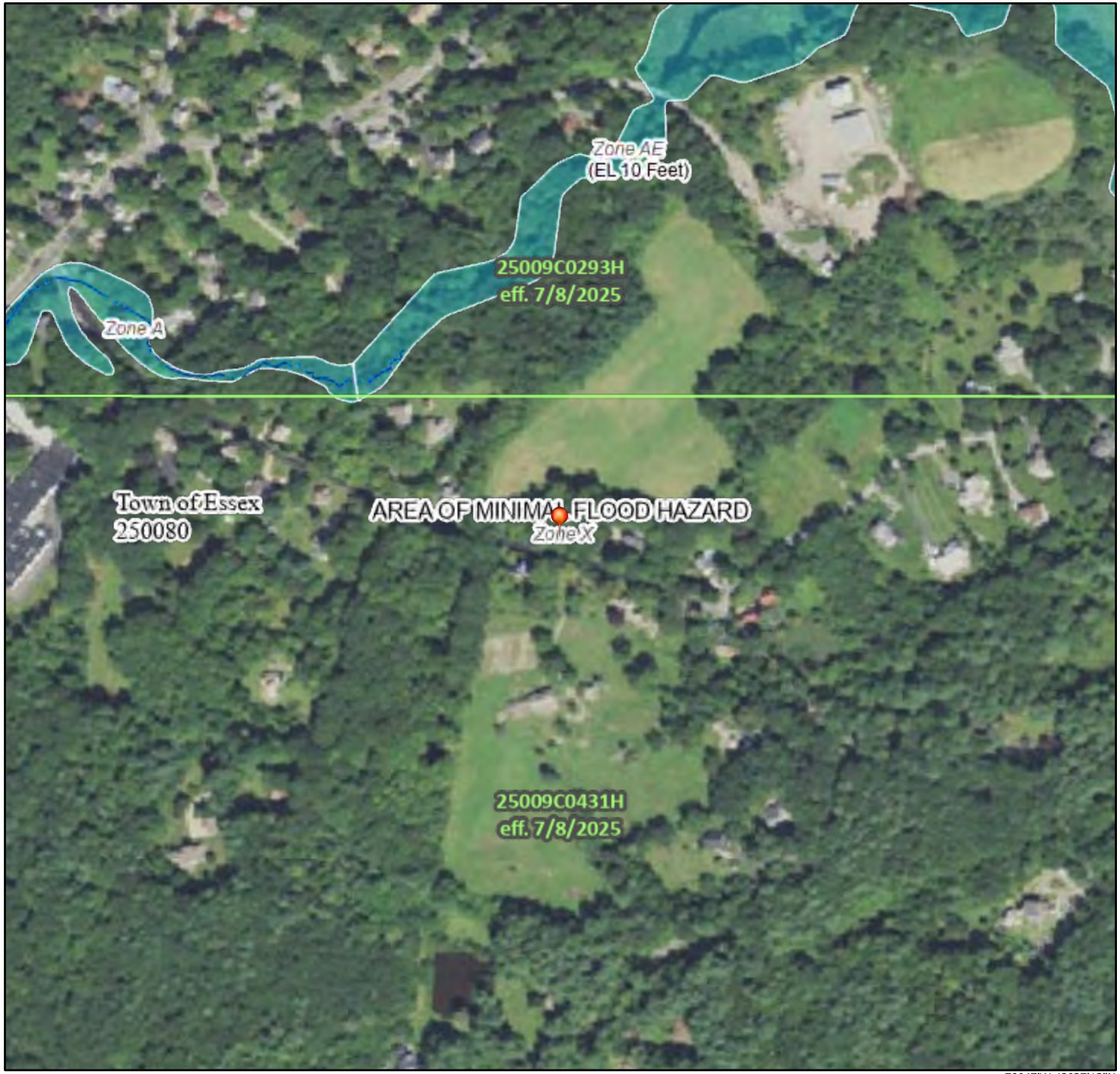
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

National Flood Hazard Layer FIRMette

FEMA

70°47'37"W 42°37'40"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

70°47'W 42°37'13"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/17/2025 at 2:38 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

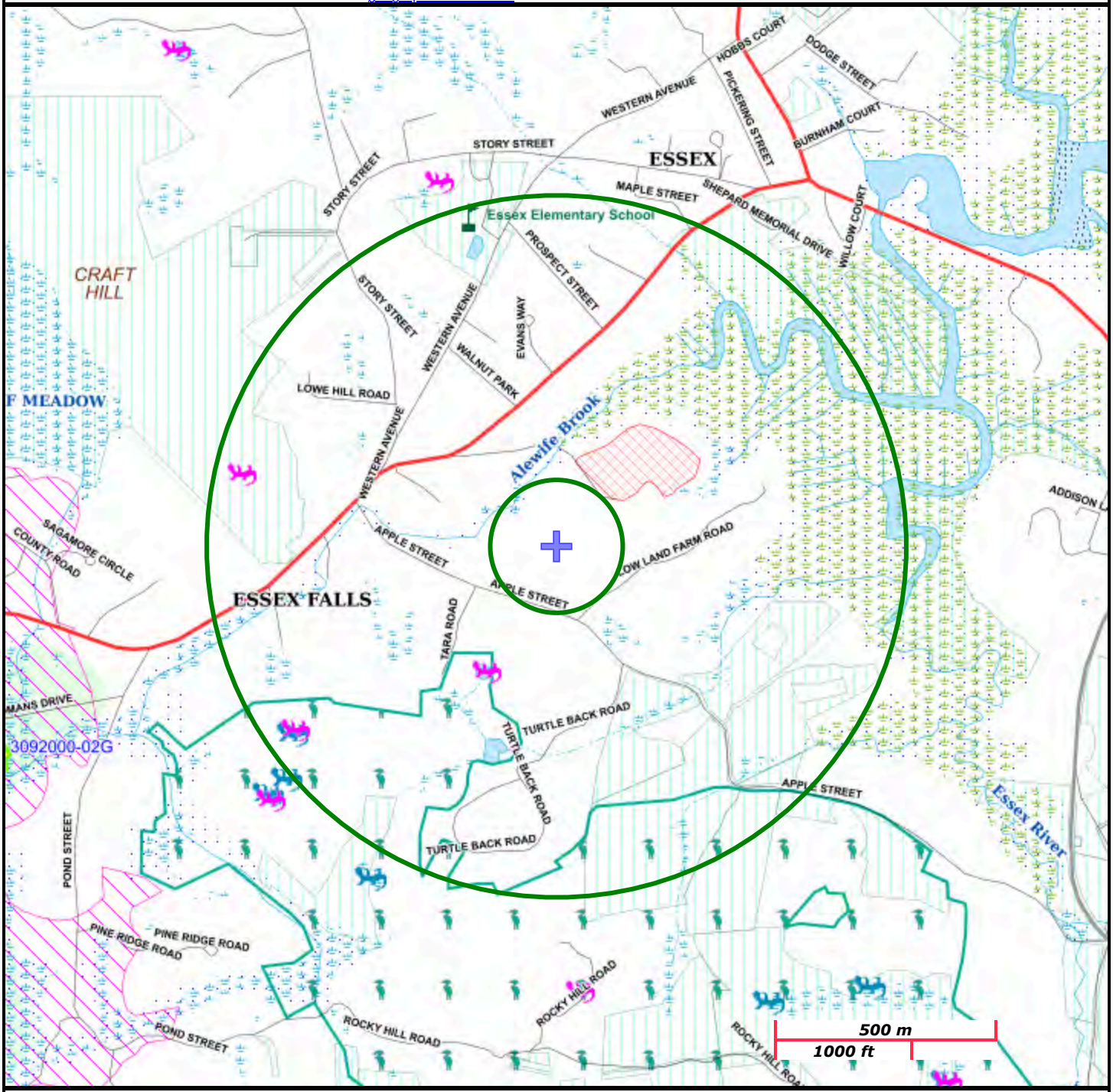
Site Information:

30 APPLE ST ESSEX, MA

NAD83 UTM Meters:
4720727mN , 353415mE (Zone: 19)
October 6, 2025

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: https://www.mass.gov/orgs/massgis-bureau-of-geographic-information.

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

NHESP Pri-Hab of Rare Species; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.

Soil Map—Essex County, Massachusetts, Southern Part



Map Scale: 1:2,210 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Essex County, Massachusetts, Southern Part
Survey Area Data: Version 21, Aug 27, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 22, 2022—Jun 5, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
102C	Chatfield-Hollis-Rock outcrop complex, 0 to 15 percent slopes	1.0	9.1%
225B	Belgrade very fine sandy loam, 0 to 8 percent slopes	3.6	31.4%
254A	Merrimac fine sandy loam, 0 to 3 percent slopes	4.9	43.4%
616A	Fluvaquents, frequently flooded, 0 to 3 percent slopes	1.0	8.7%
652	Udorthents, refuse substratum	0.0	0.0%
714B	Melrose fine sandy loam, 3 to 8 percent slopes	0.8	7.4%
Totals for Area of Interest		**11.4**	**100.0%**

MAP ID: 142 – 8

MAP ID: 33/ 24/ / /

Bldg #: 1 of 1

Bldg Name:

Sec #: 1 of 1 Card 1 of 1

106
ESSEX, MA

VISION

Property Location: 30 APPLE ST

Account #

Vision ID: 1200

CURRENT OWNER	TOPO.	UTILITIES	STRT./ROAD	LOCATION
FRYE, ELISABETH C TRUSTEE THE BOTHSIDES REAL ESTATE TRU 31 APPLE ST ESSEX, MA 01929 Additional Owners:				

SUPPLEMENTAL DATA		
Other ID:	00033 00024 00000	Billing
Sub-Div		
Photo		
Ward		
Prec.	0	
Sewer ID		
GIS ID: 1200		ASSOC PID#

RECORD OF OWNERSHIP	BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.
FRYE, ELISABETH C TRUSTEE SHEWOOD, PETER & LYDIA TRSTS FRYE, ALLEN F	18576/0201 16547/0531	04/11/2002 09/06/2000	U U	V V	1 1 0	1F 1F

CURRENT ASSESSMENT			
Description	Code	Appraised Value	Assessed Value
61A LAND	7130	205,700	2,400
61A	7130	600	600
		Total	236,300
			3,000

PREVIOUS ASSESSMENTS (HISTORY)						
Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Assessed Value
2011	7130	2,400	2010	7160	2,100	2,100
2011	7130	600	2010	7160	600	600
					2009 7160	100
					2009 7220	
		Total: 3,000			Total: 2,700	Total: 2,800

This signature acknowledges a visit by a Data Collector or Assessor

EXEMPTIONS				OTHER ASSESSMENTS			
Year	Type	Description	Amount	Code	Description	Number	Amount	Comm. Int.
			Total:					

ASSESSING NEIGHBORHOOD			
NBHD/ SUB	NBHD NAME	STREET INDEX NAME	TRACING	BATCH
0001/A				

NOTES

PETER & LYDIA SHERWOOD
TRUSTEES OF LYDIA C F
SHERWOOD 2000 REVOCABLE
TRUST - 25% INTEREST
ELISABETH FRYE - 50% INT.

APPRAISED VALUE SUMMARY	
Appraised Bldg. Value (Card)	0
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	600
Appraised Land Value (Bldg)	0
Special Land Value	235,700
Total Appraised Parcel Value	236,300
Valuation Method:	C
Adjustment:	0
Net Total Appraised Parcel Value	236,300

BUILDING PERMIT RECORD								
Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments

VISIT/ CHANGE HISTORY					
Date	Type	IS	ID	Cd.	Purpose/Result
7/1/2009			RC	44	No Change Reinspecti
7/22/2004			LC	00	Measur+Listed
7/19/2004			LC	00	Measur+Listed
5/6/1988			MT		

LAND LINE VALUATION SECTION

B #	Use Code	Use Description	Zone	D	Frontage	Depth	Units		Unit Price	I. Factor	S.A.	Acre Disc	C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing	Adj. Unit Price	Land Valu
1	7130	FIELD CRPS		0			11.00	AC	17,000.00	1.10	0	1.0000	1.00	3R	1.00	61A	61A:216	18,700.00	205,7
1	7160	TILL FORAG		0			150.00	FF	200.00	1.00	0	1.0000	1.00	3R	1.00		61A:160	200.00	30,0
1																			
1																			

Total Card Land Units: 11.00 AC Parcel Total Land Area: 479,160 SF

Total Land Value: 23

Total Land Value: 539,800

Property Location: 30 APPLE ST **MAP ID:** 33/ 24/ / / **Bldg Name:** **State Use:** 7130
Vision ID: 1200 **Account #** **Bldg #:** 1 of 1 **Sec #:** 1 of 1 **Card** 1 of 1 **Print Date:** 03/14/2011 10:41

CONSTRUCTION DETAIL

Element	Cd.	Ch.	Description
Model	00		Vacant

CONSTRUCTION DETAIL (CONTINUED)

Element	Cd.	Ch.	Description

MIXED USE

Code	Description	Percentage
7130	FIELD CRPS	100

COST/MARKET VALUATION

Adj. Base Rate:	0.00
Section. RCN:	0
Net Other Adj:	0.00
Replace Cost	0
AYB	
EYB	0
Dep Code	
Remodel Rating	
Year Remodeled	
Dep %	
Functional Obslnc	
External Obslnc	
Cost Trend Factor	1
Condition	
% Complete	
Overall % Cond	
Apprais Val	
Dep % Ovr	0
Dep Ovr Comment	
Misc Imp Ovr	0
Misc Imp Ovr Comment	
Cost to Cure Ovr	0
Cost to Cure Ovr Comment	

OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)

Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value
	CP			L	300	5.00	1979		1		70	600

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Living Area	Gross Area	Eff. Area	Unit Cost	Undeprec. Value
	Ttl. Gross Liv/Lease Area:	0	0	0		



NBHD NAME
STREET INDEX NAME
NOTES
Valuation Method:

.: 30 APPLE ST

MAP ID: 33/ 24/ / /
Other ID: 00033 00024 00000

Bldg #: 1 **Card** 1 **of** 1

Print Date: 07/21/2004 09:56

106
ESSEX, MA

VISION

CURRENT OWNER	TOPO.	UTILITIES	STRT./ROAD	LOCATION
ELISABETH C TRUSTEE BOTHSIDES REAL ESTATE TRUST APPLE STREET ESSEX, MA 01929 Additional Owners:				

SUPPLEMENTAL DATA

Account #
Sub-Div
Photo
Ward
Prec. 0
Sewer ID

GIS ID: 1200

RECORD OF OWNERSHIP	BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.
FRYE, ELISABETH C TRUSTEE	18576/0201	04/11/2002	U	V	1	1F
SHEWOOD, PETER & LYDIA TRSTS	16547/0531	09/06/2000	U	V	1	1F
FRYE, ALLEN F					0	

CURRENT ASSESSMENT

Description	Code	Appraised Value	Assessed Value
61A LAND	7130	192,000	2,100
61A	7130	400	400
		Total	212,400	2,500

PREVIOUS ASSESSMENTS (HISTORY)

Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
		Total:			Total:			Total:

This signature acknowledges a visit by a Data Collector or Assessor

EXEMPTIONS

Year	Type/Description	Amount
	Total:	

OTHER ASSESSMENTS

Code	Description	Number	Amount	Comm. Int.

APPRAISED VALUE SUMMARY

Appraised Bldg. Value (Card)	0
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	400
Appraised Land Value (Bldg)	212,000
Special Land Value	
	212,400
Total Appraised Card Value	212,400
Total Appraised Parcel Value	Cost/Market Valuation
Valuation Method:	
Net Total Appraised Parcel Value	212,400

NOTES

PETER & LYDIA SHERWOOD
TRUSTEES OF LYDIA C F
SHERWOOD 2000 REVOCABLE
TRUST - 25% INTEREST
ELISABETH FRYE - 50% INT.

open barn for 2 cars (garage)
photo pg 2

VISIT/CHANGE HISTORY

Date	ID	Cd.	Purpose/Result
5/6/1988	MT		

BUILDING PERMIT RECORD

Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments

LAND LINE VALUATION SECTION

B#	Use Code	Description	Zone	D	Frontage	Depth	Units		Unit Price	I. Factor	S.I.	C. Factor	Nbhd.	Adj.	Notes- Adj/Special Pricing	Adj. Unit Price	Land Value
1	7130	FIELD CRPS	RS2	0			10.00	AC	20,000.00	1.00	0	0.93		1.00	SPCL(61A 213;)Notes: 61A	18,600.00	186,000
1	7130	FIELD CRPS	RS2	0			150.00	FF	40.00	1.00	0	1.00		1.00	SPCL(61A 0%;)Notes: 61A	40.00	6,000
1	7220	NONPRWETLD					1.00	AC	20,000.00	1.00	0	1.00		1.00	SPCL(61A 29;)Notes:	20,000.00	20,000
		Total Card Land Units					11.00	AC	Parcel Total Land Area:				11.00 AC			Total Land Value	212,000

00033
00024
00000

MAP
BLOCK
LOT 145

ESSEX, MA

APPRAISED BY MT ON 05/06/88 88301

10/27/88

CARD 1 OF 1

00033
00024
00000

COST/MARKET CONSTRUCTION DETAIL

ELEMENT	CODE	DESCRIPTION
EXT. WALL 1		
2		
ROOF STRUCTURE		
ROOF COVER		
INT. WALL 1		
2		
INT. FLOORING 1		
2		
HEATING FUEL		
HEATING TYPE		
AIR COND. TYPE		

MARKET FEATURES SPECIAL MODELS

VACANT	94	OUTBUILDINGS

AREA TYPE	TOTAL GROSS AREA	PCT. OF BASE	TOTAL ADJUSTED AREA	UNDEPRECIATED COST/MARKET VALUE
TOTALS				

COST-MARKET VALUE

TYPE	MODEL	EFF. AREA	QUAL INDEX	UNDEPRECIATED VALUE	EYB	AYB
9400						

EFFECTIVE BASE RATE

DEPRECIATION

NORM	ECON	FUNCT	OTHER	% COND
.				

APPLE ST

VALUE SUMMARY

DEPRECIATED BUILDING VALUE	
VALUATION BY MARKET	
TOTAL DEPR. OB VALUE	
TOTAL DEPR. XF VALUE	600
TOTAL LAND VALUE MARKET	128,800
TOTAL LAND VALUE-AGRICULT.	-124,900
INCOME APPROACH VALUE	
TOTAL AGRICULTURAL VALUE-CARD	-124,300
TOTAL AGRICULTURAL VALUE-PARCEL	-124,300
TOTAL COST-MARKET VALUE: CARD	129,400
TOTAL COST-MARKET VALUE: PARCEL	4,500

INCOME VALUATION

METHOD:

	PCT	
GROSS ANNUAL INCOME		
VACANCY & COLL. LOSS		
EFFECTIVE GROSS INCOME		
FIXED OPERATING EXPS &		
RESERVE FOR DEPR.		
NET ANNUAL INCOME		

1 2 3 4 5 6 7

INCOME VALUE

LINE	OFFIC. RECORD BOOK	OFFIC. RECORD PAGE	DATE MO	DATE YR	TYPE INST	Q/U	V/I	INDICATED SALES PRICE
1								
2								
3								
4								
5								

R1X
400
HOUSE LOT

0000

OUT BUILDINGS/EXTRA FEATURES

LINE NO.	DESCRIPTION	UNITS	UNIT PRICE	DATE ON		ANNUAL DEPR. RATE	PCT. COND	OB/XF DEPR. VALUE	L B
1	CP	30000	500	79		0100	050	600	L

TOTAL OB/XF VALUE 600

BUILDING TRAVERSE

1 2 3 4 5 6 7 8 9

m.m.c. inc. subsidiary of A.M.S.I.

NOTES

1 2 3 4

LAND CODE	LAND DESCRIPTION	ZONING	DIST	FRONTAGE	DEPTH	TOTAL LAND UNITS	UNIT TYPE	UNIT PRICE	INFLU FACTOR	SI	COND. FACTOR	NOTES AND OTHER ADJUST. / SPECIAL LAND CALC.	TOTAL ADJUST	ADJUSTED UNIT PRICE	LAND VALUE
7130	FIELD CRPS	RS20				1100	AC	12,000	00	1	09361A	0035000	93	11,160	122,760
7130	FIELD CRPS	RS20				1500	FF	4	00	1	00061A	0000000	100	4	6,000
TOTAL AREA						1100	AC	MARKET VALUE AGRICULTURAL					-124,900	MARKET VALUE	128,800

00033
00024
00000

MAP
BLOCK
LOT 1157

Frye allen

ESSEX, MA

APPRAISED BY 7300 ON 10/22/79 85241

12/03/85 DATE

00033
00024
00000

CARD 1 OF 1

APPLE ST

COST/MARKET CONSTRUCTION DETAIL

ELEMENT		CODE	DESCRIPTION
EXT. WALL	1		
	2		
ROOF STRUCTURE			
ROOF COVER			
INT. WALL	1		
	2		
INT. FLOORING	1		
	2		
HEATING FUEL			
HEATING TYPE			
AIR COND. TYPE			

MARKET FEATURES SPECIAL MODELS

VACANT 94 OUTBUILDINGS

COST-MARKET VALUE

TYPE	MODEL	EFF. AREA	QUAL INDEX	UNDEPRECIATED VALUE	EYB	AYB
94	00					

EFFECTIVE BASE RATE

DEPRECIATION

NORM	ECON	FUNCT	OTHER	% COND
•				

VALUE SUMMARY

DEPRECIATED BUILDING VALUE	
VALUATION BY	MARKET
TOTAL DEPR. OB VALUE	700
TOTAL DEPR. XF VALUE	
TOTAL LAND VALUE MARKET	61,000
TOTAL LAND VALUE-AGRICULT.	-57,300
INCOME APPROACH VALUE	
TOTAL AGRICULTURAL VALUE-CARD	-56,600
TOTAL AGRICULTURAL VALUE-PARCEL	-56,600
TOTAL COST-MARKET VALUE: CARD	61,700
TOTAL COST-MARKET VALUE: PARCEL	4,400

INCOME VALUATION

METHOD:

	PCT	
GROSS ANNUAL INCOME		
VACANCY & COLL. LOSS		
EFFECTIVE GROSS INCOME		
FIXED OPERATING EXPS & RESERVE FOR DEPR.		
NET ANNUAL INCOME		

INCOME VALUE

LINE	OFFIC. RECORD BOOK	OFFIC. RECORD PAGE	DATE MO	DATE YR	TYPE INST	Q / U	V / I	INDICATED SALES PRICE
1								
2								
3								
4								
5								

NOTES

AREA TYPE	TOTAL GROSS AREA	PCT. OF BASE	TOTAL ADJUSTED AREA	UNDEPRECIATED COST/MARKET VALUE
TOTALS				

0000

LINE NO.	OUT BUILDINGS/EXTRA FEATURES DESCRIPTION	UNITS	UNIT PRICE	DATE ON		ANNUAL DEPR. RATE	PCT. COND	OB/XF DEPR. VALUE	L B
1	CP	3000	5.00	79		0100	050	700	L
TOTAL OB/XF VALUE								700	

BUILDING TRAVERSE

1
2
3
4
5
6
7
8
9

M.M.C. Inc.
subsidiary of
A.M.S.I.

NOTES

1
2
3
4

LAND CODE	LAND DESCRIPTION	ZONING	DIST	FRONTAGE	DEPTH	TOTAL LAND UNITS	UNIT TYPE	UNIT PRICE	INFLU FACTOR	SI	COND. FACTOR	NOTES AND OTHER ADJUST. SPECIAL LAND CALC.	TOTAL ADJUST	ADJUSTED UNIT PRICE	LAND VALUE
7130	FIELD CRPS	RS20				1100	AC	5,000.00	1000		100	61A 0034000	100	5,000.00	55,000
7130	FIELD CRPS	RS20				15000	FF	40.00	1000		100	61A 0000000	100	40.00	6,000
TOTAL AREA						1100	AC	MARKET VALUE AGRICULTURAL					-57,300	MARKET VALUE	61,0

PROPERTY WORK CARD - ESSEX, MASS.

RECORD OF OWNERSHIP	DATE	BOOK	PAGE	R.S.
9.				
8.				
7.				
6.				
5.				
4.				
3.				
2.				
1. Frye, Allen F.	1956			

MAP NO. 33 LOT. NO. 24

ADD. Apple Street

SUB. DIV. NO. PHOTO NO.

PROPERTY INFORMATION

LAND COST	INCOME
BLDG. COST	EXPENSE
SALE PRICE	NET INCOME

LAND @ % =

BLDG. @ % =

TOTAL

	1969	1978	1978	19	19	19	19	19	19	19	19
DWELLING											
GARAGE											
CAR PORT		1760	700								
TOTAL BLDGS.			700								
LAND	2,700	6000	6000								
TOTAL	2,700	6000	6700								

NOTES

N/A 31 Apple St
Essex

Visited Property 11/30/77.
Found 10 Ac Agricultural and
1 Ac Contiguous.
Reclassified Agricultural Ch 61A
Tax Lien Form filed

NC 1/14/77

PROPERTY FACTORS

TOPOGRAPHY		IMPROVEMENTS	
LEVEL		WATER	✓
HIGH		SEWER	
LOW PART	✓	GAS	
ROLLING			
SWAMPY		ALL UTILITIES	

TREND of DISTRICT		STREET	
IMPROVING		PAVED	✓
STATIC	✓	SEMI-IMPROVED	
DECLINING		DIRT	
		SIDEWALK	

LAND VALUE COMPUTATIONS & SUMMARY

CLASSIFICATION	NO. OF ACRES	RATE	TOTAL
TILLABLE	7.5		
ORCHARDS			
PASTURE			
WOODLAND	2.81	300 x 93	2870
WASTELAND			
HOMESITE	.69		
TOTAL AREA	11 Ac.		

FRONTAGE	DEPTH	UNIT PRICE	DEPTH FACTOR	FRONT FT. PRICE	
150	200	30	100	30.00	4500

UNO TOPO - 30% x 4500 — 1350

C. I.

TOTAL VALUE LAND 6020

TOTAL VALUE BUILDINGS —

TOTAL VALUE LAND & BUILDINGS 6020

RENTAL EXPENSE ITEMS

VACANCY	
HEATING	
WATER	
ELECTRICITY	
JANITOR	
MANAGEMENT	
TOTAL FLAT EXPENSES	

PROPERTY INFORMATION

LAND COST	
BLDG. COST	
SALE PRICE	
GROSS ANNUAL INCOME	
LESS EXPENSES	
NET INCOME	
LAND @ % =	
BLDG. @ % =	
TOTAL	

BUILDING RECORD

OCCUPANCY

SINGLE FAMILY		STORES	
MULT. FAMILY		OFFICES	
APARTMENTS		CAR PORT	✓

RANCH		CAPE		CONTEMPORARY		GAMBREL	
SPLIT LEVEL		GARRISON		CONVENTIONAL			

CONSTRUCTION

FOUNDATION

CONCRETE	
CONCRETE BL'K.	
BRICK or STONE	✓
PIERS	

BASEMENT

AREA FULL	
¼ ½ ¾	
NO B'M'T	✓
HEAD ROOM	

WALLS

CLAPBOARDS	
DROP SIDING	
WOOD SHINGLES	
ASPHALT SIDING	
ASBESTOS SIDING	
ALUMINUM SIDING	
VERT. SIDING	✓
STUCCO ON MASONRY	
STUCCO ON FRAME	
BRICK ON MASONRY	
CONC. or CIND. BLK.	
STONE ON MASONRY	
STONE ON FRAME	

ROOF

Gable		Hip	
Gambrel		Mansard	
Flat		Shed	✓
ASPHALT SHINGLES			✓
WOOD SHINGLES			
SLATE			
TAR & GRAVEL			
ROLL ROOFING			
ASBESTOS			

FRAMING

WOOD JOIST	
TIMBER BMS. & COLS.	
STEEL BMS. & COLS.	
WOOD RAFTERS	✓

NO. OF ROOMS

B'M'T.		2nd	
1st		3rd	

FLOORS

	B	1	2	3
CONCRETE				
EARTH		✓		
HARDW'D				
COMMON				
ASPH. TILE				

ATTIC STRS. & FLOOR	
FIN. B'M'T AREA	
FIN. ATTIC AREA	
FIRE PLACES	0
MODERN KITCHEN	

INTERIOR FINISH

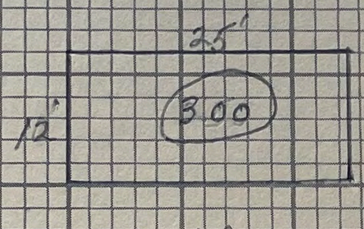
	B	1	2	3
PINE				
HARDW'D				
PLASTER				
DRY WALL				
UNFIN.				
PANEL				
NONE				

PLUMBING

BATH (3 fix.)	
STALL SHOWER BATH	
TOILET RM. (2 Fix.)	
WATER CLOSET	
LAVATORY	
KITCHEN SINK	
NO PLUMBING	✓
STALL SHOWER	
MODERN FIXTURES	
TILE FLOOR & WCT.	

HEATING

PIPELESS FURNACE	
Forced Hot Air Furn.	
STEAM	
HOT W'T'R or VAPOR	
HOT AIR GRAVITY	
RADIANT H'T'G	
UNIT HEATERS	
AIR CONDITIONING	
AUTO. BURNERS	
ELECTRIC	
NO HEATING	✓



NOTES: VAC
CARPORT ADDED 1/1/78
PM MEASURED

DESCRIPTION of OBSOLESCENCE

STRUCTURAL	
SURPLUS CAP.	
OVERBUILT	
COMMERCIAL LOC	
ECONOMIC	
BLIGHTED AREA	

COMPUTATIONS

UNIT	AMOUNT	
SF		
PF		
ADD. & PCHS		
WALL HT.		
ATTIC		
B'M'T AREA		
FIN. B'M'T		
B'M'T GAR.		
FIREPLACES		
HEATING		
PLUMBING		
M. F.		
TOTAL		
FACTOR		
REPL. VALUE		

— SUMMARY OF BUILDINGS —

OCCUPANCY	TYPE	GRADE	YR. BUILT	REMOD.	COND.	REPL. VAL.	PHYS. DEP.	PHYS. VAL.	FUNC. DEP.	SOUND VAL.
DWELLING										
GARAGE										
CARPORT	1 St 7R Car Shelter 300SF @ 4.00	D	1930±		FAIR	1200	35%	780	5%	740
COMMERCIAL										

DATE	LISTED	MEAS.	AREA	PRICED	REV'D	CHECKED	TOTAL VALUE BUILDINGS	
5/14/80	SL					22		740

WHIPPLE - MAGANE - DARCY, INC. ANDOVER, MASS.

TOWN PRINTING COMPANY, ANDOVER, MA

B&H

COPY

GLOVSKY

Counselors-at-Law

Donald M. Greenough
Of Counsel
Telephone (978) 356-1040
dgreenough@glovsky.com

RECEIVED
SEP 29 2022
TOWN ESSEX
BOARD OF HEALTH

September 27th, 2022
(VIA: 1st Class Mail & Certified Mail – Return Receipt Requested)

Town of Essex
Board of Selectman
Town Hall
30 Martin Street
Essex, MA 01929

Re: NOTICE OF INTENT TO SELL AND CONVERT THE USEUNDER MGL Ch. 61A
Assessor's Map 142, Lot 8; 11.5 acres, more or less; situated on the northerly side of Apple Street, Essex, Massachusetts, and known and numbered as 30 Apple Street, Essex, Massachusetts

Dear Members of the Board:

This office represents H. WHITNEY WAGNER, Trustee of Bothsides Realty Trust, PETER M. SHERWOOD, Trustee of the Lyndia C.F. Sherwood 2000 Revocable Trust, and H. WHITNEY WAGNER, Personal Representative of the Estate of Minot A. Frye, owners of the above-referenced property with a mailing address c/o Donald M. Greenough, Esquire, Glovsky & Glovsky, 8 Washington Street, Beverly, Massachusetts 01915 (dgreenough@glovsky.com) and telephone number 978-356-1040 (the "Sellers"). This notice is given on their behalf.

All of the above captioned land at 30 Apple Street, Essex, has been valued, assessed and classified pursuant to the provisions of Massachusetts General Laws Chapter 61A.

Please consider this letter as formal written notice to the Town, in accordance with MGL Chapter 61A, Section 14, which addresses, among other matters, certain rights of first refusal running in favor of the Town of lands which are valued, assessed and taxed under Chapter 61A.

The Town is hereby formally notified as follows:

1. The Sellers intend to sell the parcel pursuant to a Purchase and Sale Agreement ("Agreement") dated September 18, 2022, for a sales price of One Million One Hundred Fifty Thousand and 00/100 ($1,150,000.00) Dollars. I certify that the copy of the Agreement attached hereto as Exhibit "A" is a true and exact copy.

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

RECEIVED
MAY 18 2022
TOWN OF ESSEX
BOARD OF HEALTH

MassDEP has provided this form for use by on-site professionals and local Boards of Health. Other forms may be used, but the information must be substantially the same as provided here. Before using this form, check with your local Board of Health to determine the form they use.

A. Facility Information

ESTATE OF ELIZABETH FRYE
Owner Name

30 APPLE STREET
Street Address

ESSEX
City

MA
State

MAP 142 LOT 8
Map/Lot #

01929
Zip Code

B. Site Information

1. (Check one) ☒ New Construction ☐ Upgrade ☐ Repair

2. Published Soil Survey Available? ☒ Yes ☐ No
   If yes: Year Published _____ Publication Scale _____
   MERRIMAC FINE SANDY LOAM
   Soil Name
   Soil Limitations

3. Surficial Geological Report Available? ☐ Yes ☒ No
   If yes: Year Published _____ Publication Scale _____ Map Unit _____
   Geologic Material
   Landform

4. Flood Rate Insurance Map
   Above the 500-year flood boundary? ☐ Yes ☐ No
   Within the 100-year flood boundary? ☐ Yes ☐ No
   Within the 500-year flood boundary? ☐ Yes ☐ No
   Within a velocity zone? ☐ Yes ☐ No

5. Wetland Area: National Wetland Inventory Map
   Map Unit _____ Name _____
   Wetlands Conservancy Program Map
   Map Unit _____ Name _____

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

B. Site Information (Continued)

6. Current Water Resource Conditions (USGS): _____ (Month/Year) Range: ☐ Above Normal ☐ Normal ☐ Below Normal

7. Other references reviewed: _____

C. On-Site Review (*minimum of two holes required at every proposed primary and reserved disposal area*)

Deep Observation Hole Number: TP-1 | 5/11/22 (Date) | 9:00 (Time) | SUNNY 55 F (Weather)

1. Location

Ground Elevation at Surface of Hole: _____ Location (identify on plan): SEE PLAN

2. Land Use: FIELD (e.g., woodland, agricultural field, vacant lot, etc.) | STONE WALLS (Surface Stones) | LEVEL (Slope (%))

_____ (Vegetation) | _____ (Landform) | _____ (Position on Landscape (attach sheet))

3. Distances from:

Open Water Body	N/A feet	Drainage Way	N/A feet	Possible Wet Area	N/A feet
Property Line	40 feet	Drinking Water Well	N/A feet	Other	N/A feet

4. Parent Material: GLACIAL OUTWASH Unsuitable Materials Present: ☐ Yes ☒ No

If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☒ Yes ☐ No If yes: 112" (Depth Weeping from Pit) _____ (Depth Standing Water in Hole)

Estimated Depth to High Groundwater: 72" inches _____

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-1

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-9	A	10YR3/3				F SANDY LOAM			GRAN	FRIABLE	
9-22	Bw	10YR5/8				F SANDY LOAM			GRAN	FRIABLE	
22-72	C1	10YR4/4				M-C SAND			GRAN	FRAIBLE	
72-120	C2	2.5Y6/4	72"	7.5YR5/8 2.5Y6/2	> 5	SILTY CL LOAM			BLOCKY	FRIABLE-FIRM	

Additional Notes:

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-2 | 5/11/22 (Date) | 9:00 (Time) | SUNNY 55 F (Weather)

1. Location

Ground Elevation at Surface of Hole: _____ Location (identify on plan): SEE PLAN

2. Land Use: FIELD (e.g., woodland, agricultural field, vacant lot, etc.) | STONE WALLS (Surface Stones) | LEVEL (Slope (%))

Vegetation | Landform | Position on Landscape (attach sheet)

3. Distances from:

Open Water Body	N/A feet	Drainage Way	N/A feet	Possible Wet Area	N/A feet
Property Line	65 feet	Drinking Water Well	N/A feet	Other	N/A feet

4. Parent Material: GLACIAL OUTWASH Unsuitable Materials Present: ☐ Yes ☒ No

If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☒ Yes ☐ No If yes: 91" (Depth Weeping from Pit) _____ (Depth Standing Water in Hole)

Estimated Depth to High Groundwater: 80" inches _____ elevation

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-2

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color- Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-9	A	10YR3/3				F SANDY LOAM			GRAN	FRIABLE	
9-28	Bw	10YR5/8				F SANDY LOAM			GRAN	FRIABLE	
28-72	C1	10YR4/4				M-C SAND			GRAN	FRIABLE	
72-90	C2	2.5Y6/4	80"	7.5YR5/8 2.5Y6/2	>5	SILTY CL LOAM			BLOCKY	FRIABLE-FIRM	
90-120	C3	10YR5/6				F SANDY LOAM			GRAN	FRIABLE	

Additional Notes:

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-3 | 5/11/22 (Date) | 9:00 (Time) | SUNNY 55 F (Weather)

1. Location

Ground Elevation at Surface of Hole: _____ Location (identify on plan): SEE PLAN

2. Land Use: FIELD (e.g., woodland, agricultural field, vacant lot, etc.) | STONE WALLS (Surface Stones) | LEVEL (Slope (%))

Vegetation | Landform | Position on Landscape (attach sheet)

3. Distances from:

Open Water Body	N/A feet	Drainage Way	N/A feet	Possible Wet Area	N/A feet
Property Line	45 feet	Drinking Water Well	N/A feet	Other	N/A feet

4. Parent Material: GLACIAL OUTWASH Unsuitable Materials Present: ☐ Yes ☒ No

If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Estimated Depth to High Groundwater: 72 inches _____ elevation

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-3

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-10	A	10YR3/3				F SANDY LOAM			GRAN	FRIABLE	
10-30	Bw	10YR5/8				F SANDY LOAM			GRAN	FRIABLE	
30-66	C1	10YR4/4				M-C SAND			GRAN	FRIABLE	
66-82	C2	2.5Y6/4	72"	7.5YR5/8 2.5Y6/2	>5	SILTY CL LOAM			BLOCKY	FRIABLE-FIRM	
82-120	C3	10YR5/6				F SANDY LOAM			GRAN	FRIABLE	

Additional Notes:

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-4 | 5/11/22 (Date) | 9:00 (Time) | SUNNY 55 F (Weather)

1. Location

Ground Elevation at Surface of Hole: _____ Location (identify on plan): SEE PLAN

2. Land Use: FIELD (e.g., woodland, agricultural field, vacant lot, etc.) | STONE WALLS (Surface Stones) | LEVEL (Slope (%))

Vegetation | Landform | Position on Landscape (attach sheet)

3. Distances from:

Open Water Body	N/A feet	Drainage Way	N/A feet	Possible Wet Area	N/A feet
Property Line	70 feet	Drinking Water Well	N/A feet	Other	N/A feet

4. Parent Material: GLACIAL OUTWASH Unsuitable Materials Present: ☐ Yes ☒ No

If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☒ Yes ☐ No If yes: 112" Depth Weeping from Pit | _____ Depth Standing Water in Hole

Estimated Depth to High Groundwater: 96" inches | _____ elevation

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-4

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-10	A	10YR3/3				F SANDY LOAM			GRAN	FRIABLE	
10-13	Bw	10YR5/8				F SANDY LOAM			GRAN	FRIABLE	
13-96	C1	10YR4/4				M-C SAND			GRAN	FRIABLE	
96-108	C2	2.5Y6/4	96"	7.5YR5/8 2.5Y6/2	>5	SILTY CL LOAM			BLOCKY	FRIABLE-FIRM	
108-120	C3	10YR5/6				F SANDY LOAM			GRAN	FRIABLE	

Additional Notes:

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-5 | 5/11/22 (Date) | 11:00 (Time) | SUNNY 55 F (Weather)

1. Location

Ground Elevation at Surface of Hole: _____ Location (identify on plan): SEE PLAN

2. Land Use: FIELD (e.g., woodland, agricultural field, vacant lot, etc.) | STONE WALLS (Surface Stones) | LEVEL (Slope (%))

Vegetation | Landform | Position on Landscape (attach sheet)

3. Distances from:

Open Water Body	N/A feet	Drainage Way	N/A feet	Possible Wet Area	N/A feet
Property Line	120 feet	Drinking Water Well	N/A feet	Other	N/A feet

4. Parent Material: GLACIAL OUTWASH Unsuitable Materials Present: ☐ Yes ☒ No

If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☒ Yes ☐ No If yes: 100" (Depth Weeping from Pit) _____ (Depth Standing Water in Hole)

Estimated Depth to High Groundwater: 66" (inches) _____ (elevation)

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-5

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-14	A	10YR3/3				F SANDY LOAM			GRAN	FRIABLE	
14-24	Bw	10YR5/8				F SANDY LOAM			GRAN	FRIABLE	
24-51	C1	10YR5/3				F SANDY LOAM			GRAN	FRIABLE	
51-112	C2	10YR4/4	66"	7.5YR5/8 2.5Y6/2	>5	M-C SAND			GRAN	FRIABLE	
112-120	C3	2.5Y6/4				SILTY CL LOAM			BLOCKY	FRIABLE FIRM	

Additional Notes:

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-6 | 5/11/22 (Date) | 11:00 (Time) | SUNNY 55 F (Weather)

1. Location

Ground Elevation at Surface of Hole: _____ Location (identify on plan): SEE PLAN

2. Land Use: FIELD (e.g., woodland, agricultural field, vacant lot, etc.) | STONE WALLS (Surface Stones) | LEVEL (Slope (%))

Vegetation | Landform | Position on Landscape (attach sheet)

3. Distances from:

Open Water Body	N/A feet	Drainage Way	N/A feet	Possible Wet Area	N/A feet
Property Line	115 feet	Drinking Water Well	N/A feet	Other	N/A feet

4. Parent Material: GLACIAL OUTWASH — Unsuitable Materials Present: ☐ Yes ☒ No

If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☒ Yes ☐ No — If yes: 112" (Depth Weeping from Pit) _____ (Depth Standing Water in Hole)

Estimated Depth to High Groundwater: 72" inches _____ elevation

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-6

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-10	A	10YR3/3				F SANDY LOAM			GRAN	FRIABLE	
10-32	Bw	10YR5/8				F SANDY LOAM			GRAN	FRIABLE	
32-72	C1	10YR4/4				M-C SAND			GRAN	FRIABLE	
72-96	C2	2.5Y6/4	72"	7.5YR5/8 2.5Y6/2	>5	SILTY CL LOAM			BLOCKY	FRIALBE FIRM	
96-120	C3	10YR5/6				F SANDY LOAM			GRAN	FRIABLE	

Additional Notes:

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-7

1. Location — 5/11/22 (Date) — 11:00 (Time) — SUNNY 55 F (Weather)

Ground Elevation at Surface of Hole: ____ Location (identify on plan): SEE PLAN

2. Land Use: FIELD (e.g., woodland, agricultural field, vacant lot, etc.) — STONE WALLS (Surface Stones) — LEVEL (Slope (%))

Vegetation — Landform — Position on Landscape (attach sheet)

3. Distances from:

Open Water Body	N/A feet	Drainage Way	N/A feet	Possible Wet Area	N/A feet
Property Line	130 feet	Drinking Water Well	N/A feet	Other	N/A feet

4. Parent Material: GLACIAL OUTWASH — Unsuitable Materials Present: ☐ Yes ☒ No

If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No — If yes: Depth Weeping from Pit — Depth Standing Water in Hole

Estimated Depth to High Groundwater: 54" inches — ____ elevation

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-7

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-10	A	10YR3/3				F SANDY LOAM			GRAN	FRIABLE	
10-45	C1	10YR4/4				M-C SAND			GRAN	FRIABLE	
45-84	C2	10YR5/6	54"	7.5YR5/8 2.5Y6/2	> 5	F SANDY LOAM			GRAN	FRIABLE	
84-120	C3	2.5Y6/4				SILTY CL LOAM			BLOCKY	FRIALBE FIRM	

Additional Notes:

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-8 | 5/11/22 (Date) | 11:00 (Time) | SUNNY 55 F (Weather)

1. Location

Ground Elevation at Surface of Hole: _____ Location (identify on plan): SEE PLAN

2. Land Use: FIELD (e.g., woodland, agricultural field, vacant lot, etc.) | STONE WALLS (Surface Stones) | LEVEL (Slope (%))

Vegetation | Landform | Position on Landscape (attach sheet)

3. Distances from:

Open Water Body	N/A feet	Drainage Way	N/A feet	Possible Wet Area	N/A feet
Property Line	80 feet	Drinking Water Well	N/A feet	Other	N/A feet

4. Parent Material: GLACIAL OUTWASH — Unsuitable Materials Present: ☐ Yes ☒ No

If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No — If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Estimated Depth to High Groundwater: 72" inches _____ elevation

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-8

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-10	A	10YR3/3				F SANDY LOAM			GRAN	FRIABLE	
10-20	Bw	10YR5/8				F SANDY LOAM			GRAN	FRIABLE	
20-72	C1	10YR4/4				M-C SAND			GRAN	FRIABLE	
72-84	C2	2.5Y6/4	72"	7.5YR5/8 2.5Y6/2	> 5	SILTY CL LOAM			BLOCKY	FRIALBE FIRM	
84-120	C3	10YR4/6				LOAMY F SAND			GRAN	FRIABLE	

Additional Notes:

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-9 | 5/11/22 (Date) | 11:00 (Time) | SUNNY 55 F (Weather)

1. Location

Ground Elevation at Surface of Hole: _____ Location (identify on plan): SEE PLAN

2. Land Use: FIELD (e.g., woodland, agricultural field, vacant lot, etc.) | STONE WALLS (Surface Stones) | LEVEL (Slope (%))

Vegetation | Landform | Position on Landscape (attach sheet)

3. Distances from:

Open Water Body	N/A feet	Drainage Way	N/A feet	Possible Wet Area	N/A feet
Property Line	55 feet	Drinking Water Well	N/A feet	Other	N/A feet

4. Parent Material: GLACIAL OUTWASH — Unsuitable Materials Present: ☐ Yes ☒ No

If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock

5. *Groundwater Observed:* ☐ Yes ☒ No — If yes: _____ Depth Weeping from Pit | _____ Depth Standing Water in Hole

Estimated Depth to High Groundwater: 66" inches _____ elevation

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (Continued)

Deep Observation Hole Number: TP-9

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-9	A	10YR3/3				F SANDY LOAM			GRAN	FRIABLE	
9-15	Bw	10YR5/8				F SANDY LOAM			GRAN	FRIABLE	
15-64	C1	10YR4/4				M-C SAND			GRAN	FRIABLE	
64-94	C2	2.5Y6/4	66"	7.5YR5/8 2.5Y6/2	> 5	SILTY CL LOAM			BLOCKY	FRIALBE FIRM	
94-120	C3	10YR4/6				LOAMY F SAND			GRAN	FRIABLE	

Additional Notes:

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

D. Determination of High Groundwater Elevation

1. Method Used:

	A.	B.
☐ Depth observed standing water in observation hole	inches	inches
☒ Depth weeping from side of observation hole	A. 112" (TP-1) inches	B. 91" (TP-2) inches
☒ Depth to soil redoximorphic features (mottles)	A. 72" (TP-1) inches	B. 80" (TP-2) inches
☐ Groundwater adjustment (USGS methodology)	A. inches	B. inches

2.

Index Well Number	Reading Date	Index Well Level
Adjustment Factor	Adjusted Groundwater Level	

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system?

☒ Yes ☐ No

b. If yes, at what depth was it observed? Upper boundary: 9" (TP-1) 9" (TP-3) Lower boundary: 72" (TP-1) 72" (TP-3)

D. Determination of High Groundwater Elevation

1. Method Used:

☐	Depth observed standing water in observation hole	A. inches	B. inches
☒	Depth weeping from side of observation hole	A. inches	B. 112" (TP-4) inches
☒	Depth to soil redoximorphic features (mottles)	A. 72" (TP-3) inches	B. 96" (TP-4) inches
☐	Groundwater adjustment (USGS methodology)	A. inches	B. inches

2. _____ Index Well Number _____ Reading Date _____ Index Well Level

_____ Adjustment Factor _____ Adjusted Groundwater Level

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

   a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system?

   ☒ Yes ☐ No

   b. *If yes, at what depth was it observed?* Upper boundary: 9" (TP-1) 9" (TP-3) Lower boundary: 72" (TP-1) 72" (TP-3)

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

D. Determination of High Groundwater Elevation

1. Method Used:

☐	Depth observed standing water in observation hole	A. _____ inches	B. _____ inches
☒	Depth weeping from side of observation hole	A. 100" (TP-5) inches	B. 112" (TP-6) inches
☒	Depth to soil redoximorphic features (mottles)	A. 66" (TP-5) inches	B. 72" (TP-6) inches
☐	Groundwater adjustment (USGS methodology)	A. _____ inches	B. _____ inches

2.

Index Well Number	Reading Date	Index Well Level
Adjustment Factor	Adjusted Groundwater Level	

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

   a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system?

   ☒ Yes ☐ No

   b. If yes, at what depth was it observed? Upper boundary: 14" (TP-5) 10" (TP-6) Lower boundary: 112" (TP-5) 72" (TP-6)

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

D. Determination of High Groundwater Elevation

1. Method Used:

☐ Depth observed standing water in observation hole	A. _____ inches	B. _____ inches
☒ Depth weeping from side of observation hole	A. _____ inches	B. _____ inches
☒ Depth to soil redoximorphic features (mottles)	A. 54" (TP-7) inches	B. 72" (TP-8) inches
☐ Groundwater adjustment (USGS methodology)	A. _____ inches	B. _____ inches

2.

Index Well Number	Reading Date	Index Well Level
Adjustment Factor	Adjusted Groundwater Level	

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

   a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system?

   ☒ Yes ☐ No

   b. If yes, at what depth was it observed? Upper boundary: 14" (TP-5) 10" (TP-6) Lower boundary: 112" (TP-5) 72" (TP-6)

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

D. Determination of High Groundwater Elevation

1. Method Used:

☐	Depth observed standing water in observation hole	A. _____ inches	B. _____ inches
☒	Depth weeping from side of observation hole	A. _____ inches	B. _____ inches
☒	Depth to soil redoximorphic features (mottles)	A. 66" (TP-9) inches	B. _____ inches
☐	Groundwater adjustment (USGS methodology)	A. _____ inches	B. _____ inches

2. _____ Index Well Number _____ Reading Date _____ Index Well Level

_____ Adjustment Factor _____ Adjusted Groundwater Level

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

   a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system?

   ☒ Yes ☐ No

   b. If yes, at what depth was it observed? Upper boundary: 14" (TP-5) 10" (TP-6) Lower boundary: 112" (TP-5) 72" (TP-6)

Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of my soil evaluation, as indicated in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Signature of Soil Evaluator

5/20/22
Date

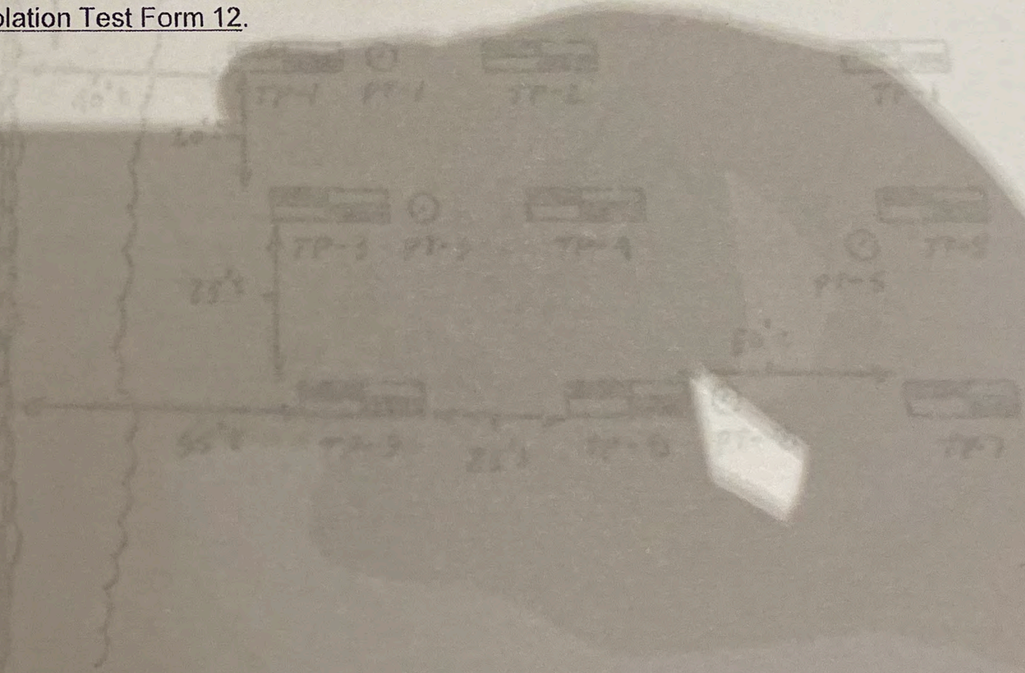
DANIEL JOHNSON / SE1137
Typed or Printed Name of Soil Evaluator / License #

11/95
Date of Soil Evaluator Exam

ERIN KIRCHNER
Name of Board of Health Witness

ESSEX
Board of Health

Note: In accordance with 310 CMR 15.018(2) this form must be submitted to the approving authority within 60 days of the date of field testing, and to the designer and the property owner with Percolation Test Form 12.

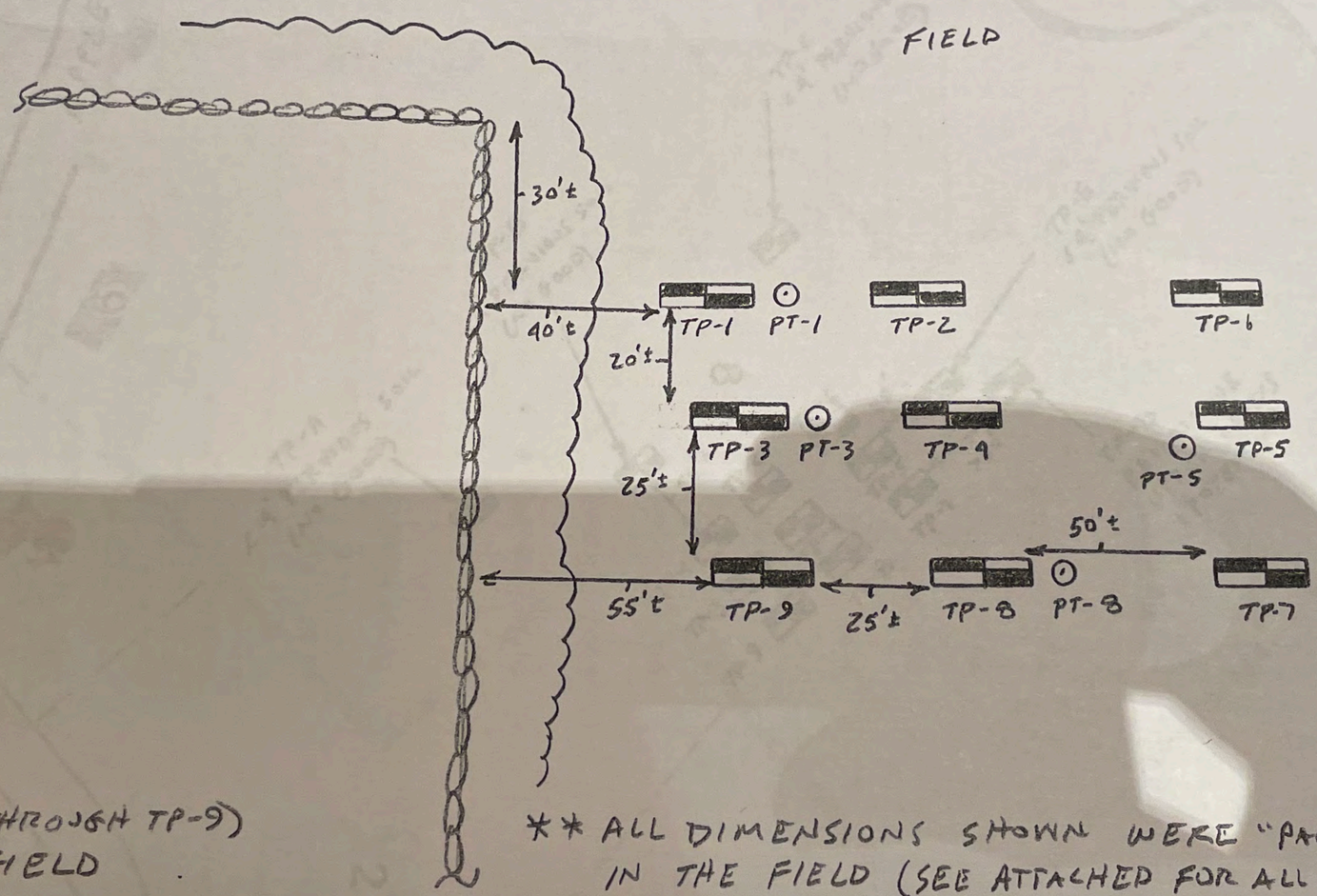


Commonwealth of Massachusetts
City/Town of ESSEX

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

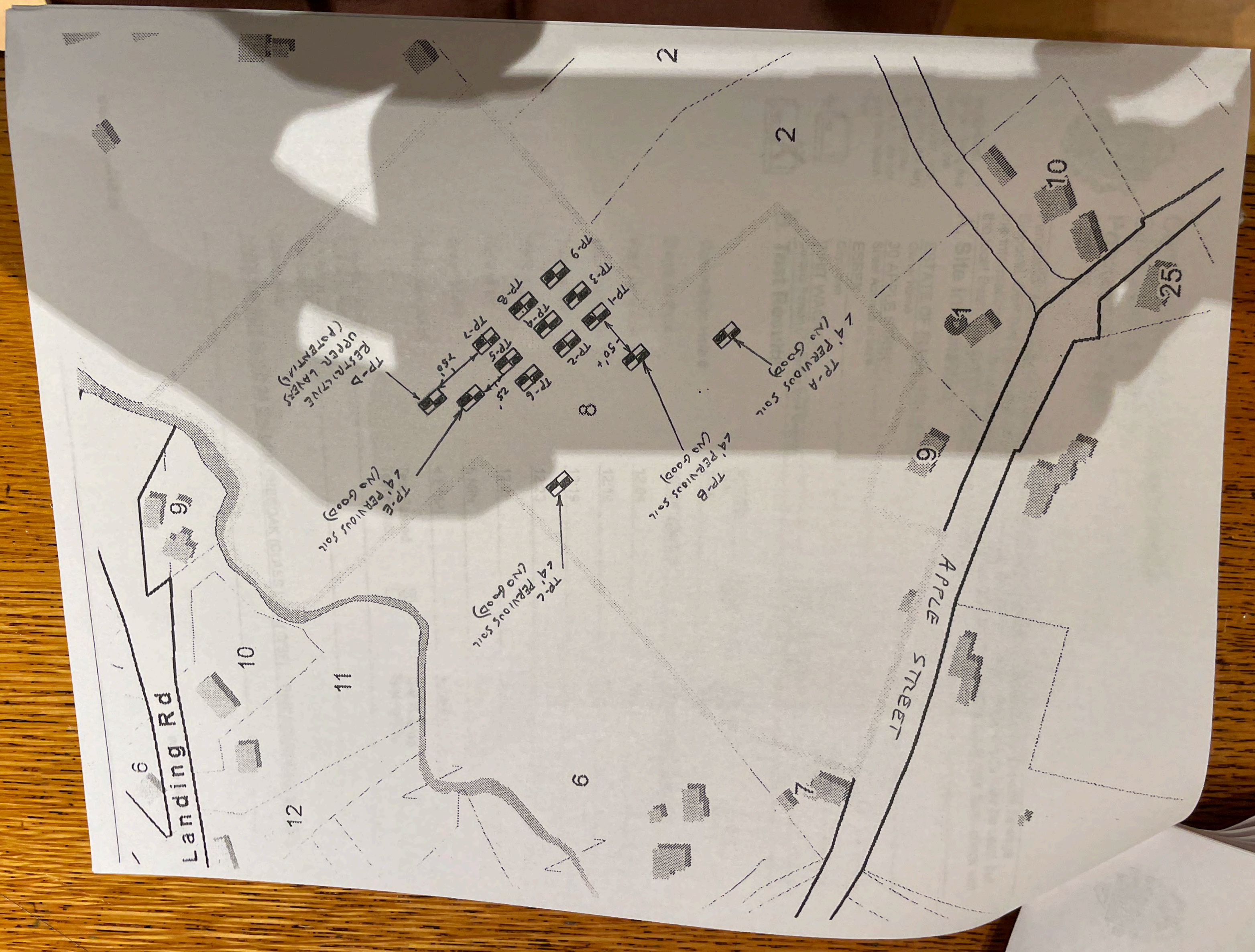
Field Diagrams

Use this sheet for field diagrams:



* TEST PITS (TP-1 THROUGH TP-9) STAKED IN THE FIELD

** ALL DIMENSIONS SHOWN WERE "PACED" BY FOOT IN THE FIELD (SEE ATTACHED FOR ALL TEST PITS EXCAVATED)


Landing Rd
APPLE STREET
TP-A
4' PERVIOUS SOIL
(No Good)
TP-B
4' PERVIOUS SOIL
(No Good)
TP-C
4' PERVIOUS SOIL
(No Good)
TP-D
RESTRICTIVE
UPPER LAYERS
(POTENTIAL)
TP-E
4' PERVIOUS SOIL
(No Good)
TP-1
TP-2
TP-3
TP-4
TP-5
TP-6
TP-7
TP-8
TP-9
50'+
25'
35'
2
2
8
10
25
9
6
10
11
12
6
7
9
6

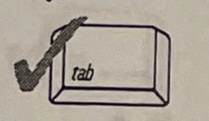
Commonwealth of Massachusetts
City/Town of ESSEX

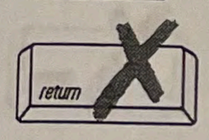
Percolation Test

Form 12

Percolation test results must be submitted with the Soil Suitability Assessment for On-site Sewage Disposal. DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with the local Board of Health to determine the form they use.

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.





A. Site Information

ESTATE OF ELIZABETH FRYE
Owner Name

30 APPLE STREET
Street Address or Lot #

ESSEX | MA | 01929
City/Town | State | Zip Code

WHIT WAGNER | (917) 880-0323
Contact Person (if different from Owner) | Telephone Number

B. Test Results

	5/11/22 (Date)	11:00 (Time)	5/11/22 (Date)	11:00 (Time)
Observation Hole #	TP-5		TP-8	
Depth of Perc	16"-34" (Bw/C1)		10"-28" (Bw HORIZON)	
Start Pre-Soak	12:04		12:39	
End Pre-Soak	12:19		*	
Time at 12”	12:19			
Time at 9”	12:23			
Time at 6”	12:28			
Time (9”-6”)	5 MIN.			
Rate (Min./Inch)	< 2 MPI		< 2 MPI *	
Test Passed:	☒		Test Passed:	☒
Test Failed:	☐		Test Failed:	☐

DANIEL JOHNSON
Test Performed By:

ERIN KIRCHNER
Witnessed By:

Comments:

* WOULD NOT HOLD 24 GALLON PRESOAK (CLASS I, 0.60 G/SF). Bw/C1 CLASS II (0.60 G/SF)

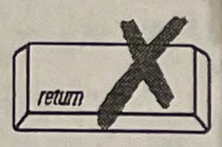
t5form12.doc• 06/03

Commonwealth of Massachusetts
City/Town of ESSEX
Percolation Test
Form 12

Percolation test results must be submitted with the Soil Suitability Assessment for On-site Sewage Disposal. DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with the local Board of Health to determine the form they use.

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.





A. Site Information

ESTATE OF ELIZABETH FRYE
Owner Name

30 APPLE STREET
Street Address or Lot #

ESSEX | MA | 01929
City/Town | State | Zip Code

WHIT WAGNER | (917)680-0323
Contact Person (if different from Owner) | Telephone Number

B. Test Results

	5/11/22 (Date)	9:00 (Time)	5/11/22 (Date)	9:00 (Time)
Observation Hole #	TP-1		TP-3	
Depth of Perc	26"-44" (C1 LAYER)		10"-28" (Bw HORIZON)	
Start Pre-Soak	10:06		9:43	
End Pre-Soak	10:12		9:58	
Time at 12”	*		9:58	
Time at 9”			10:00	
Time at 6”			10:03	
Time (9”-6”)			3 MIN.	
Rate (Min./Inch)	< 2 MPI *		< 2 MPI	
	Test Passed: ☒ Test Failed: ☐		Test Passed: ☒ Test Failed: ☐	

DANIEL JOHNSON
Test Performed By:

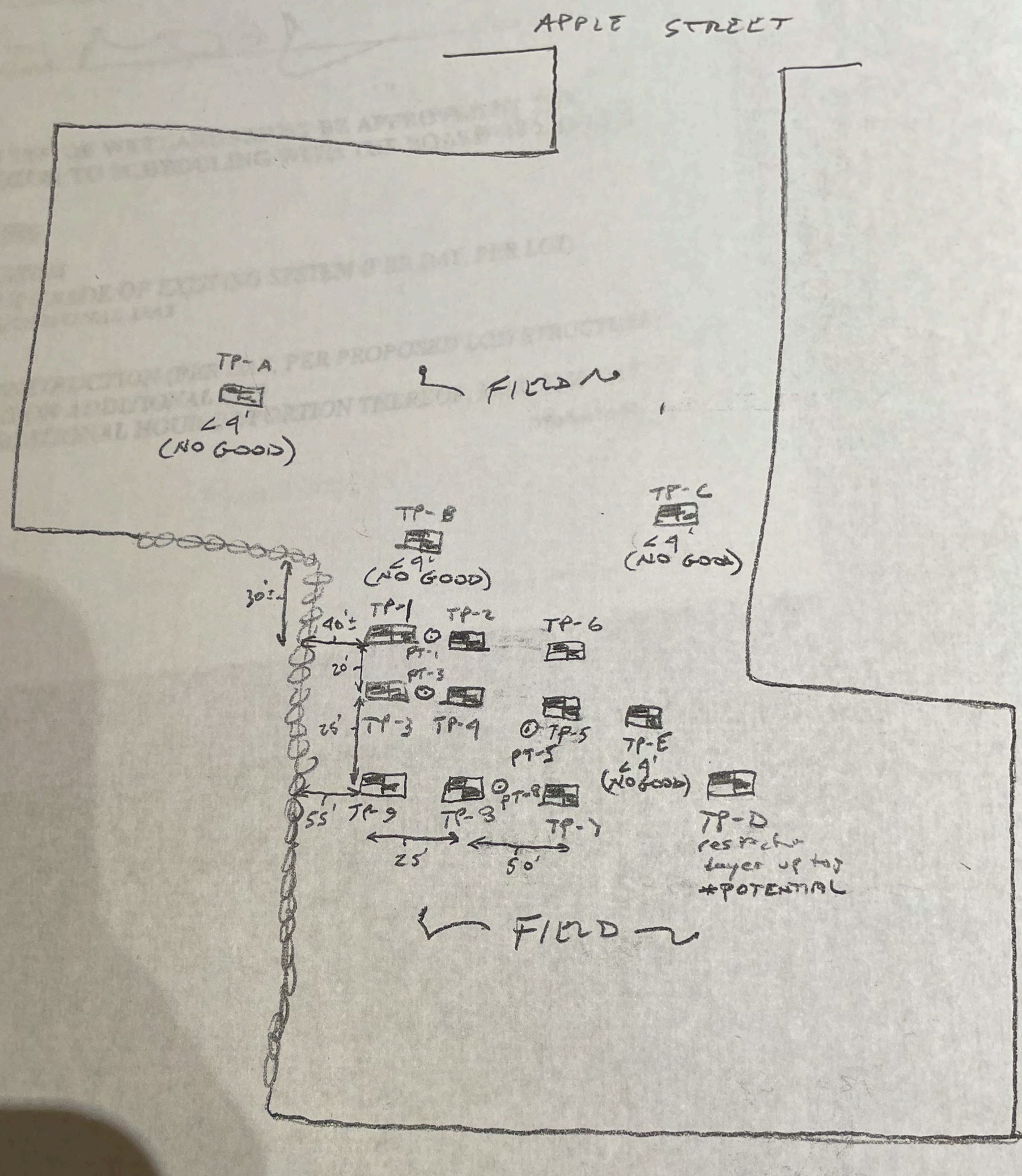
ERIN KIRCHNER
Witnessed By:

Comments:

* WOULD NOT HOLD 24 GALLON PRESOAK (CLASS I, 0.74 G/SF). Bw CLASS II (0.60 G/SF)

R: E
R'S AI
R'S P
NEEF
NEE
AT
:
J
F

R OF ESTATE)



RECEIVED
APR 28 2022
TOWN ESSEX
BOARD OF HEALTH

Date: 4/26/22

Paid: 500 –

Check #: 4797

APPLICATION FOR SOIL TESTING

DATE: * 5/11/22 TIME: 9am

RESCHEDULED DATE: _____ TIME: _____

PROPERTY ADDRESS: 30 APPLE STREET MAP: 142 LOT: 8

OWNER: ELIZABETH E. FRYE TRUST C/O WHIT WAGNER

OWNER'S ADDRESS: WHIT WAGNER, (EXECUTOR OF ESTATE)
43 MT. VERNON ST., BOSTON, MA 02108

OWNER'S PHONE: _____ CELL: WHIT WAGNER (917) 880-0323

ENGINEER/EVALUATOR: DANIEL JOHNSON

ENGINEER/EVALUATOR PHONE: (978) 768-7600 CELL: (508) 280-4007

SIGNATURE OF OWNER/AGENT: [signature]

DATE: 4/26/22

***ALL SOIL TESING WITHIN 100' OF WETLANDS MUST BE APPROVED BY THE CONSERVATION COMMISION PRIOR TO SCHEDULING WITH THE BOARD OF HEALTH.**

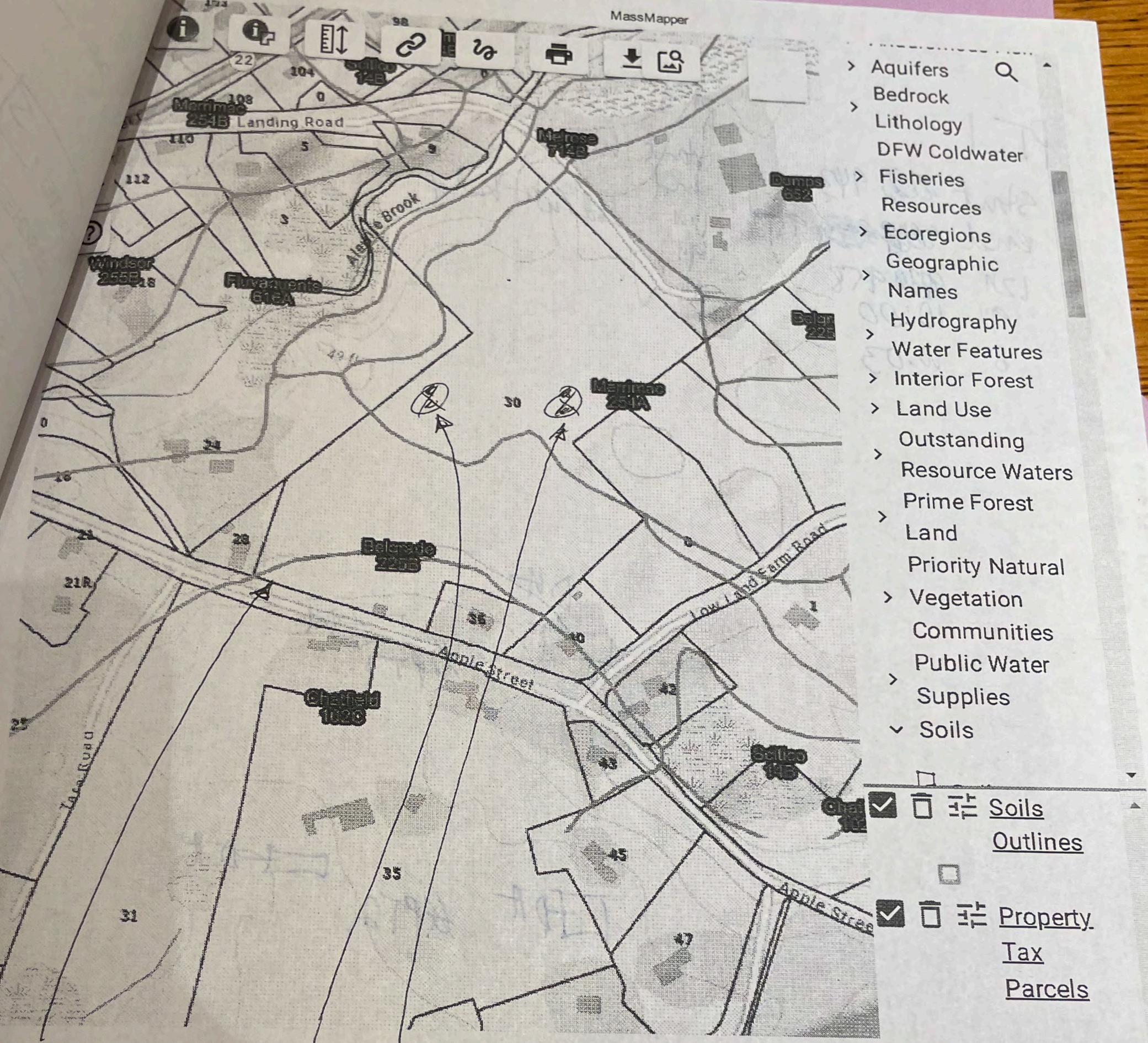
DUE AT THE TIME OF APPLICATION:

REPAIR/UPGRADE OF EXISTING SYSTEM
$150 FEE REQUIRED FOR REPAIR/UPGRADE OF EXISTING SYSTEM (PER DAY, PER LOT)
$100 FEE REQUIRED FOR EACH ADDITIONAL DAY

NEW CONSTRUCTION
$250 FEE REQUIRED FOR NEW CONSTRUCTION (PER DAY, PER PROPOSED LOT/ STRUCTURE)
$150 FEE REQUIRED FOR 3 HOURS ON ADDITIONAL DAY
$50 FEE REQUIRED FOR EACH ADDITIONAL HOUR OR PORTION THEREOF, MAX. $250/DAY

Effective 1/1/09

30 APPLE STREET



* GATE TO ENTER FIELD

SOIL TEST ANCA (2 LOTS)

N

1:4,514

50 m
200 ft

42.62648, -70.78013 LAT LON

MassMapper

Leaflet | MassGIS

https://maps.massgis.digital.mass.gov/MassMapper/MassMapper.html

Facility Information						Responsible Organization/Reporting Contact	
ESSEX		NE	172508	MSW	CSU-LF		
ESSEX LANDFILL					14.00		
30 LANDING RD					tpd unknwn	Municipal TOWN OF ESSEX	
ESSEX, MA 01929						MARTIN STREET, ESSEX, MA 01929	
Inactive	0	1985	0	Incomplete	Not Lined	BRUCE JULIAN, DPW DIRECTOR	(978)768-6262

CMA ENGINEERS, INC.
CIVIL | ENVIRONMENTAL | STRUCTURAL

35 Bow Street
Portsmouth, New Hampshire
03801-3819

P: 603|431|6196
www.cmaengineers.com

August 18, 2025

Mr. Mark Fairbrother (via email)
MassDEP Northeast Regional Office
205B Lowell Street
Wilmington, MA 01887

RE: 2025 Q3 Landfill Gas Monitoring Summary
Essex Landfill, Essex, MA
SMS #: 39261
CMA #1372

Dear Mr. Fairbrother:

On behalf of the Town of Essex (Essex or Town) and in conformance with the requirements of 310 CMR 19.000, this report summarizes the 2025 third quarter landfill gas testing round at the Essex Landfill, located off Landing Road in Essex. Five landfill gas wells and the passive gas vent in the Department of Public Works (DPW) garage were screened for landfill gas by Eurofins Environment Testing Eastern Analytical (Eurofins) of Concord, New Hampshire on August 5, 2025. Landfill gas was not detected at any monitored location this round.

The gas testing program at the landfill is currently performed on a quarterly basis and consists of screening the gas for % methane (and % LEL [lower explosive limit] of methane), % oxygen, and % carbon dioxide. The laboratory report from the testing is provided in Appendix A and a summary table of the data is attached as Appendix B. A site plan depicting the location of the landfill gas monitoring locations relative to the landfill and transfer station/DPW area is provided as Appendix C.

BACKGROUND

The Town solid waste site consists of a closed landfill, operating transfer station, and DPW facilities including an 80' x 80' garage, 40' x 50' salt shed, and DPW laydown/storage areas. The landfill does not have a formal cap and there are no passive gas vents installed in the landfill cover. Flatter areas of the landfill are vegetated with grass and steeper areas are generally wooded. The Town maintains the grass areas of the landfill and subcontracts vegetation removal in steeper areas.

The landfill is bounded by the Town Transfer Station and DPW facilities to the west, the Alewife Brook and associated wetlands to the north and east, and a residential neighborhood to the south (Lowland Farm Road). There is not currently landfill gas testing between the landfill and the neighborhood, which is approximately 200 feet to the south of the landfill.

There are no drainage benches on the landfill side slopes and stormwater sheet flows off the landfill cap to apparent wetlands to the north, east, and south and towards the transfer station to the west. There are no stormwater ponds associated with the site. Access to the site is restricted by gates and fencing to the west along Landing Road.

Landfill gas is monitored between the landfill and transfer station/DPW area by five wells identified as LFG-1 through LFG-5 and depicted on the site plan provided in Appendix C. Gas wells are approximately spaced along the boundary every 100 feet. Gas is also screened through an access port in the PVC passive gas vent pipe in the DPW garage. The pipe vents gravels beneath the slab through the roof of the structure via the PVC pipe. This test location is identified as PGV on the enclosed table and site plan.

LANDFILL GAS SUMMARY

Screening for landfill gas was performed using a Landtec GEM 5000 non-consumptive landfill gas analyzer. The instrument was calibrated on the day of use and operated in accordance with the manufacturer's specifications. At the time of the gas screening, barometric pressure was 30.3 in Hg and the temperature was 75 degrees F. Winds were around 3 mph out of the west according to the Weather Underground website (Weather Station KMAESSEX31).

The five gas wells and the passive gas vent were screened for landfill gas including % methane, % oxygen, and % carbon dioxide. Methane was not detected at any location during this round.

CONCLUSIONS AND RECOMMENDATIONS

The results of the Q3 testing round indicate no detections of methane in the monitored locations. No changes to the monitoring program for the site are currently recommended.

The top of PVC for gas wells LFG-3, 4, and 5 are being reset so that they can be locked and covered. This work is expected to be completed before the end of 2025 and has been reported to MassDEP-NERO in the 2025 Third Party Inspection report for the landfill submitted to your attention on August 11th.

Should you have any questions, please feel free to contact us.

Very truly yours,

CMA ENGINEERS, INC.

Adam J. Sandahl, P.E., BCEE
Project Manager



AJS:vpt

Enclosures:

Certification Statement
Appendices: A – Eurofins Laboratory Report, Landfill Gas Monitoring (August 5, 2025)
B – Summary of Testing Results
- Table 1: Landfill Gas

C – Site Plan

ec: Mike Galli, Town of Essex
Mandy Davis, Town of Essex
Essex Board of Health – Erin Kirchner
MassDEP Reports Upload Portal

Certification Statements, In compliance with 310 CMR 19.011

I, Adam Sandahl (engineer), attest under the pains and penalties of perjury that:

(a) I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification statement;
(b) based on my inquiry of those persons responsible for obtaining the information, the information contained in this submittal is, to the best of my knowledge, true, accurate, and complete;
(c) I am fully authorized to bind the entity required to submit these documents and to make this attestation on behalf of such entity; and
(d) I am aware that there are significant penalties, including, but not limited to, possible administrative and civil penalties for submitting false, inaccurate, or incomplete information and possible fines and imprisonment for knowingly submitting false, inaccurate, or incomplete information.

08/15/2025

Adam Sandahl, P.E.
CMA Engineers

Date

I, Michael Galli (Town), attest under the pains and penalties of perjury that:

(a) I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification statement;
(b) based on my inquiry of those persons responsible for obtaining the information, the information contained in this submittal is, to the best of my knowledge, true, accurate, and complete;
(c) I am fully authorized to bind the entity required to submit these documents and to make this attestation on behalf of such entity; and
(d) I am aware that there are significant penalties, including, but not limited to, possible administrative and civil penalties for submitting false, inaccurate, or incomplete information and possible fines and imprisonment for knowingly submitting false, inaccurate, or incomplete information.

8-18-2025

Michael Galli
Public Works Superintendent, Town of Essex

Date

Appendix A

Eurofins Laboratory Report, Landfill Gas
August 5, 2025

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Adam Sandahl
CMA Engineers Inc
35 Bow Street
Portsmouth, New Hampshire 03801-3819

Generated 8/15/2025 7:54:22 AM

JOB DESCRIPTION

Essex, MA Landfill Gas

JOB NUMBER

475-9577-1

Eurofins Concord
51 Antrim Avenue
Concord NH 03301

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

Authorization



Generated
8/15/2025 7:54:22 AM

Authorized for release by
Jeffrey Gagne, Project Manager
Jeffrey.Gagne@et.eurofinsus.com
(603)410-3880

Case Narrative

Client: CMA Engineers Inc
Project: Essex, MA Landfill Gas

Job ID: 475-9577-1

Job ID: 475-9577-1 — Eurofins Concord

Job Narrative
475-9577-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
All analyses performed in the field. The COC was received on 8/5/2025 1:55 PM.

Field Service / Mobile Lab
Analyses performed using a Landtec GEM 5000 non-consumptive landfill gas analyzer. The instrument was calibrated on the day of use and operated in accordance with manufacturer's specifications. Ambient temperature 75F and barometric pressure 30.3"Hg.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Sample Summary

Client: CMA Engineers Inc
Project/Site: Essex, MA Landfill Gas

Job ID: 475-9577-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
475-9577-1	LFG-1	Air	08/05/25 10:14	08/05/25 13:55	Massachusetts
475-9577-2	LFG-2	Air	08/05/25 10:20	08/05/25 13:55	Massachusetts
475-9577-3	LFG-3	Air	08/05/25 10:25	08/05/25 13:55	Massachusetts
475-9577-4	LFG-4	Air	08/05/25 10:36	08/05/25 13:55	Massachusetts
475-9577-5	LFG-5	Air	08/05/25 10:30	08/05/25 13:55	Massachusetts
475-9577-6	PGV	Air	08/05/25 09:56	08/05/25 13:55	Massachusetts

Client Sample Results

Client: CMA Engineers Inc
Project/Site: Essex, MA Landfill Gas

Job ID: 475-9577-1

Client Sample ID: LFG-1
Lab Sample ID: 475-9577-1
Date Collected: 08/05/25 10:14
Matrix: Air
Date Received: 08/05/25 13:55
Sample Container: No Container

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL		Unit	D	Analyzed	Dil Fac	Analyst
% LEL	< 2				%		08/05/25 10:14	1	TNC
Carbon dioxide	**1.7**				%		08/05/25 10:14	1	TNC
Oxygen	**19**				%		08/05/25 10:14	1	TNC
Methane	< 0.1				%		08/05/25 10:14	1	TNC

Client Sample ID: LFG-2
Lab Sample ID: 475-9577-2
Date Collected: 08/05/25 10:20
Matrix: Air
Date Received: 08/05/25 13:55
Sample Container: No Container

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL		Unit	D	Analyzed	Dil Fac	Analyst
% LEL	< 2				%		08/05/25 10:20	1	TNC
Carbon dioxide	**1.1**				%		08/05/25 10:20	1	TNC
Oxygen	**19**				%		08/05/25 10:20	1	TNC
Methane	< 0.1				%		08/05/25 10:20	1	TNC

Client Sample ID: LFG-3
Lab Sample ID: 475-9577-3
Date Collected: 08/05/25 10:25
Matrix: Air
Date Received: 08/05/25 13:55
Sample Container: No Container

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL		Unit	D	Analyzed	Dil Fac	Analyst
% LEL	< 2				%		08/05/25 10:25	1	TNC
Carbon dioxide	**1.0**				%		08/05/25 10:25	1	TNC
Oxygen	**20**				%		08/05/25 10:25	1	TNC
Methane	< 0.1				%		08/05/25 10:25	1	TNC

Client Sample ID: LFG-4
Lab Sample ID: 475-9577-4
Date Collected: 08/05/25 10:36
Matrix: Air
Date Received: 08/05/25 13:55
Sample Container: No Container

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL		Unit	D	Analyzed	Dil Fac	Analyst
% LEL	< 2				%		08/05/25 10:36	1	TNC
Carbon dioxide	< 0.1				%		08/05/25 10:36	1	TNC
Oxygen	**20**				%		08/05/25 10:36	1	TNC
Methane	< 0.1				%		08/05/25 10:36	1	TNC

Client Sample ID: LFG-5
Lab Sample ID: 475-9577-5
Date Collected: 08/05/25 10:30
Matrix: Air
Date Received: 08/05/25 13:55
Sample Container: No Container

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL		Unit	D	Analyzed	Dil Fac	Analyst
% LEL	< 2				%		08/05/25 10:30	1	TNC
Carbon dioxide	**2.8**				%		08/05/25 10:30	1	TNC

Client: CMA Engineers Inc
Project/Site: Essex, MA Landfill Gas

Job ID: 475-9577-1

Client Sample ID: LFG-5

Lab Sample ID: 475-9577-5

Date Collected: 08/05/25 10:30
Matrix: Air
Date Received: 08/05/25 13:55
Sample Container: No Container

Method: Field Sampling - Field Sampling (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Analyzed	Dil Fac	Analyst
Oxygen	**18**				%		08/05/25 10:30	1	TNC
Methane	< 0.1				%		08/05/25 10:30	1	TNC

Client Sample ID: PGV

Lab Sample ID: 475-9577-6

Date Collected: 08/05/25 09:56
Matrix: Air
Date Received: 08/05/25 13:55
Sample Container: No Container

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL		Unit	D	Analyzed	Dil Fac	Analyst
% LEL	< 2				%		08/05/25 09:56	1	TNC
Carbon dioxide	**2.5**				%		08/05/25 09:56	1	TNC
Oxygen	**18**				%		08/05/25 09:56	1	TNC
Methane	< 0.1				%		08/05/25 09:56	1	TNC

Accreditation/Certification and Definitions Summary

Client: CMA Engineers Inc
Job ID: 475-9577-1
Project/Site: Essex, MA Landfill Gas

Laboratory: Eurofins Concord

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Massachusetts	State	M-NH005	06-30-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Field Sampling		Air	% LEL
Field Sampling		Air	Carbon dioxide
Field Sampling		Air	Methane
Field Sampling		Air	Oxygen

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
MRL	Method Reporting Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
SDL	Sample Detection Limit
SDL	Sample Detection Limit
SDL	Sample Detection Limit
TEF	Toxicity Equivalent Factor (Dioxin)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Eurofins Environment Testing Concord
51 Antrim Avenue
Concord, NH 03301
Phone: 603-228-0525

Chain of Custody Record

eurofins | Environment Testing

475-9577 COC

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM:	Carrier Tracking No(s): N/A	COC No:
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail:	State of Origin:	Page:
Company: CMA Engineers Inc.		Accreditations Required (See note):		Job #: 9S
Address: 35 Bow Street	Due Date Requested:			Preservation Codes: -
City: Portsmouth	TAT Requested (days): N/A			
State, Zip: New Hampshire 03801-3819				
Phone: 603-431-6196	PO #: N/A			
Email:	WO #:			
Project Name: Essex, MA Landfill Gas	Project #:			
Site: Essex, MA Landfill	SSOW#:			Other: N/A

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	% LEL	% CH4	%CO2	%O2	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
LFG-1	8-5-25	10:14	G	A	N	N					0	
LFG-2	8.5.25	10:20	G	A	N	N					0	
LFG-3	8.5.25	10:25	G	A	N	N					0	
LFG-4	8.5.25	10:36	G	A	N	N					0	
LFG-5	8-5-25	10:30	G	A	N	N					0	
PGV	8-5-25	09:56	G	A	N	N					0	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northeast, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 1	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	8-5-25/17:55	FEET Concord	[signature]		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

8/15/2025

Appendix B

Summary of Testing Results

Table 1: Landfill Gas

Table 1 - Landfill Gas
Essex Landfill
Essex, MA

Sample ID	Sample Date	LEL (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	Pressure (inches Hg)
LFG-1	08/05/25	<2	**19**	<0.1	**1.7**	**30.3**
LFG-2	08/05/25	<2	**19**	<0.1	**1.1**	**30.3**
LFG-3	08/05/25	<2	**20**	<0.1	**1.0**	**30.3**
LFG-4	08/05/25	<2	**20**	<0.1	<0.1	**30.3**
LFG-5	08/05/25	<2	**18**	<0.1	**2.8**	**30.3**
PGV	08/05/25	<2	**18**	<0.1	**2.5**	**30.3**

Notes:

1. LFG 1 through 5 are landfill gas monitoring wells that are located between the landfill and transfter station/DPW area. See Figure 1

2. PGV is a passive gas vent in the DPW garage that vents the gravel beneath the concrete slab. Gas is measured through a port in the PVC pipe, which vents to the roof of the structure.

--- = not tested

< = "less than" followed by the detection limit

Bold: Parameter was detected

Gray Shading: Parameter was detected at concentrations greater than the LEL for methane

LEL = Lower Expolosive Limit for Methane (5% in air)

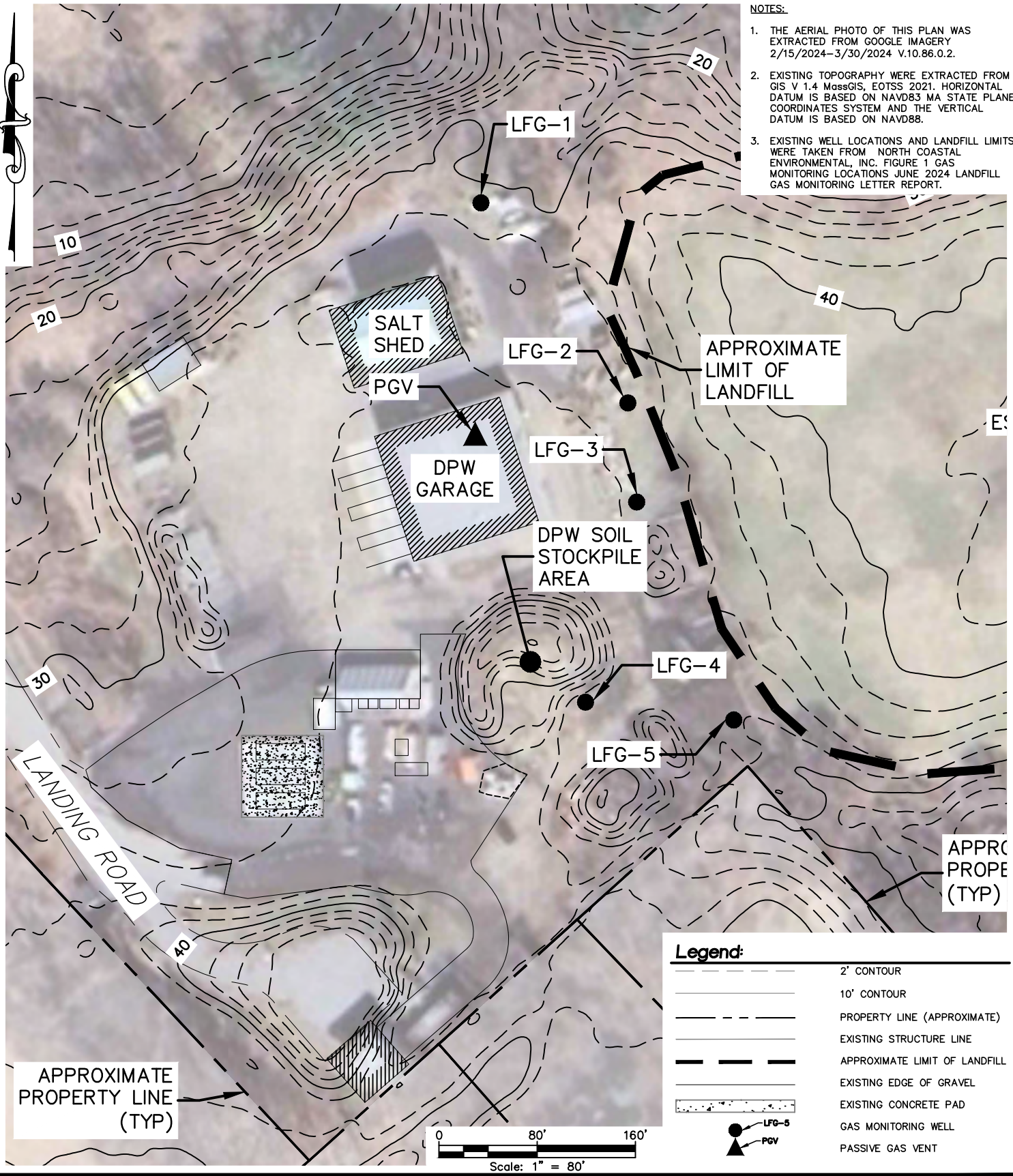
O_2 = Oxygen

CH_4 = Methane

CO_2 = Carbon Dioxide

Appendix C

Site Plan



CMA ENGINEERS
CIVIL/ENVIRONMENTAL/STRUCTURAL
Portsmouth, NH • Manchester, NH • Portland, ME
603/431-6196 • 603/627-0708 • 207/541-4223
c m a e n g i n e e r s . c o m

Essex Landfill
Town of Essex
30 Landing Road
Essex, MA 01929

Landfill Gas Report

Figure 1

CMA ENGINEERS, INC.
CIVIL | ENVIRONMENTAL | STRUCTURAL

35 Bow Street
Portsmouth, New Hampshire
03801-3819

P: 603|431|6196
www.cmaengineers.com

August 11, 2025

MassDEP Northeast Regional Office
205B Lowell Street
Wilmington, MA 01887

Re: Biennial Operation & Maintenance Third Party Inspection - 2025
Essex Landfill, Essex, MA
SMS# 39261
CMA #1372

Dear MassDEP NERO Office:

On behalf of the Town of Essex, CMA Engineers, Inc. is submitting the enclosed Operation and Maintenance Third Party Inspection Report, in conformance with the requirements of Massachusetts Solid Waste Management Regulations 310 CMR 19.018(8). The Third-Party Inspection (TPI) was performed by Adam Sandahl (TPI ID# SW48-0000065) on July 1st at 10:30 AM. The weather on this date was clear with a breeze and temperatures around 80 degrees F.

Enclosed is the Operation & Maintenance TPI inspection report which summarizes the results of the inspection. The report also includes a site plan and photographs. In general, the inspection concludes that the landfill cover system is in good condition.

A Corrective Action Plan & Schedule form is provided with this inspection to address repair work for some of the landfill gas wells. The gas wells are all able to be sampled, but three of the five wells need to be adjusted for them to be covered and locked. This work is expected to be completed in 2025.

Please feel free to contact me at (603) 627-0708 (or asandahl@cmaengineers.com) if you have any questions regarding the inspection.

Very truly yours,

CMA ENGINEERS, INC.

Adam J. Sandahl, P.E., BCEE
Project Manager

ec: Mike Galli, Town of Essex (via email)
Mandy Davis., Town of Essex (via email)
Essex Board of Health (via email)
MassDEP Upload Portal

Enc.

1372-Essex-DT-250722-TPI-LF-AJS.docx

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention / Solid Waste Management

Third-Party Inspection Report – 310 CMR 19.018(8)
Operation & Maintenance

Important: When completing this form on a computer, use only the Tab key to move your cursor – not the Return key.



Instructions

Use this form to record and report the results of a Third-Party Operation and Maintenance Inspection conducted pursuant to 310 CMR 19.018. Be sure to obtain the most recent version of this form. All applicable sections of the submitted form must be completed to be accepted by MassDEP.

Pursuant to 310 CMR 19.018(8)(a), the third-party inspector and facility owner/operator must sign this Third-Party Inspection Report form and submit the completed report to the appropriate MassDEP regional office and one copy of each completed report to the board of health of the municipality in which the facility is located.

In the event that this inspection report contains a recommendation for corrective action(s), the owner/operator shall also submit the information required by 310 CMR 19.018(8)(c)2.

Forms and instructions are available online:
http://www.mass.gov/eea/agencies/massdep/recycle/approvals/solid-waste-applications-and-forms.html#8

Note: This form does not identify all of the requirements applicable to each solid waste management facility; other requirements and/or policies may apply to the operation, maintenance and monitoring for each facility.

MassDEP Use Only

Rec'd Date:

FMF #:

RO #:

Reviewer:

Comments:

I. Facility Information

Facility Type (check one):

☐ Transfer Station/Handling Facility ☐ C&D Waste Processor or C&D Waste Transfer Station ☐ Municipal Waste Combustor

☐ Active Landfill ☒ Closed Landfill ☐ Other: _____ Specify

Facility:

Essex Landfill
Facility Name

Essex	MA	01929
City/Town	State	ZIP Code
978-768-6262	172508	39261 (SMS)
Telephone Number	Regulated Object Account Number	FMF Number

Operator:

Town of Essex
Operator Name (Doing Business As/Company Name)

978-768-6262	adavis@essexma.org
Telephone Number	Email Address

30 Martin Street
Mailing Address

Essex	MA	01929
City/Town	State	ZIP Code

Permittee:

Town of Essex
Permittee Name (Entity Identified on Facility Permit)

30 Martin Street
Mailing Address

Essex	MA	01929
City/Town	State	ZIP Code

Responsible Official for the Facility:

Michael Galli	mgalli@essexma.org
Responsible Official Name (Individual)	Responsible Official Email Address
Town of Essex	978-361-6158
Responsible Official Company Name	Responsible Official Telephone Number

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention / Solid Waste Management

Third-Party Inspection Report – 310 CMR 19.018(8)
Operation & Maintenance

II. Third-Party Inspector

Adam Sandahl, P.E.	CMA Engineers, Inc.
Third-Party Inspector Name	Company Name
SW48-0000065	06/12/2027
MassDEP Third-Party Inspector Identification Number	MassDEP Third-Party Inspector Expiration Date (MM/DD/YYYY)
(603) 627-0708	asandahl@cmaengineers.com
Telephone Number	Email Address

1 Sundial Avenue, Suite 510N
Mailing Address

Manchester	NH	03103
City/Town	State	ZIP Code

Construction and Demolition Waste (C&D Waste) Processing Facility or C&D Waste Transfer Station Only:
Identify the qualified individual that conducted the observation of incoming waste loads and collection of samples of suspect asbestos-containing materials during the inspection [pursuant to 310 CMR 19.018(6)(f)]. If the entire inspection was conducted by the third-party inspector listed above, then check the box and enter only the Asbestos Inspector Certification Number.

☐ Same as above. **Provide Asbestos Certification Number ►**

MA Dept. of Labor Standards Asbestos Inspector Certification Number

Asbestos Inspector Name	Company Name
Telephone Number	Email Address

Mailing Address

City/Town	State	ZIP Code

III. Inspection Details

A. FREQUENCY

Indicate the scheduled inspection frequency for this facility as required by 310 CMR 19.018(6)(b), or a more frequent schedule set forth in the Facility Permit/Other Approval:

☐ Bi-Monthly ☐ Quarterly ☐ Semi-Annual ☐ Annual ☒ Biennial
☐ Other (include permit/approval type and date of issuance):

B. DATE, TIME & PERSONNEL

Inspection Date (MM/DD/YYYY):	07/01/2025
Inspection Start Time:	10:30 ☒ AM ☐ PM
Facility Representatives in Attendance During Inspection:	Mike Galli, Mandy Davis, and Transfer Station Operators

C. CONDITIONS

Air Temperature: *Approximately* 80 *degrees F.*

Weather: ☒ Clear ☐ Partly Cloudy ☐ Cloudy ☒ Dry ☐ Rain ☐ Snow

Wind Speed: ☐ Calm ☒ Breeze ☐ Moderate ☐ Strong

Wind Direction (direction from which the wind is blowing):

☐ NW	☐ N	☐ NE
☐ W	Wind	☐ E
☐ SW	☐ S	☒ SE

IV. Pre-Inspection Preparation

A. FACILITY-SPECIFIC O&M REQUIREMENTS

During each third-party inspection, the third-party inspector shall examine and evaluate the facility's solid waste activities, equipment, operations, practices, procedures, and records relevant to the type of third-party inspection being conducted in order to determine the facility's compliance with all applicable requirements as set forth in 310 CMR 19.018(6)(a)1.

Therefore, pursuant to 310 CMR 19.018(6)(a)1, prior to conducting a third-party facility operation and maintenance inspection, the third-party inspector shall, without limitation, complete all of the following:

☒ Review and become familiar with the regulations set forth at 310 CMR 19.000 – *Massachusetts Solid Waste Regulations.*

☒ Identify, review and become familiar with all solid waste permits, plans, approvals, and orders (or other enforcement documents issued to the facility by the Department), and the solid waste requirements applicable to the operation and maintenance of the facility.

Relevant requirements may include, without limitation, specific practices and procedures for the operation, maintenance and monitoring of the facility, waste acceptance/storage limits, and other requirements related to the facility's solid waste activities. Without limitation, these facility-specific requirements may be contained in the Facility Permit, Authorization to Construct, Authorization to Operate, Operation and Maintenance Plan, Closure/Post-Closure Plans and Approvals, Facility Modification Approvals, Beneficial Use Determinations, Administrative Consent Orders, and other determinations, authorizations or enforcement actions issued by the Department.

I, Adam Sandahl **, have identified, reviewed and understand all of the aforementioned requirements that are applicable to this facility and the following are my observations and recommendations related to the facility-specific requirements.**

► AJS
Inspector Initials

B. SOLID WASTE PERMITS, PLANS, APPROVALS & ORDERS

List all relevant solid waste permits, plans, approvals, orders or other enforcement actions issued to the facility by the Department that contain specific practices, procedures and other requirements still in effect for the operation, maintenance and monitoring or closure/post-closure of the facility. Where applicable, provide the plan or issue date for each item. For enforcement actions, include the document number, effective date, and status of implementation by the facility.

Discussion: Former solid waste ID# SL0092.001

BWP SW 37 Post Closure Use - DPW Garage and Salt Shed Conditional Approval (File #W045592) dated July 19, 2004

V. Performance Standards

Examine and evaluate the facility's solid waste activities, equipment, operations, practices, procedures and records relevant to the type of solid waste facility.

Using the tables below, identify all areas evaluated by the inspector during the inspection by checking the box in the first column. Describe all deviations noted during the inspection in the third column. Provide recommendations for corrective action to return to compliance with the applicable performance standard in the fourth column.

Facility Type	Performance Standards
Transfer Station/Handling Facility (Including C&D Facility)	Complete Section A. If C&D Handling/ Processing Facility, then also complete Section B.
Municipal Waste Combustor	Complete Section A.
Active Landfill	Complete Sections C. and F. If active ash landfill, then also complete Section D.
Closed Landfill	Complete Sections E. and F.

A. TRANSFER STATION, HANDLING FACILITY, OR MUNICIPAL WASTE COMBUSTOR (INCLUDING C&D FACILITY)

Evaluated	Performance Standard	Deviation(s)	Comments/Observations and Recommended Corrective Action(s)
☐	19.205(1) Storm Water Controls.		
☐	19.205(2) Equipment.		
☐	19.205(3) Weighing Facilities.		
☐	19.207(1) General.	Discuss in Section VI.	Discuss in Section VI.
☐	19.207(2) Supervision of Operation.		
☐	19.207(3) Access to Facilities.		
☐	19.207(4) Security.		
☐	19.207(5) Posting of Handling Facility.		
☐	19.207(6) Unloading of Refuse.		
☐	19.207(7) Special Wastes.		
☐	19.207(8) Banned/Restricted Wastes.		
☐	19.207(9) Hazardous Waste.		
☐	19.207(10) Household Hazardous Waste and Waste Oil Collections.		
☐	19.207(11) Bulky Waste.		
☐	19.207(12) Liquid Wastes.		

Evaluated	Performance Standard	Deviation(s)	Comments/Observations and Recommended Corrective Action(s)
☐	19.207(13) Bird Hazards.		
☐	19.207(14) Dust Control.		
☐	19.207(15) Vector Control.		
☐	19.207(16) Control of Wind-blown Litter.		
☐	19.207(17) Staffing.		
☐	19.207(18) Employee Facilities.		
☐	19.207(19) Accident Prevention/Safety.		
☐	19.207(20) Fire Protection.		
☐	19.207(21) Recycling Operations.		
☐	19.207(22) Records for Operational and Plan Execution.		
☐	19.207(23) Screening and/or Fencing.		
☐	19.207(24) Open Burning.		
☐	19.207(25) Inspections.		
☐	19.207(26) End-of-Life Mercury-added Products.		

B. CONSTRUCTION AND DEMOLITION (C&D) WASTE PROCESSING FACILITY OR C&D WASTE TRANSFER STATION

Evaluated	Performance Standard	Deviation(s)	Comments/Observations and Recommended Corrective Action(s)
☐	19.206(1) Enclosed Operations.		
☐	19.206(2) Storage.		
☐	19.206(3) Contact Water.		
☐	Suspect Asbestos-Containing Material (ACM) Inspection and Management Protocol.		
☐	Sample collection of suspect ACM from incoming loads.	Discuss sample results: ► ☐ Attach analytical reports.	

C. ACTIVE LANDFILL

Evaluated	Performance Standard	Deviation(s)	Comments/Observations and Recommended Corrective Action(s)
☐	19.130(1) General.	Discuss in Section VI.	Discuss in Section VI.
☐	19.130(2) Operator Supervision.		
☐	19.130(3) Special Wastes.		
☐	19.130(4) Banned/Restricted Wastes.		
☐	19.130(5) Hazardous Waste.		
☐	19.130(6) Bulky Wastes.		
☐	19.130(7) Liquid Wastes.		
☐	19.130(8) Solid Waste Handling.		
☐	19.130(9) Bird Hazards.		
☐	19.130(10) Equipment and Shelter.		
☐	19.130(11) Staffing.		
☐	19.130(12) Employee Facilities.		
☐	19.130(13) Accident Prevention/Safety.		
☐	19.130(14) Spreading and Compacting of Solid Waste.		
☐	19.130(15) Cover Material.		
☐	19.130(16) Vector, Dust and Odor Control.		
☐	19.130(17) Litter Control.		
☐	19.130(18) Top Slope and Side Slopes.		
☐	19.130(19) Storm Water Drainage.		
☐	19.130(20) Erosion Control.		
☐	19.130(21) Boundary/Elevation Markers.		
☐	19.130(22) Access Roads.		
☐	19.130(23) Security.		
☐	19.130(24) Posting of the Landfill.		

Evaluated	Performance Standard	Deviation(s)	Comments/Observations and Recommended Corrective Action(s)
☐	19.130(25) Open Burning.		
☐	19.130(26) Fire Protection and Control.		
☐	19.130(27) Convenience and Recycling Drop-off Areas at Landfills.		
☐	19.130(28) Waste Oil Collections at Landfills.		
☐	19.130(29) Household Hazardous Waste Collections at Landfills.		
☐	19.130(30) Leachate Collection, Treatment and Disposal.		
☐	19.130(31) Phase Completion of the Landfill.		
☐	19.130(32) Disruption of Landfilled Areas.		
☐	19.130(33) Construction of Buildings.		
☐	19.130(34) Records for Operational and Plan Execution.		
☐	19.130(35) Inspections.		
☐	19.130(36) Re-circulation of Leachate.		
☐	19.130(37) End-of-Life Mercury-added Products.		

D. ASH LANDFILL

Evaluated	Performance Standard	Deviation(s)	Comments/Observations and Recommended Corrective Action(s)
☐	19.131(1) General.	Discuss in Section VI.	Discuss in Section VI.
☐	19.131(2) Fugitive Emissions.		
☐	19.131(3) Ash Moisture Content.		
☐	19.131(4) Spreading/Compacting of Ash.		
☐	19.131(5) Vehicle Washdown / Wheelwash / Other Measures.		

E. CLOSED LANDFILL

Evaluated	Performance Standard	Deviation(s)	Comments/Observations and Recommended Corrective Action(s)
☒	19.016 Post-closure Use.	N/A	The landfill does not have a final cap. The landfill surface is predominantly vegetated with grass, with trees growing in the steeper slopes.
☒	19.142(1) General.	Discuss in Section VI.	Discuss in Section VI.
☒	19.142(2) Post-closure Period.	N/A	N/A
☒	19.142(3) Post-closure Period Waiver.	N/A	N/A
☒	19.142(4) Post-closure Period Extension.	N/A	N/A
☒	19.142(5) Post-closure Requirements.	N/A	N/A
☒	19.142(6) Inspection Requirements.	N/A	Inspections of the landfill are completed on a biennial basis.
☒	19.142(7) Additional Measures.	N/A	No additional measures are being undertaken at this time.
☒	19.142(8) Termination of the Post-Closure Period.	N/A	N/A
☒	19.143(1) Applicability.	N/A	The landfill surface has a vegetative cover and is not being utilized for other purposes.
☒	19.143(2) Submission of Post-closure Use Plans.	N/A	No post closure uses are planned at this time.
☒	19.143(3) Criteria for Approval of Post-closure Use.	N/A	N/A
☒	19.143(4) Post-closure Construction.	N/A	N/A

F. ADDITIONAL LANDFILL REQUIREMENTS

Evaluated	Performance Standard	Comments/Observations and Recommended Corrective Action(s)
☒	19.132 Environmental Monitoring Requirements. Is the monitoring of surface water, ground water, landfill gas and any other media as determined by the Department, including without limitation, soil and sediment, being conducted on the schedule established in the permit or as otherwise required by the Department? ☒ YES ☐ NO Are the analytical results of the environmental monitoring submitted to the Department within 60 days after the date of sample collection or as otherwise specified by the Department? ☒ YES ☐ NO	Landfill gas screening at the landfill is performed by Eurofins Environment Testing Concord of Concord, NH under agreement with CMA Engineers on a quarterly basis. The gas monitoring program consists of 5 landfill gas wells and one vent pipe beneath the slab of the DPW building. The five wells are located between the landfill and Town transfer station/DPW garage.
☒	19.133 Maintenance of Environmental Control and Monitoring Systems. Are the facility operations conducted in a manner which protects all environmental control systems as approved in the Operation and Maintenance plan and monitoring systems as approved in the Operation and Maintenance plan or permit? ☒ YES ☐ NO Is regular maintenance of all landfill environmental control systems performed as approved in the Operation and Maintenance plan or permit? ☒ YES ☐ NO Has the Department been notified of the existence and extent of damaged or destroyed environmental control systems, monitoring devices, or surface water sampling location markers in accordance with 310 CMR 19.133(1)(c) and/or 19.133(1)(e)? ☐ N/A (if no damage to report) ☒ YES ☐ NO	Landfill gas wells were observed by CMA Engineers during the July 1, 2025 inspection. Most of the wells were observed to be unlocked. Eurofins reported the following during the August 2025 (Q3) monitoring round: LFG-1: In good condition and has an expansion plug and WB lock on the cover. No repair recommendations LFG-2: Had a master lock that DPW staff did not have a key for. The lock was cut off and replaced it with an ABUS lock. A set of keys was provided to the DPW staff to keep on site. No further repair recommended LFG-3: The PVC has heaved up and is above the standpipe, so the cover will not sit flush and the well cannot be locked. There is no expansion plug, but the standpipe cover is covering most of the well. Recommend resetting the standpipe so the well can be fully covered and locked. LFG-4: The PVC has heaved up and is above the standpipe. There is no cover on the standpipe but there is an expansion plug in the well. Recommend resetting the standpipe so the well

Evaluated	Performance Standard	Comments/Observations and Recommended Corrective Action(s)
		can be fully covered and locked. LFG 5: The PVC has heaved up and is above the standpipe, so the cover will not sit flush and the well cannot be locked. The well has duct tape on the top of it acting as a plug and the standpipe cover is covering most of the well. Recommend resetting the standpipe so the well can be fully covered and locked. Eurofins is praparing a quote to complete the repairs in 2025 which are expected to include: - Cutting PVC so a height that will fit inside the casing and allow it to close and lock. - Install expansion plugs where needed. - Install new covers and locks where needed (keys for locks are to be provided to Town DPW staff). Eurofins did not report issues sampling the gas wells during Q3. There are no groundwater monitoring wells or gas vents that are part of the monitoring program for the site.

Continue to Next Page ►

F. ADDITIONAL LANDFILL REQUIREMENTS – Continued

Evaluated	Performance Standard	Comments/Observations and Recommended Corrective Action(s)
☐	19.121(4) Landfill Gas Recovery Operation and Maintenance Requirements.	N/A - No active landfill gas recovery system in place at the landfill.
	Is condensate generation kept to a minimum and condensate recirculation, if proposed, performed in accordance with the permit? ☐ YES ☐ NO	
	Are the sampling and analysis of condensate conducted on the schedule established in the permit or as otherwise required by the Department? ☐ YES ☐ NO	
	Are the analytical results of condensate monitoring reported to the Department as established in the permit or as otherwise required by the Department? ☐ YES ☐ NO	
	Is an annual report on the operation of the landfill gas recovery facility submitted to the Department as specified in the permit? ☐ YES ☐ NO	

VI. Inspection Observations

A. FACILITY CONDITION AND OPERATIONS

Examine and evaluate the facility condition and operations as observed during the inspection, including the following:

☒ Describe any evidence of the following conditions observed at the time of the inspection:
- Unpermitted discharges to air, water, land or other natural resources of the Commonwealth; and
- Dust, odors, litter, and/or other nuisance conditions.

☒ Document and discuss all deviations from any specific requirements for the facility that are not addressed in the previous section (*Section V. – Performance Standards*), including without limitation, the requirements set forth in the facility's operation and maintenance plan, orders or other enforcement documents, and other solid waste permits, approvals, and authorizations issued to the facility by MassDEP.

☐ List the types and estimated quantities of all waste and materials stored at the facility at the time of the inspection.

☒ Provide a narrative that describes the overall status of the general condition, operation and performance of the facility as observed at the time of the inspection.

⇨Attach photographs taken during the inspection that depict the general condition and operation of the facility. At a minimum, include photographs, as applicable, of the waste unloading (tipping) area, waste storage areas, recyclable material storage and, for transfer stations, the waste reloading activity.

Discussion:

No unpermitted discharges to air, water, land, or other natural resources were observed during the inspection. Additionally, no dust, significant litter or other nuisance conditions were observed. Some minor amounts of litter were observed along the east face of the landfill and along the eastern toe of slope.

The landfill has not received final cap. The current cover of the landfill consists of grass over the plateau area and wooded surfaces on the steeper sideslopes on the south, east, and north. The Town operates Transfer Station and Public Works facilities to the west of the landfill.

There are no passive landfill gas vents in the landfill or stormwater swales on the landfill and no stormwater ponds associated with the landfill/transfer station/DPW facilities. Water quality, including groundwater and surface water is not currently monitored at the site. Five landfill gas wells between the landfill and transfer station/public works area are screened on a quarterly basis. Landfill gas is typically not detected.

The landfill is bounded by the Town transfer station and public works facilities to the west, the Alewife Brook and associated wetlands to the north and east, and a residential neighborhood to the south (Lowland Farm Road). Town public works facilities consist of an 80' x 80' public works garage, 40' x 50' salt shed, concrete waste block bunkers for storing soil and stone, and laydown areas.

Access to the site is restricted to the landfill by gates/fencing associated with the Transfer Station/DPW to the west and apparent wetland areas to the north, east, and south.

Overall, the surface of the landfill is in good condition with established vegetation and no observations of erosion. The grassed areas of the landfill appear to have been recently mowed. We understand that the Town subcontracts mowing of the steeper slopes, which is expected to be performed later this year.

B. RECORD REVIEW

Examine and evaluate the facility's record-keeping. Without limitation, document the status of the facility's compliance with, and any deviations from, the record-keeping required by 310 MCR 19.000; the facility's operation and maintenance plan; orders or other

enforcement documents issued to the facility; and other solid waste permits, approvals, determinations and authorizations issued to the facility by the Department, including the following:

☐ Discuss the evaluation of the Facility's "daily log" such as, daily tonnage records.

☐ List and discuss any special incidents that have occurred since the previous inspection such as exceedances of the facility's permitted waste acceptance limits, nature and outcome of complaints reported to the facility operator (including the identity of the complainant, if known), fires, emergencies, or other disruptions to the routine operation of the facility.

Discussion:

VII. Summary and Recommendations

Pursuant to 310 CMR 19.018(6)(a)4., where a third-party inspector observes that the operation or maintenance of the facility deviates from the aforementioned applicable requirements, he or she shall document all such deviations and recommend corrective actions for the facility to take to return to compliance.

A. INSPECTION RESULTS

Based on the examinations and evaluations conducted in Sections V. and VI., please summarize the inspection results by checking one of the following determinations:

☐ **No deviations from the applicable performance standards or additional requirements listed at 310 CMR 19.018(6) were identified during this inspection.**
If no deviations were identified during the inspection, check this box and proceed to Section VII.B.

☒ **Deviations from the applicable performance standards or additional requirements listed at 310 CMR 19.018(6) were identified during this inspection and are discussed further in this report.**
If deviations were identified during the inspection, check this box and ensure that each deviation and the recommended corrective actions are discussed in the applicable section(s) below.

B. STATUS OF PREVIOUS RECOMMENDATIONS FOR CORRECTIVE ACTION

If a previous inspection report identified deviations with recommendations for corrective action, please describe the action(s) taken since the last inspection to return the facility to compliance with the applicable requirements.

Discussion:

C. RECOMMENDATIONS FOR CORRECTIVE ACTION

Based on the results of this inspection, please list all deviations noted during the inspection and provide recommendations for corrective action to return to compliance with the applicable requirement.

Recommendations: Complete repairs to gas monitoring wells in 2025 as described in Section F of this inspection report.

D. ADDITIONAL COMMENTS

Comments:

VIII. Additional Information Checklist

Attach the following additional information, as applicable, to complete the inspection report.*

☒ Attach photographs taken during the inspection that depict the general condition and operation of the facility, as required in Section VI.A.

☐ For C&D Waste facilities only, attach the analytical results, as required in Section V.B.

**Note: Pursuant to 310 CMR 19.018(8), MassDEP may request additional information.*

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention / Solid Waste Management

Third-Party Inspection Report – 310 CMR 19.018(8)
Operation & Maintenance

Continue to Certification Statement on Next Page ►

IX. Certification – THIRD-PARTY INSPECTOR

"I attest under the pains and penalty of perjury that:

1. I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification statement;
2. Based on my inquiry of those persons responsible for obtaining the information, the information contained in this submittal is, to the best of my knowledge, true, accurate and complete;
3. I have been able to conduct the third-party inspection and prepare the third-party inspection report without being influenced by the facility owner or operator and, (if I am a municipal employee) without being influenced by my municipal employer, by any coworker or by any elected or appointed official of the municipality; and
4. I am aware that there are significant penalties, including, but not limited to, possible administrative and civil penalties for submitting false, inaccurate, or incomplete information and possible fines and imprisonment for knowingly submitting false, inaccurate, or incomplete information."

Signature of Third-Party Inspector

Adam J. Sandahl, P.E.
Print Full Name

CMA Engineers, Inc.
Company Name

07/22/2025
Date (MM/DD/YYYY)

X. Certification – FACILITY OWNER/OPERATOR

Does the facility maintain a Financial Assurance Mechanism (FAM) pursuant to 310 CMR 19.051? ☐ YES ☒ NO

If yes:
- Enter the amount of the current FAM: $
- Enter the date of the last revision of the FAM amount, pursuant to 310 CMR 19.051(6):

As a reminder, pursuant to 310 CMR 19.051(6), the estimate of the cost of closure and post-closure maintenance must be revised every year, and every second year shall be submitted to the Department.

"I certify under the penalty of law:

1. That I have personally examined and am familiar with the information submitted in this third-party inspection report, including but not limited to the statements above concerning the financial assurance mechanism in place in accordance with any facility permit and 310 CMR 19.051, and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties both civil and criminal for submitting false information including possible fines and imprisonment.
2. That, in the event that this inspection report contains a recommendation for corrective action(s), I have completed and attached to this report a Corrective Action Plan and Schedule*, pursuant to 310 CMR 19.018(8)(c)2."

**Note: The owner or operator may elect to correct deviations identified in the Third-Party Inspection Report in a manner that is different than that recommended by the Third-Party Inspector, so long as the facility is brought back into compliance with applicable requirements.*

Signature of Responsible Official

Michael Galli
Print Full Name

DPW Superintendent
Title

08/11/2025
Date (MM/DD/YYYY)

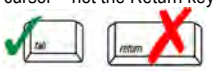
► Pursuant to 310 CMR 19.018(8)(c), a copy of each third-party inspection report shall be maintained at the facility in accordance with the requirements of 310 CMR 19.000. The owner and operator shall make third-party inspection reports available to personnel or authorized representatives of the Department for review at the facility upon request.

Within 30 days of the inspection date:	• Mail this completed form to the MassDEP Regional Office that serves the municipality in which the facility is located. (Attention: Solid Waste Management) • Send one copy to the local board of health for the municipality in which the facility is located.	A list of municipalities and MassDEP Regional Offices is available online at: http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention / Solid Waste Management

Third-Party Inspections – 310 CMR 19.018(8)
Corrective Action Plan & Schedule

Important: When completing this form on a computer, use only the Tab key to move your cursor – not the Return key.



Instructions

In the event that a third-party inspection report prepared in accordance with 310 CMR 19.018(8) contains a recommendation for corrective action(s) at a Solid Waste Management Facility, the owner or operator shall complete and sign **Section IV. Certification** of this form. Pursuant to 310 CMR 19.018(8)(c), the owner or operator shall submit the completed Corrective Action Plan and Schedule form, along with the third-party inspection report with attachments to the appropriate MassDEP Regional Office, and a copy of this form and each completed inspection report with attachments to the board of health of the municipality in which the facility is located. Be sure to obtain the most recent version of this form. All applicable sections of the submitted form must be completed to be accepted by MassDEP. Blank forms and additional instructions on using this form are available online:

http://www.mass.gov/eea/agencies/massdep/recycle/approvals/solid-waste-applications-and-forms.html#8

I. Facility Information

Identify the facility and responsible official.

A. Facility

Essex Landfill
Facility Name

Essex	MA	39261 (SMS)
City/Town	State	FMF Number

B. Responsible Official

Michael Galli	mgalli@essexma.org
Responsible Official Name (Individual)	Responsible Official Email Address
Town of Essex	978-361-6158
Responsible Official Company Name	Responsible Official Telephone Number

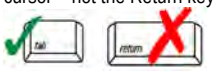
II. Third-Party Inspection

Enter the date of the third-party inspection and identify the inspector that conducted the inspection related to this corrective action plan.

07/01/2025	Adam Sandahl, P.E. (SW48-0000065)
Inspection Date (MM/DD/YYYY)	Third-Party Inspector Name

Continue to Next Page ►

Important: When completing this form on a computer, use only the Tab key to move your cursor – not the Return key.



III. Plan & Schedule for Corrective Action

Pursuant to 310 CMR 19.018(8)(c)2., the owner or operator shall provide the following:

a. A written report documenting the completion of the corrective action(s) [recommended in the report];
b. Documentation or explanation why corrective action is not needed; or
c. A plan and schedule for completing the corrective action(s).

Note: The owner or operator may elect to correct deviations identified in the inspection report in a manner that is different than that recommended by the third-party inspector, so long as the facility is brought back into compliance with applicable requirements.

Discuss the status of the corrective actions recommended in the third-party inspection report. For each deviation documented in the inspection report, describe the corrective action(s) that have been taken, or that will be taken, by the owner or operator to return the facility to compliance with the applicable requirements. Provide the schedule for completing each corrective action, or, as applicable, provide the date the corrective action was completed. If the facility owner/operator intends to submit a permit application in order to complete the corrective action(s), please identify the permit type and anticipated submittal schedule. Contact MassDEP (Regional Office) if you are not sure the corrective action(s) will require a filing to MassDEP prior to implementation.

The following corrective actions are being recommend at this time, which are planned for implementation in 2025. These corrective actions are documented in the inspection report.

1. Complete repairs to gas monitoring wells:

LFG-3: Reset PVC, install new expansion plug and provide new lock.

LFG-4: Reset PVC and provide new lock.

LFG-5: Reset PVC, install new expansion plug and provide new lock.

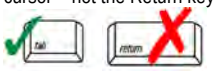
Keys to new locks are to be provided to DPW staff.

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention / Solid Waste Management

Third-Party Inspections – 310 CMR 19.018(8)

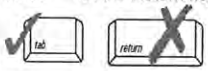
Corrective Action Plan & Schedule

Important: When completing this form on a computer, use only the Tab key to move your cursor – not the Return key.



Massachusetts Department of Environmental Protection
Bureau of Waste Prevention / Solid Waste Management
Third-Party Inspections – 310 CMR 19.018(8)
Corrective Action Plan & Schedule

Important: When completing this form on a computer, use only the Tab key to move your cursor – not the Return key.



IV. Certification

FACILITY OWNER/OPERATOR

"I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties both civil and criminal for submitting false information including possible fines and imprisonment."

Signature of Responsible Official

Michael Galli
Print Full Name

Director of Public Works
Title

8/11/2025
Date (MM/DD/YYYY)

The owner/operator of the facility shall submit this form along with the third-party inspection report to the Department with a copy to the board of health of the municipality in which the facility is located no later than 30 days following the date of the inspection. Pursuant to 310 CMR 19.018(8)(c), a copy of each third-party inspection report shall be maintained at the facility in accordance with the requirements of 310 CMR 19.000. The owner and operator shall make third-party inspection reports available to personnel or authorized representatives of the Department for review at the facility upon request.

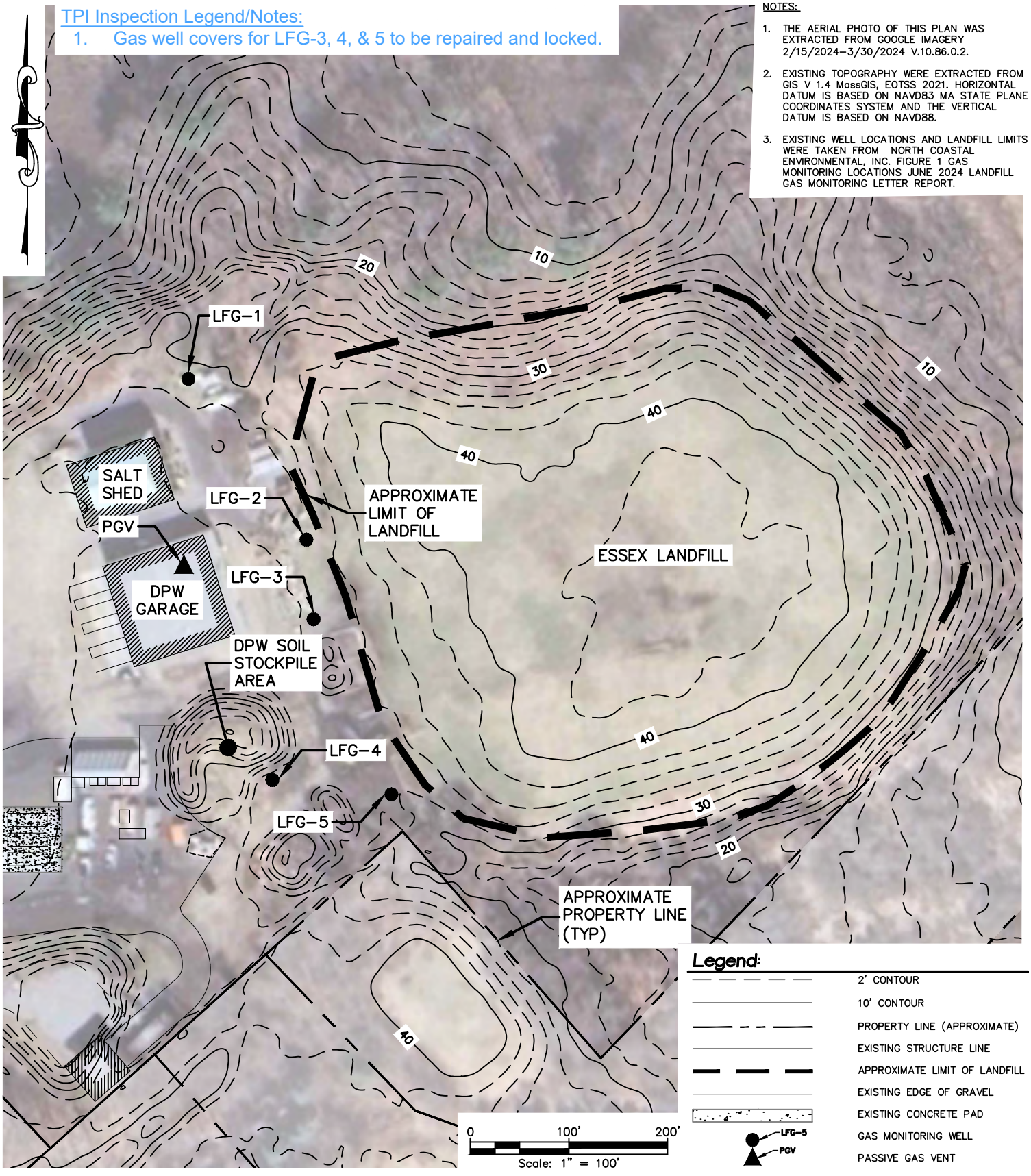
Within 30 days of the inspection date:	• Mail this completed form to the MassDEP Regional Office that serves the municipality in which the facility is located. (Attention: Solid Waste Management) • Send one copy to the local board of health for the municipality in which the facility is located.	A list of municipalities and MassDEP Regional Offices is available online at: http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html

TPI Inspection Legend/Notes:

1. Gas well covers for LFG-3, 4, & 5 to be repaired and locked.

NOTES:

1. THE AERIAL PHOTO OF THIS PLAN WAS EXTRACTED FROM GOOGLE IMAGERY 2/15/2024–3/30/2024 V.10.86.0.2.
2. EXISTING TOPOGRAPHY WERE EXTRACTED FROM GIS V 1.4 MassGIS, EOTSS 2021. HORIZONTAL DATUM IS BASED ON NAVD83 MA STATE PLANE COORDINATES SYSTEM AND THE VERTICAL DATUM IS BASED ON NAVD88.
3. EXISTING WELL LOCATIONS AND LANDFILL LIMITS WERE TAKEN FROM NORTH COASTAL ENVIRONMENTAL, INC. FIGURE 1 GAS MONITORING LOCATIONS JUNE 2024 LANDFILL GAS MONITORING LETTER REPORT.



CMA ENGINEERS
CIVIL/ENVIRONMENTAL/STRUCTURAL
Portsmouth, NH • Manchester, NH • Portland, ME
603/431-6196 • 603/627-0708 • 207/541-4223
c m a e n g i n e e r s . c o m

Essex Landfill
Town of Essex
30 Landing Road
Essex, MA 01929

MassDEP Third Party Inspection Report

Figure 1

Essex Landfill, Essex, Massachusetts
Operation & Maintenance Third Party Inspection Report Photos – Section VI.A, VII.C, and VIII
July 1, 2025



Photo 1: Southern Slope – Looking East



Photo 2: Southern Slope – Looking East



Photo 3: Southern Slope – Looking West



Photo 4: Landfill Plateau – Looking East



Photo 5: Eastern Slope – Looking North



Photo 6: Northern Slope – Looking West



Photo 7: Northern Slope – Looking North



Photo 8: Western Slope From Transfer Station – Looking Northeast



Photo 9: Western Slope From DPW Bunkers – Looking Northeast



Photo 10: Gas Well LFG-4



Photo 11: Gas Well LFG-5



Photo 12: DPW Vent Pipe Gas Sample Location

APPENDIX B

PHOTOGRAPH LOG



The subject property as viewed from Apple Street looking north.



The subject property as viewed from the south looking north.



Two wagons observed on the southern portion of the subject property.



The subject property as viewed from the south looking northeast.



The western boundary of the subject property.



The subject property as viewed centrally looking north.



The Essex Transfer Station north of the subject property.



The Essex Transfer Station and landfill north of the subject property.



Three pole-mounted transformers observed north of the subject property on Landing Road.



Alewife Brook as viewed from Landing Road looking south. The subject property is to the left.



The subject property as viewed from the north looking south.



The carport observed on the subject property off Apple Street.



Two kayaks, a bicycle, a car, and two ATVs observed in the car port.

APPENDIX C

ENVIRONMENTAL SITE ASSESSMENT OWNER QUESTIONNAIRE

Environmental Questionnaire

This questionnaire is to be completed by the site owner or representative with direct knowledge of the property.

Site name:	**30 Apple Street**
Street	30 Apple Street
City, State, Zip	Essex, MA 01929

This questionnaire was completed by:

Name:	Brendhan Zubricki
Title:	Town Administrator
Organization:	Town of Essex
Address:	30 Martin Street, Essex, MA 01929
Telephone:	978-768-6531
Email:	bzubricki@essexma.org
Date completed:	September 23, 2025
Relationship to site:	Owner's Agent

	QUESTION	RESPONSE
1.	Is the *property* or any *adjoining property* used for an industrial use?	Yes __X__ No _____ Unknown ____ Explanation: Town DPW yard and transfer station abuts.
2.	To the best of your knowledge, has the *property* or any *adjoining property* been used for an industrial use in the past?	Yes __X__ No _____ Unknown ____ Explanation: See above. Also, former Town landfill abuts.
3.	Is the *property* or any *adjoining property* used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard, or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	Yes __X__ No _____ Unknown ____ Explanation: New municipal fuel depot (aboveground) to be installed on abutting property this fall. Solid waste, recycling, and former landfill facilities on abutting property.
4.	To the best of your knowledge has the *property* or any *adjoining property* been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	Yes __X__ No _____ Unknown ____ Explanation: See answer to 3.
5.	Are there currently, or to the best of your knowledge have there been previously, any damaged or discarded automobile or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gal (19 L) in volume or 50 gal (190 L) in the aggregate, stored on or used at the *property* or at the facility?	Yes _____ No __X__ Unknown ____ Explanation:

	QUESTION	RESPONSE
6.	Are there currently, or to the best of your knowledge have there been previously, any industrial *drums* (typically 55 gal [208 L]) or sacks of chemicals located on the property or at the facility?	Yes _____ No __X__ Unknown ____ Explanation:
7.	Has *fill dirt* been brought onto the property that originated from a contaminated site or that is of an unknown origin?	Yes _____ No __X__ Unknown ____ Explanation:
8.	Are there currently, or to the best of your knowledge have there been previously, any *pits, ponds, or lagoons* located on the *property* in connection with waste treatment or waste disposal?	Yes _____ No __X__ Unknown ____ Explanation:
9.	Is there currently, or to the best of your knowledge have there been previously, any stained soil on the *property*?	Yes _____ No __X__ Unknown ____ Explanation:
10.	Are there currently, or to the best of your knowledge have there been previously, any registered or unregistered storage tanks (above or underground) located on the *property*?	Yes _____ No __X__ Unknown ____ Explanation:
11.	Are there currently, or to the best of your knowledge have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *property* adjacent to any structure located on the *property*?	Yes _____ No __X__ Unknown ____ Explanation:
12.	Are there currently, or to the best of your knowledge have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors?	Yes _____ No __X__ Unknown ____ Explanation:
13.	If the *property* is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated contaminated by any government environmental/health agency?	Yes _____ No __X__ Unknown ____ Explanation:
14.	Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user, (a.) Do you know the past uses of the property? (b.) Do you know of other chemical releases that have taken place at the property? (d.) Do you know of any environmental cleanups that have taken place at the property?	Yes __X__ No _____ Unknown ____ Explanation: Property is a former flower field and has been in agricultural use for decades.
15.	Does the *owner* or *occupant* of the *property* have any knowledge of *environmental liens* or governmental notification relating to the past or recurrent violations of environmental laws with respect to the *property* or any facility located on the *property*?	Yes _____ No __X__ Unknown ____ Explanation:

	QUESTION	RESPONSE
16.	Has the *owner* or *occupant* of the *property* been informed of the past or current existence of *hazardous substances* or petroleum *products* or environmental violations with respect to the *property* or any facility located on the *property*?	Yes _____ No ___X___ Unknown ____ Explanation:
17.	Does the *owner* or *occupant* of the property have any knowledge of any environmental site assessment of the *property* or facility that indicated the presence of *hazardous substances* or *petroleum products* on, or contamination of, the *property* or recommended further assessment of the *property*?	Yes _____ No ___X___ Unknown ____ Explanation:
18.	Does the *owner* or *occupant* of the *property* know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *property* by any owner or occupant of the *property*?	Yes _____ No ___X___ Unknown ____ Explanation:
19.	Does the *property* discharge wastewater on or adjacent to the *property* other than stormwater into a sanitary sewer system?	Yes _____ No ___X___ Unknown ____ Explanation:
20.	To the best of your knowledge, have any *hazardous substances* or *petroleum products*, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the *property*?	Yes _____ No ___X___ Unknown ____ Explanation:
21.	Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of PCBs on the *property*?	Yes _____ No ___X___ Unknown ____ Explanation:
22.	Are there any activity and use limitations, such as engineering controls, land use restrictions, or institutional controls in place at the site and/or have they been filed or recorded in a registry under federal, tribal, state, or local law?	Yes _____ No ___X___ Unknown ____ Explanation:
23.	As part of this study, can you provide any of the following? • Previous environmental site assessment reports • Environmental compliance audit reports • Environmental permits (including but not limited to solid waste disposal, hazardous waste disposal, NPDES, underground injection permits) • Registrations for aboveground and underground storage tanks • Registrations for underground injection systems • Material safety data sheets (MSDS) • Community right-to-know plan • Safety plans, preparedness and prevention plans, spill prevention, countermeasure and control plans • Reports regarding hydraulic conditions at the property and surrounding area • Hazardous waste generator notices or reports	If yes, please highlight which and provide Mabbett with a copy of said report. **No, none of these items are applicable.**

	QUESTION	RESPONSE
	• Geotechnical studies • Risk assessments • Reports regarding any self-directed or other cleanup activities conducted at the property	

Preparer represents that to the best of the preparer's knowledge the above statements and facts are true and correct and to the best of the preparer's actual knowledge, no material facts have been suppressed or misstated.

Signature: _____

Date: 9/23/25

APPENDIX D

DATABASE SEARCH REPORT: EDR Radius Map™ Report with GeoCheck®

30 Apple Street
30 Apple Street
Essex, MA 01929

Inquiry Number: 8109451.2s
September 17, 2025

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	173
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-19
Physical Setting Source Map Findings	A-21
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. **NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA) INFORMATION PROVIDED IN THIS REPORT.** Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2025 by Environmental Data Resources, LLC. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, LLC, or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

30 APPLE STREET
ESSEX, MA 01929

COORDINATES

Latitude (North):	42.6252890 - 42° 37' 31.04''
Longitude (West):	70.7876410 - 70° 47' 15.50''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	353403.9
UTM Y (Meters):	4720539.5
Elevation:	40 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	19019791 IPSWICH, MA
Version Date:	2021
South Map:	19019793 MARBLEHEAD NORTH, MA
Version Date:	2021

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20230705
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
30 APPLE STREET
ESSEX, MA 01929

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	ESSEX DPW	27 LANDING RD	MA HW GEN	Lower	1 ft.
A2	ESSEX DPW	27 LANDING RD	RCRA-VSQG	Lower	1 ft.
B3	MASSACHUSETTS ELECTR	42 APPLE ST	E MANIFEST	Lower	254, 0.048, SSE
B4	ADJACENT TO 42 APPLE	42 APPLE STREET	MA SHWS, MA RELEASE	Lower	254, 0.048, SSE
C5	TRANSFER STATION	30 LANDING ROAD	MA MERCURY	Lower	341, 0.065, NE
C6	TOWN OF ESSEX (HHW)	30 LANDING ROAD	E MANIFEST	Lower	341, 0.065, NE
C7	ACV ENVIRONMENTAL SE	30 LANDING ROAD	E MANIFEST	Lower	341, 0.065, NE
C8	BOTHWAY FARM	SOUTHERN AVE	MA SHWS, MA SWF/LF, MA INST CONTROL, MA RELEASE,...	Lower	341, 0.065, NE
9	ESSEX SANITARY LANDF	OFF LANDING ROAD	ODI	Lower	480, 0.091, NNE
D10	PAUL RUSSELL & COMPA	106 WESTERN AVE	PA MANIFEST	Lower	1081, 0.205, WSW
D11	PAUL RUSSELL & CO.	106 WESTERN AVE	RCRA-SQG, US AIRS, FINDS, ECHO, E MANIFEST, NJ...	Lower	1081, 0.205, WSW
D12	STEPHEN TERHUNE WOOD	106 WESTERN AVE	MA HW GEN	Lower	1081, 0.205, WSW
D13	GULLWING SERVICE CO	106 WESTERN AVE	MA HW GEN	Lower	1081, 0.205, WSW
D14	MARK RICHEY WOODWORK	106 WESTERN AVE	RCRA NonGen / NLR	Lower	1081, 0.205, WSW
D15	MARK RICHEY WOODWORK	106 WESTERN AVENUE	NY MANIFEST	Lower	1081, 0.205, WSW
16	NO LOCATION AID	60 WESTERN AVE	MA SHWS, MA RELEASE	Higher	1282, 0.243, NNW
17	NO LOCATION AID	ACROSS FROM 3 BROOK	MA SHWS, MA RELEASE	Lower	1737, 0.329, North
E18	FMR LIBERTY RESEARCH	7 ESSEX PARK RD	MA SHWS, MA RELEASE	Higher	1775, 0.336, WSW
E19	NO LOCATION AID	7 ESSEX PARK RD	MA SHWS, MA RELEASE	Higher	1775, 0.336, WSW
E20	NO LOCATION AID	7 ESSEX PARK RD	MA SHWS, MA RELEASE	Higher	1775, 0.336, WSW
E21	LIBERTY RESEARCH FAC	7 ESSEX PARK DR	MA SHWS, MA RELEASE	Higher	1775, 0.336, WSW
F22	NO LOCATION AID	MARTIN ST AND SHEPAR	MA SHWS, MA RELEASE	Lower	2355, 0.446, NNE
F23	WHITEY'S GARAGE	16 MARTIN ST	MA SHWS, MA UST, MA RELEASE	Lower	2464, 0.467, NNE
24	NO LOCATION AID	17 STORY ST	MA SHWS, MA RELEASE	Higher	2470, 0.468, NNW
25	ESSEX FIRE STATION	MARTIN ST	MA LUST, MA RELEASE	Lower	2472, 0.468, NE
G26	ESSEX SHIPBLDG MUSEU	66 MAIN ST	MA SHWS, MA INST CONTROL, MA RELEASE	Lower	3096, 0.586, NE
G27	ESSEX SHIPBUILDING M	66 MAIN ST	MA SHWS, MA INST CONTROL, MA RELEASE	Lower	3096, 0.586, NE
28	CONSTRUCTION SITE	91 MAIN STREET ADJ	MA SHWS, MA RELEASE	Lower	3097, 0.587, NE
29	NO LOCATION AID	109 MAIN ST	MA SHWS, MA RELEASE	Lower	3199, 0.606, ENE
30	ERNIE'S SERVICE STAT	8 MAIN STREET	MA SHWS, MA LUST, MA INST CONTROL, MA RELEASE	Lower	3360, 0.636, NNE
31	COMMERCIAL PROPERTY	9 SOUTHERN AVE	MA SHWS, MA BROWNFIELDS, MA RELEASE	Lower	4027, 0.763, ENE
H32	RICHDALE CONVENIENCE	156 NORTH MAIN ST	MA SHWS, MA LUST, MA INST CONTROL, MA RELEASE	Lower	4049, 0.767, ENE
H33	RICHDALE CONVENIENCE	156 NORTH MAIN ST	MA SHWS, MA RELEASE	Lower	4049, 0.767, ENE
34	NO LOCATION AID	22 JOHN WISE AVE	MA SHWS, MA RELEASE	Higher	4165, 0.789, NNE
35	RESIDENCE	42 EASTERN AVENUE	MA SHWS, MA LAST, MA RELEASE	Lower	4837, 0.916, ENE
36	AT 25-27 CENTENIAL G	27 CENTENNIAL GROVE	MA SHWS, MA RELEASE	Higher	5163, 0.978, WSW
37	TRANSFORMER RELEASE	4 ESSEX REACH ROAD	MA SHWS, MA RELEASE	Higher	5273, 0.999, ENE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ---------- RCRA - Large Quantity Generators

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROLS ---------- Institutional Controls Sites List

Federal ERNS list

ERNS ---------- Emergency Response Notification System

Lists of state and tribal leaking storage tanks

INDIAN LUST ---- Leaking Underground Storage Tanks on Indian Land

Lists of state and tribal registered storage tanks

FEMA UST ---- Underground Storage Tank Listing
MA AST ---- Aboveground Storage Tank Database
INDIAN UST ---- Underground Storage Tanks on Indian Land

Lists of state and tribal voluntary cleanup sites

INDIAN VCP ---- Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---- Delisted National Clandestine Laboratory Register
US CDL ---- National Clandestine Laboratory Register

Local Land Records

MA LIENS ---- Liens Information Listing
LIENS 2 ---- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System
MA SPILLS ---- Historical Spill List
MA SPILLS 90 ---- SPILLS 90 data from FirstSearch
MA SPILLS 80 ---- SPILLS 80 data from FirstSearch

Other Ascertainable Records

FUDS ---- Formerly Used Defense Sites
DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information
EPA WATCH LIST ---- EPA WATCH LIST
2020 COR ACTION ---- 2020 Corrective Action Program List
TSCA ---- Toxic Substances Control Act
TRIS ---- Toxic Chemical Release Inventory System

EXECUTIVE SUMMARY

SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
MINES MRDS	Mineral Resources Data System
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
FUELS PROGRAM	EPA Fuels Program Registered Listing
PFAS NPL	Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES	Federal Sites PFAS Information
PFAS TSCA	PFAS Manufacture and Imports Information
PFAS TRIS	List of PFAS Added to the TRI
PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR	PFAS Contamination Site Location Listing
PFAS WQP	Ambient Environmental Sampling for PFAS
PFAS PROJECT	NORTHEASTERN UNIVERSITY PFAS PROJECT
PFAS NPDES	Clean Water Act Discharge Monitoring Information
PFAS ECHO	Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAIN	Facilities in Industries that May Be Handling PFAS Listing
PFAS PT 139 AIRPORT	All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC	Aqueous Foam Related Incidents Listing
BIOSOLIDS	ICIS-NPDES Biosolids Facility Data
UST FINDER	UST Finder Database
UST FINDER RELEASE	UST Finder Releases Database
MA PFAS	PFAS Contaminated Sites Listing
MA AIRS	Permitted Facilities Listing
MA DRYCLEANERS	Regulated Drycleaning Facilities
MA ENF	Enforcement Action Cases
MA Financial Assurance	Financial Assurance Information Listing
MA GWDP	Ground Water Discharge Permits
MA NPDES	NPDES Permit Listing
MA TIER 2	Tier 2 Information Listing
MA TSD	TSD Facility
MA UIC	Underground Injection Control Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants

EXECUTIVE SUMMARY

EDR Hist Auto ---------- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ---------- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

MA RGA HWS ---------- Recovered Government Archive State Hazardous Waste Facilities List
MA RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal RCRA generators

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 06/02/2025 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PAUL RUSSELL & CO. EPA ID:: MAD981064009	***106 WESTERN AVE***	***WSW 1/8 - 1/4 (0.205 mi.)***	***D11***	***36***

RCRA-VSQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-VSQG list, as provided by EDR, and dated 06/02/2025 has revealed that there is 1 RCRA-VSQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ESSEX DPW EPA ID:: MAR000606491	27 LANDING RD	0 - 1/8 (0.000 mi.)	A2	8

Lists of state- and tribal hazardous waste facilities

MA SHWS: Contains information on releases of oil and hazardous materials that have been reported to DEP.

A review of the MA SHWS list, as provided by EDR, and dated 06/30/2025 has revealed that there are 23 MA SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NO LOCATION AID Current Status: RAO Release Tracking Number: 3-0015915	***60 WESTERN AVE***	***NNW 1/8 - 1/4 (0.243 mi.)***	***16***	***85***
FMR LIBERTY RESEARCH Current Status: TMPS Release Tracking Number: 3-0020280	***7 ESSEX PARK RD***	***WSW 1/4 - 1/2 (0.336 mi.)***	***E18***	***91***
NO LOCATION AID Current Status: TMPS Release Tracking Number: 3-0027639	***7 ESSEX PARK RD***	***WSW 1/4 - 1/2 (0.336 mi.)***	***E19***	***94***
NO LOCATION AID Current Status: TMPS Release Tracking Number: 3-0026038	***7 ESSEX PARK RD***	***WSW 1/4 - 1/2 (0.336 mi.)***	***E20***	***98***
LIBERTY RESEARCH FAC Current Status: TMPS Release Tracking Number: 3-0019187	***7 ESSEX PARK DR***	***WSW 1/4 - 1/2 (0.336 mi.)***	***E21***	***107***
NO LOCATION AID Current Status: RAO Release Tracking Number: 3-0012521	***17 STORY ST***	***NNW 1/4 - 1/2 (0.468 mi.)***	***24***	***121***
NO LOCATION AID Current Status: RAO Release Tracking Number: 3-0017866	***22 JOHN WISE AVE***	***NNE 1/2 - 1 (0.789 mi.)***	***34***	***159***
AT 25-27 CENTENIAL G Current Status: PSNC Release Tracking Number: 3-0035768	***27 CENTENNIAL GROVE***	***WSW 1/2 - 1 (0.978 mi.)***	***36***	***169***
TRANSFORMER RELEASE Current Status: PSNC Release Tracking Number: 3-0038645	***4 ESSEX REACH ROAD***	***ENE 1/2 - 1 (0.999 mi.)***	***37***	***171***

Lower Elevation	Address	Direction / Distance	Map ID	Page
ADJACENT TO 42 APPLE Current Status: PSNC Release Tracking Number: 3-0036867	***42 APPLE STREET***	***SSE 0 - 1/8 (0.048 mi.)***	***B4***	***12***
BOTHWAY FARM Current Status: RAO	***SOUTHERN AVE***	***NE 0 - 1/8 (0.065 mi.)***	***C8***	***29***

Release Tracking Number: 3-0011464

NO LOCATION AID	***ACROSS FROM 3 BROOK***	***N 1/4 - 1/2 (0.329 mi.)***	***17***	***88***
Current Status: RAO Release Tracking Number: 3-0027443				
NO LOCATION AID	***MARTIN ST AND SHEPAR***	***NNE 1/4 - 1/2 (0.446 mi.)***	***F22***	***113***
Current Status: URAM Release Tracking Number: 3-0022999				
WHITEY'S GARAGE	***16 MARTIN ST***	***NNE 1/4 - 1/2 (0.467 mi.)***	***F23***	***114***
Current Status: RAO Release Tracking Number: 3-0021187				
ESSEX SHIPBLDG MUSEU	***66 MAIN ST***	***NE 1/2 - 1 (0.586 mi.)***	***G26***	***125***
Current Status: RAO Release Tracking Number: 3-0004552				
ESSEX SHIPBUILDING M	***66 MAIN ST***	***NE 1/2 - 1 (0.586 mi.)***	***G27***	***130***
Current Status: RTNCLOSED Release Tracking Number: 3-0024673				
CONSTRUCTION SITE	***91 MAIN STREET ADJ***	***NE 1/2 - 1 (0.587 mi.)***	***28***	***133***
Current Status: PSNC Release Tracking Number: 3-0035511				
NO LOCATION AID	***109 MAIN ST***	***ENE 1/2 - 1 (0.606 mi.)***	***29***	***134***
Current Status: URAM Release Tracking Number: 3-0025296				
ERNIE'S SERVICE STAT	***8 MAIN STREET***	***NNE 1/2 - 1 (0.636 mi.)***	***30***	***136***
Current Status: PSNC Release Tracking Number: 3-0034160				
COMMERCIAL PROPERTY	***9 SOUTHERN AVE***	***ENE 1/2 - 1 (0.763 mi.)***	***31***	***143***
Current Status: TIERII Release Tracking Number: 3-0003021				
RICHDALE CONVENIENCE	***156 NORTH MAIN ST***	***ENE 1/2 - 1 (0.767 mi.)***	***H32***	***147***
Current Status: RAO Release Tracking Number: 3-0023545				
RICHDALE CONVENIENCE	***156 NORTH MAIN ST***	***ENE 1/2 - 1 (0.767 mi.)***	***H33***	***158***
Current Status: RTNCLOSED Release Tracking Number: 3-0027206				
RESIDENCE	***42 EASTERN AVENUE***	***ENE 1/2 - 1 (0.916 mi.)***	***35***	***162***
Current Status: RAO Release Tracking Number: 3-0031447				

Lists of state and tribal landfills and solid waste disposal facilities

MA SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Department of Environmental Protection's Solid Waste Facility Database/Transfer Stations.

A review of the MA SWF/LF list, as provided by EDR, has revealed that there is 1 MA SWF/LF site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BOTHWAY FARM	***SOUTHERN AVE***	***NE 0 - 1/8 (0.065 mi.)***	***C8***	***29***
Database: LF PROFILES, Date of Government Version: 07/01/2015 Database: SWF/LF, Date of Government Version: 06/28/2024				

Current Operational Status: Inactive
Current Operational Status: Active
Status: Inactive

Lists of state and tribal leaking storage tanks

MA LUST: Sites within the Releases Database that have a UST listed as its source.

A review of the MA LUST list, as provided by EDR, and dated 06/30/2025 has revealed that there is 1 MA LUST site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ESSEX FIRE STATION	***MARTIN ST***	***NE 1/4 - 1/2 (0.468 mi.)***	***25***	***122***
Release Tracking Number / Current Status: 3-0013690 / RAO				

State and tribal institutional control / engineering control registries

MA INST CONTROL: Activity and Use Limitations establish limits and conditions on the future use of contaminated property, and therefore allow cleanups to be tailored to these uses.

A review of the MA INST CONTROL list, as provided by EDR, and dated 06/30/2025 has revealed that there is 1 MA INST CONTROL site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BOTHWAY FARM	***SOUTHERN AVE***	***NE 0 - 1/8 (0.065 mi.)***	***C8***	***29***
Release Tracking Number: 3-0011464				

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

A review of the ODI list, as provided by EDR, and dated 06/30/1985 has revealed that there is 1 ODI site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ESSEX SANITARY LANDF	OFF LANDING ROAD	NNE 0 - 1/8 (0.091 mi.)	9	36

EXECUTIVE SUMMARY

Records of Emergency Release Reports

MA RELEASE: MA Release Tracking Database.

A review of the MA RELEASE list, as provided by EDR, and dated 06/30/2025 has revealed that there are 2 MA RELEASE sites within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ADJACENT TO 42 APPLE	***42 APPLE STREET***	***SSE 0 - 1/8 (0.048 mi.)***	***B4***	***12***
Release Tracking Number / Current Status: 3-0036867 / PSNC				
BOTHWAY FARM	***SOUTHERN AVE***	***NE 0 - 1/8 (0.065 mi.)***	***C8***	***29***
Release Tracking Number / Current Status: 3-0011464 / RAO				

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 06/02/2025 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
MARK RICHEY WOODWORK	106 WESTERN AVE	WSW 1/8 - 1/4 (0.205 mi.)	D14	69
EPA ID:: MAD980916720				

E MANIFEST: EPA established a national system for tracking hazardous waste shipments electronically. This system, known as ?e-Manifest,? will modernize the nation?s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

A review of the E MANIFEST list, as provided by EDR, and dated 06/02/2025 has revealed that there are 4 E MANIFEST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
MASSACHUSETTS ELECTR	42 APPLE ST	SSE 0 - 1/8 (0.048 mi.)	B3	10
TOWN OF ESSEX (HHW)	30 LANDING ROAD	NE 0 - 1/8 (0.065 mi.)	C6	14
ACV ENVIRONMENTAL SE	30 LANDING ROAD	NE 0 - 1/8 (0.065 mi.)	C7	18
PAUL RUSSELL & CO.	***106 WESTERN AVE***	***WSW 1/8 - 1/4 (0.205 mi.)***	***D11***	***36***

MA HW GEN: Permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities.

A review of the MA HW GEN list, as provided by EDR, and dated 06/04/2025 has revealed that there are 3 MA HW GEN sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ESSEX DPW	27 LANDING RD	0 - 1/8 (0.000 mi.)	A1	8

State Generator Status: VQG-MA EPA Id: MAR000606491				
STEPHEN TERHUNE WOOD EPA Id: MV9787680106	106 WESTERN AVE	WSW 1/8 - 1/4 (0.205 mi.)	D12	69
GULLWING SERVICE CO State Generator Status: SQG-MA EPA Id: MAD981064009	106 WESTERN AVE	WSW 1/8 - 1/4 (0.205 mi.)	D13	69

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the NY MANIFEST list, as provided by EDR, and dated 12/31/2019 has revealed that there is 1 NY MANIFEST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
MARK RICHEY WOODWORK EPA ID: MAD981064009 EPA ID: MAP000065413	106 WESTERN AVENUE	WSW 1/8 - 1/4 (0.205 mi.)	D15	83

NJ MANIFEST: Hazardous waste manifest information.

A review of the NJ MANIFEST list, as provided by EDR, and dated 12/31/2018 has revealed that there is 1 NJ MANIFEST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PAUL RUSSELL & CO. EPA Id: MAD981064009	***106 WESTERN AVE***	***WSW 1/8 - 1/4 (0.205 mi.)***	***D11***	***36***

PA MANIFEST: Hazardous waste manifest information.

A review of the PA MANIFEST list, as provided by EDR, and dated 06/30/2018 has revealed that there is 1 PA MANIFEST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PAUL RUSSELL & COMPA Generator EPA Id: MAD981064009	106 WESTERN AVE	WSW 1/8 - 1/4 (0.205 mi.)	D10	36

MA MERCURY: A listing of locations, collecting and recycling for mercury-added products. Mercury is toxic to the human nervous system, as well as fish and animals. Mercury can enter the body either through skin absorption or through inhalation of mercury vapors. At room temperature, small beads of mercury will vaporize.

A review of the MA MERCURY list, as provided by EDR, and dated 04/02/2025 has revealed that there is 1 MA MERCURY site within approximately 0.5 miles of the target property.

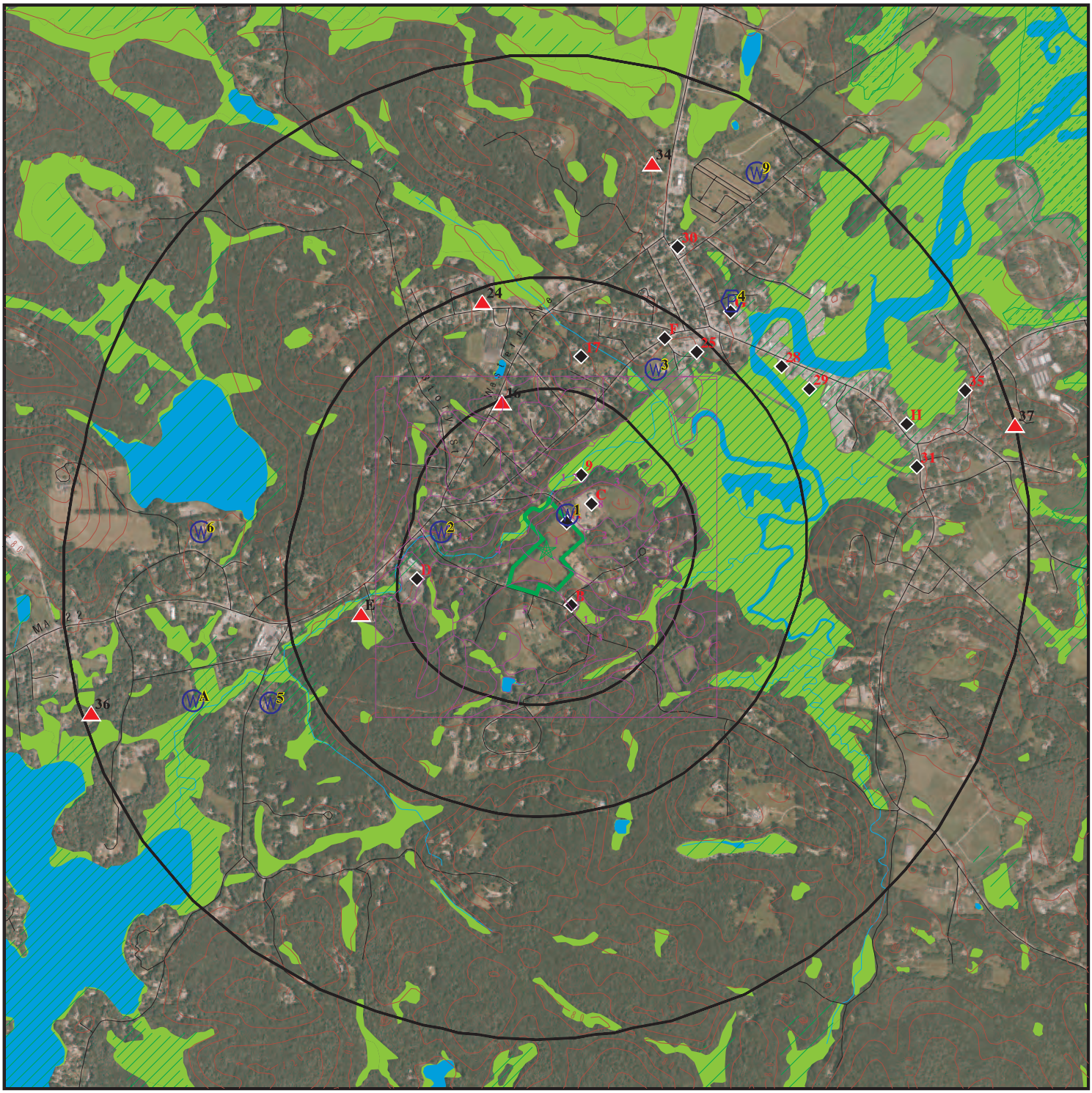
Lower Elevation	Address	Direction / Distance	Map ID	Page
TRANSFER STATION	30 LANDING ROAD	NE 0 - 1/8 (0.065 mi.)	C5	13

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

Site Name	Database(s)
POLE NO 558	MA SHWS, MA RELEASE
NO LOCATION AID	MA SHWS, MA RELEASE
ESSEX DUMP	MA SWF/LF

OVERVIEW MAP - 8109451.2S

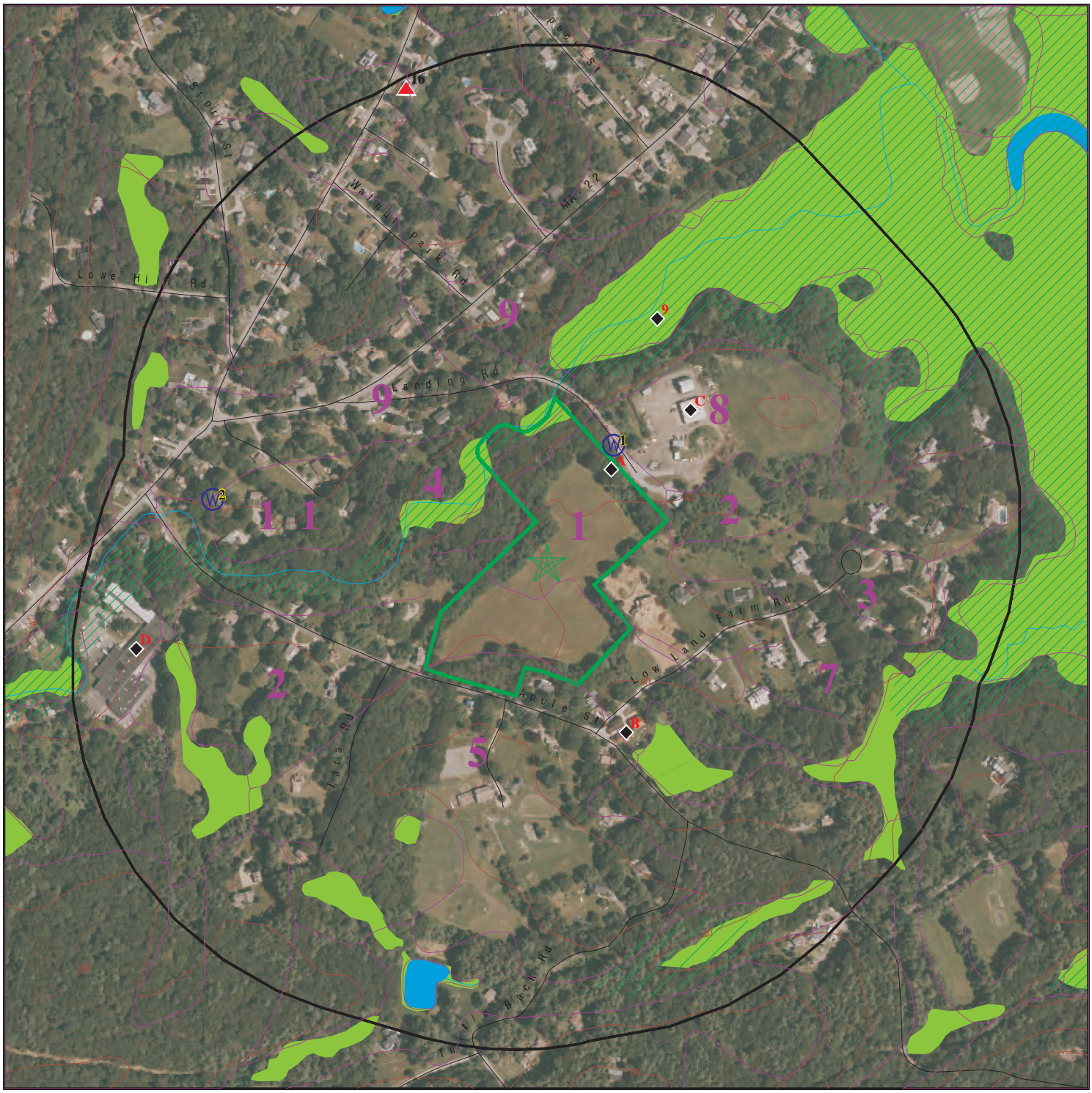


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 30 Apple Street	CLIENT: Mabbett & Assoc.
ADDRESS: 30 Apple Street Essex MA 01929	CONTACT: Cassidy Way
LAT/LONG: 42.625289 / 70.787641	INQUIRY #: 8109451.2s DATE: September 17, 2025 11:25 am

Copyright © 2025 EDR, Inc. © 2015 TomTom Rel. 2015.

DETAIL MAP - 8109451.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Areas of Critical Environmental Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	30 Apple Street	CLIENT:	Mabbett & Assoc.
ADDRESS:	30 Apple Street Essex MA 01929	CONTACT:	Cassidy Way
		INQUIRY #:	8109451.2s
LAT/LONG:	42.625289 / 70.787641	DATE:	September 17, 2025 11:25 am

Copyright © 2025 EDR, Inc. © 2015 TomTom Rel. 2015.

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	1	NR	NR	NR	1
RCRA-VSQG	0.250		1	0	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
MA SHWS	1.000		2	1	8	12	NR	23
Lists of state and tribal landfills and solid waste disposal facilities								
MA SWF/LF	0.500		1	0	0	NR	NR	1
Lists of state and tribal leaking storage tanks								
MA LAST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MA LUST	0.500		0	0	1	NR	NR	1
INDIAN LUST	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
MA UST	0.250		0	0	NR	NR	NR	0
MA AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
MA INST CONTROL	0.500		1	0	0	NR	NR	1
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
MA BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		1	0	0	NR	NR	1
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
MA LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
MA RELEASE	0.125		2	NR	NR	NR	NR	2
MA SPILLS	0.125		0	NR	NR	NR	NR	0
MA SPILLS 90	0.125		0	NR	NR	NR	NR	0
MA SPILLS 80	0.125		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	1	NR	NR	NR	1
FUDS	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS PROJECT	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAIN	0.250		0	0	NR	NR	NR	0
PFAS PT 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	0.125		0	NR	NR	NR	NR	0
UST FINDER	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST FINDER RELEASE	0.500		0	0	0	NR	NR	0
E MANIFEST	0.250		3	1	NR	NR	NR	4
MA PFAS	0.250		0	0	NR	NR	NR	0
MA AIRS	TP		NR	NR	NR	NR	NR	0
MA ASBESTOS	TP		NR	NR	NR	NR	NR	0
MA DRYCLEANERS	0.250		0	0	NR	NR	NR	0
MA ENF	TP		NR	NR	NR	NR	NR	0
MA Financial Assurance	TP		NR	NR	NR	NR	NR	0
MA GWDP	TP		NR	NR	NR	NR	NR	0
MA HW GEN	0.250		1	2	NR	NR	NR	3
NY MANIFEST	0.250		0	1	NR	NR	NR	1
NJ MANIFEST	0.250		0	1	NR	NR	NR	1
PA MANIFEST	0.250		0	1	NR	NR	NR	1
MA MERCURY	0.500		1	0	0	NR	NR	1
MA NPDES	TP		NR	NR	NR	NR	NR	0
MA TIER 2	TP		NR	NR	NR	NR	NR	0
MA TSD	0.500		0	0	0	NR	NR	0
MA UIC	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
MA RGA HWS	TP		NR	NR	NR	NR	NR	0
MA RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	13	9	9	12	0	43

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **ESSEX DPW** **MA HW GEN** **S128595203**
27 LANDING RD **N/A**
< 1/8 **ESSEX, MA 01929**
1 ft.

Site 1 of 2 in cluster A

Relative: HW GEN:
Lower

Name:	ESSEX DPW
Address:	27 LANDING RD
City,State,Zip:	ESSEX, MA 01929
EPA Id:	MAR000606491
RCRA Generator Status:	VSQG
State Generator Status:	VQG-MA

Actual:
36 ft.

A2 **ESSEX DPW** **RCRA-VSQG** **1027098096**
27 LANDING RD **MAR000606491**
< 1/8 **ESSEX, MA 01929**
1 ft.

Site 2 of 2 in cluster A

Relative: RCRA Listings:
Lower

Date Form Received by Agency:	20211227
Handler Name:	Essex Dpw
Handler Address:	Landing Rd
Handler City,State,Zip:	ESSEX, MA 01929
EPA ID:	MAR000606491
Contact Name:	MICHAEL GALLI
Contact Address:	CENTENNIAL GROVE RD
Contact City,State,Zip:	ESSEX, MA 01929
Contact Telephone:	978-768-6262
Contact Fax:	Not reported
Contact Email:	MGALLI@ESSEXMA.ORG
Contact Title:	DIRECTOR
EPA Region:	01
Land Type:	Municipal
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities, State-specific Activities
State District Owner:	Ma
State District:	NE
Mailing Address:	CENTENNIAL GROVE RD
Mailing City,State,Zip:	ESSEX, MA 01929
Owner Name:	Town Of Essex Department Of Public Works
Owner Type:	Municipal
Operator Name:	Town Of Essex Department Of Public Works
Operator Type:	Municipal
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No

Actual:
36 ft.

ESSEX DPW (Continued) **1027098096**

Federal Universal Waste:	No
Active Site State-Reg Handler:	--Y
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20211228
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	Ignitable Waste

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	TOWN OF ESSEX DEPARTMENT OF PUBLIC WORKS
Legal Status:	Municipal
Date Became Current:	20211220
Date Ended Current:	Not reported
Owner/Operator Address:	44 CENTENNIAL GROVE RD
Owner/Operator City,State,Zip:	ESSEX, MA 01929
Owner/Operator Telephone:	978-768-6262
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	MGALLI@ESSEXMA.ORG

Owner/Operator Indicator:	Operator
Owner/Operator Name:	TOWN OF ESSEX DEPARTMENT OF PUBLIC WORKS
Legal Status:	Municipal
Date Became Current:	20211220
Date Ended Current:	Not reported
Owner/Operator Address:	44 CENTENNIAL GROVE RD
Owner/Operator City,State,Zip:	ESSEX, MA 01929
Owner/Operator Telephone:	978-762-6262
Owner/Operator Telephone Ext:	Not reported

ESSEX DPW (Continued) **1027098096**

Owner/Operator Fax: Not reported
Owner/Operator Email: MGALLI@ESSEXMA.ORG

Historic Generators:
Receive Date: 20211227
Handler Name: ESSEX DPW
Federal Waste Generator Description: Very Small Quantity Generator (formerly Conditionally-Exempt Small Quantity Generator
State District Owner: Ma
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

List of NAICS Codes and Descriptions:
NAICS Code: 921190
NAICS Description: Other General Government Support

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

B3 **MASSACHUSETTS ELECTRIC COMPANY** **E MANIFEST** **1032168816**
SSE **42 APPLE ST** **N/A**
< 1/8 **ESSEX, MA 01929**
0.048 mi.
254 ft. **Site 1 of 2 in cluster B**

Relative: **Lower**
Actual: **37 ft.**

E MANIFEST:
Manifest Tracking Number: 011032295FLE
Last Updated Date: 20210623
Shipped Date: 20210529
Received Date: 20210601
Manifest Status: Signed
Submission Type: DataImage5Copy
Origin Type: Service
Generator EPA ID: MAC300012655
Generator Name: Massachusetts Electric Company
Generator Location Street Number: Not reported
Generator Location Street 1: 42 APPLE ST
Generator Location Street 2: Not reported
Generator Location City: ESSEX
Generator Location State: MA
Generator Location Zip: 01929
Generator Mail Street Number: Not reported
Generator Mail Street 1: 40 Sylvan Road
Generator Mail Street 2: Not reported
Generator Mail City: Waltham
Generator Mail Zip: 02451

MASSACHUSETTS ELECTRIC COMPANY (Continued) **1032168816**

Generator Mail State:	MA
Generator Contact Company Name:	Massachusetts Electric Company
Designated Facility EPA ID:	MAD053452637
Designated Facility Name:	Clean Harbors Of Braintree Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	1 Hill Avenue
Designated Facility Mail City:	Braintree
Designated Facility Mail Zip:	02184
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	1 Hill Avenue
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	Braintree
Designated Facility Location Zip:	02184
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Transporter:

Manifest Tracking Number:	011032295FLE
Transporter Line Number:	1
Transporter EPA ID:	MAD039322250
Transporter Name:	Clean Harbors Environmental Services, Inc.

Waste Line:

Manifest Tracking Number:	011032295FLE
Waste Line Number:	1
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported
U.S. DOT Description:	Not reported
Non-Hazardous Waste Description:	None, Non Dot Regulated Material, N/A, None
Number of Containers:	1
Container Type Code:	TT
Container Type Description:	Cargo tanks (tank trucks)
Waste Quantity:	3
Quantity Unit of Measure Code:	Y
Quantity Unit of Measure Description:	Cubic Yards
Waste Quantity, in Tons:	2.52
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	2.52
Waste Quantity, in Kilograms:	2285.7156
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	2285.7156
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported

MASSACHUSETTS ELECTRIC COMPANY (Continued) **1032168816**

Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	2285.7156
Quantity Non Haz Tons:	2.52
State Waste Codes:	MA-MA01

B4 **ADJACENT TO 42 APPLE STREET** **MA SHWS** **S127590270**
SSE **42 APPLE STREET** **MA RELEASE** **N/A**
< 1/8 **ESSEX, MA 01929**
0.048 mi.
254 ft. **Site 2 of 2 in cluster B**

Relative:
Lower

Actual:
37 ft.

SHWS:

Name:	ADJACENT TO 42 APPLE STREET
Address:	42 APPLE STREET
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0036867
Source Type:	TRANSFORM
Release Town:	ESSEX
Notification Date:	05/28/2021
Category:	TWO HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	07/27/2021
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Not reported

Release:

Name:	ADJACENT TO 42 APPLE STREET
Address:	42 APPLE STREET
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0036867 / PSNC
Primary ID:	Not reported
Official City:	ESSEX
Notification:	05/28/2021
Category:	TWO HR
Status Date:	07/27/2021
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/28/2021
Response Action Outcome:	PN
Action Type:	Immediate Response Action

ADJACENT TO 42 APPLE STREET (Continued) **S127590270**

Action Status: Oral Approval of Plan or Action
Action Date: 5/28/2021
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/17/2021
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 7/27/2021
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/27/2021
Response Action Outcome: PN

Chemicals:
Chemical: MINERAL OIL
Quantity: 49 gallons
Location Type: ROADWAY
Source: TRANSFORM

C5 **TRANSFER STATION** **MA MERCURY** **S113670346**
NE **30 LANDING ROAD** **N/A**
< 1/8 **ESSEX, MA**
0.065 mi.
341 ft. **Site 1 of 4 in cluster C**

Relative: **Lower**
Actual: **33 ft.**

MERCURY:
Name: TRANSFER STATION
Address: 30 LANDING ROAD
City,State,Zip: ESSEX, MA
Hours1: Tues, Fri, Sat: 7:30am-3pm
Work Phone: (978) 768-6262
Button Batteries B: Yes
Button Batteries R: Yes
Fluorescent Lamps (Incl# Cfls) B: Not reported
Fluorescent Lamps (Incl# Cfls) R: Yes
Thermostats B: Yes
Thermostats R: Not reported
Electronics-Inc Flat Panel TV,Laptops B: Yes
Electronics-Inc Flat Panel TV,Laptops R: Yes
Other Hg Products-Thermometers Blood Press Cuffs B: Not reported
Other Hg Products-Thermometers Blood Press Cuffs R: Yes
Comments: Residents of Essex only with sticker.
Municipality: ESSEX
Site Status: Not reported
End Date: Not reported
Add Date: 8/25/2023
Display On Map: YES
Accepts Small Business: Not reported
Small Business Comments: Not reported

C6 **TOWN OF ESSEX (HHW)** **E MANIFEST** **1032341795**
NE **30 LANDING ROAD** **N/A**
< 1/8 **ESSEX, MA 01929**
0.065 mi.
341 ft. **Site 2 of 4 in cluster C**

Relative:
Lower

Actual:
33 ft.

E MANIFEST:

Manifest Tracking Number:	021599480JJK
Last Updated Date:	20210527
Shipped Date:	20210410
Received Date:	20210414
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	NJD003812047
Generator Name:	Town Of Essex (Hhw)
Generator Location Street Number:	Not reported
Generator Location Street 1:	30 LANDING ROAD
Generator Location Street 2:	Not reported
Generator Location City:	ESSEX
Generator Location State:	MA
Generator Location Zip:	01929
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	6 SHIRE DRIVE
Generator Mail Street 2:	Not reported
Generator Mail City:	NORFOLK
Generator Mail Zip:	02056
Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	NJD002200046
Designated Facility Name:	Cycle Chem, Inc.
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	217 SOUTH FIRST STREET
Designated Facility Mail City:	ELIZABETH
Designated Facility Mail Zip:	07206
Designated Facility Mail State:	NJ
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	217 SOUTH FIRST STREET
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	ELIZABETH
Designated Facility Location Zip:	07206
Designated Facility Location State:	NJ
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Transporter:

Manifest Tracking Number:	021599480JJK
Transporter Line Number:	1
Transporter EPA ID:	NJD003812047
Transporter Name:	Acv Environmental Services, Inc

Waste Line:

Manifest Tracking Number:	021599480JJK
Waste Line Number:	1
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported

TOWN OF ESSEX (HHW) (Continued) **1032341795**

U.S. DOT Description:	Not reported
Non-Hazardous Waste Description:	Un3480, Lithium Ion Batteries Including Lithium Ion Polymer Batteries, 9 ,
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	7
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.0035
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.0035
Waste Quantity, in Kilograms:	3.1746051
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	3.1746051
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	3.1746051
Quantity Non Haz Tons:	0.0035
State Waste Codes:	Not reported
Manifest Tracking Number:	021599480JJK
Waste Line Number:	2
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported
U.S. DOT Description:	Not reported
Non-Hazardous Waste Description:	Batteries, Dry, [Not Subject To The Requirements Of This Subchapter] (Nickel Cadmium Batteries For Recycle)
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	12
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.006
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.006
Waste Quantity, in Kilograms:	5.44218
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	5.44218

TOWN OF ESSEX (HHW) (Continued) **1032341795**

Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	5.44218
Quantity Non Haz Tons:	0.006
State Waste Codes:	Not reported

Manifest Tracking Number:	021599480JJK
Waste Line Number:	3
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported
U.S. DOT Description:	Not reported
Non-Hazardous Waste Description:	Non Rcra Non Dot Regulated Material (Alkaline Batteries)
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	8
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.004
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.004
Waste Quantity, in Kilograms:	3.6281202
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	3.6281202
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N

TOWN OF ESSEX (HHW) (Continued) **1032341795**

Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	3.6281202
Quantity Non Haz Tons:	0.004
State Waste Codes:	Not reported
Manifest Tracking Number:	021599480JJK
Waste Line Number:	4
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported
U.S. DOT Description:	Not reported
Non-Hazardous Waste Description:	Rq, Un2794, Batteries, Wet, Filled With Acid, 8 , (Universal Waste)
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	5
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.0025
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.0025
Waste Quantity, in Kilograms:	2.267575
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	2.267575
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	2.267575
Quantity Non Haz Tons:	0.0025
State Waste Codes:	Not reported
Manifest Tracking Number:	021599480JJK
Waste Line Number:	5
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported
U.S. DOT Description:	Not reported
Non-Hazardous Waste Description:	Non Dot Regulated-Universal Waste- Mercury Containing Lamps
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs

TOWN OF ESSEX (HHW) (Continued) **1032341795**

Waste Quantity:	3
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.0015
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.0015
Waste Quantity, in Kilograms:	1.360545
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	1.360545
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	1.360545
Quantity Non Haz Tons:	0.0015
State Waste Codes:	Not reported

C7 **ACV ENVIRONMENTAL SERVICES INC. FOR TOWN OF ESSEX** **E MANIFEST** **1031848078**
NE **30 LANDING ROAD** **N/A**
< 1/8 **ESSEX, MA 01929**
0.065 mi.
341 ft. **Site 3 of 4 in cluster C**

Relative: **Lower**
Actual: **33 ft.**

E MANIFEST:

Manifest Tracking Number:	021599478JJK
Last Updated Date:	20220210
Shipped Date:	20210410
Received Date:	20210414
Manifest Status:	Corrected
Submission Type:	DataImage5Copy
Origin Type:	Web
Generator EPA ID:	NJD003812047
Generator Name:	Acv Environmental Services Inc. For Town Of Essex
Generator Location Street Number:	30
Generator Location Street 1:	30 LANDING ROAD
Generator Location Street 2:	Not reported
Generator Location City:	ESSEX
Generator Location State:	MA
Generator Location Zip:	01929
Generator Mail Street Number:	6
Generator Mail Street 1:	Shire Drive
Generator Mail Street 2:	Not reported
Generator Mail City:	Norfolk

ACV ENVIRONMENTAL SERVICES INC. FOR TOWN OF ESSEX (Continued) **1031848078**

Generator Mail Zip:	02056
Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	NJD002200046
Designated Facility Name:	Cyclechem,Inc.
Designated Facility Mail Street Number:	217
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	SOUTH FIRST STREET
Designated Facility Mail City:	ELIZABETHPORT
Designated Facility Mail Zip:	07206
Designated Facility Mail State:	NJ
Designated Facility Location Street Number:	217
Designated Facility Location Street 1:	SOUTH FIRST STREET
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	ELIZABETHPORT
Designated Facility Location Zip:	07206
Designated Facility Location State:	NJ
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Transporter:

Manifest Tracking Number:	021599478JJK
Transporter Line Number:	1
Transporter EPA ID:	NJD003812047
Transporter Name:	Acv Environmental Services Inc.

Waste Line:

Manifest Tracking Number:	021599478JJK
Waste Line Number:	1
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN2588
U.S. DOT Description:	Rq, Un2588, Waste Pesticides, Solid, Toxic, N.O.S. (Diazinon, Lindane), 6.1, Ii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	225
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.1125
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.1125
Waste Quantity, in Kilograms:	102.04088
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	102.04088
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported

ACV ENVIRONMENTAL SERVICES INC. FOR TOWN OF ESSEX (Continued) **1031848078**

Form Code Description: Not reported
Source Code: Not reported
Source Code Description: Not reported
Waste Minimization Code: Not reported
Waste Minimization Code Description: Not reported
Consent Number: Not reported
EPA Waste Indicator: Y
Federal Waste Codes: D004, D013, D014, D016, D020, D036
Quantity Haz Kg: 102.04088
Quantity Haz Tons: 0.1125
Quantity Non Haz Kg: 0
Quantity Non Haz Tons: 0
State Waste Codes: Not reported

Manifest Tracking Number: 021599478JJK
Waste Line Number: 2
U.S. DOT Hazardous Indicator: Y
U.S. DOT ID Number: UN2902
U.S. DOT Description: Rq, Un2902, Waste Pesticides, Liquid, Toxic, N.O.S. (Diazinon, Lindane), 6.1, Ii
Non-Hazardous Waste Description: Not reported
Number of Containers: 2
Container Type Code: DF
Container Type Description: Fiberboard or plastic drums, barrels, kegs
Waste Quantity: 275
Quantity Unit of Measure Code: P
Quantity Unit of Measure Description: Pounds
Waste Quantity, in Tons: 0.1375
Acute Waste Quantity, in Tons: 0
Non-Acute Waste Quantity, in Tons: 0.1375
Waste Quantity, in Kilograms: 124.71663
Acute Waste Quantity, in Kilograms: 0
Non-Acute Waste Quantity, in Kilorgrams: 124.71663
Management Method Code: H141
Management Method Description: STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator: N
Quantity Discrepancy Indicator: N
Waste Type Discrepancy Indicator: N
Waste Density: Not reported
Waste Density Unit of Measure Code: Not reported
Waste Density Unit of Measure Description: Not reported
Form Code: Not reported
Form Code Description: Not reported
Source Code: Not reported
Source Code Description: Not reported
Waste Minimization Code: Not reported
Waste Minimization Code Description: Not reported
Consent Number: Not reported
EPA Waste Indicator: Y
Federal Waste Codes: D004, D013, D014, D016, D020, D036
Quantity Haz Kg: 124.71663
Quantity Haz Tons: 0.1375
Quantity Non Haz Kg: 0
Quantity Non Haz Tons: 0
State Waste Codes: Not reported

Manifest Tracking Number: 021599478JJK

ACV ENVIRONMENTAL SERVICES INC. FOR TOWN OF ESSEX (Continued) **1031848078**

Waste Line Number:	3
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	NA1760
U.S. DOT Description:	Rq, Na1760, Waste Compounds, Cleaning Liquid, 8, Ii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	75
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.0375
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.0375
Waste Quantity, in Kilograms:	34.013626
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	34.013626
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D002
Quantity Haz Kg:	34.013626
Quantity Haz Tons:	0.0375
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0
State Waste Codes:	Not reported

Manifest Tracking Number:	021599478JJK
Waste Line Number:	4
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN1791
U.S. DOT Description:	Rq, Un1791, Waste Hypochlorite Solutions, 8, Ii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	45
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.0225
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.0225
Waste Quantity, in Kilograms:	20.408176
Acute Waste Quantity, in Kilograms:	0

ACV ENVIRONMENTAL SERVICES INC. FOR TOWN OF ESSEX (Continued) **1031848078**

Non-Acute Waste Quantity, in Kilorgrams:	20.408176
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D002
Quantity Haz Kg:	20.408176
Quantity Haz Tons:	0.0225
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0
State Waste Codes:	Not reported

Manifest Tracking Number:	021599478JJK
Waste Line Number:	5
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN3266
U.S. DOT Description:	Rq, Un3266, Waste Corroisve Liquid, Basic, Inorganic, N.O.S. (Sodium Hydroxide, Potassium Hydroxide), 8, Ii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	DM
Container Type Description:	Metal drums, barrels, kegs
Waste Quantity:	35
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.0175
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.0175
Waste Quantity, in Kilograms:	15.873026
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	15.873026
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported

ACV ENVIRONMENTAL SERVICES INC. FOR TOWN OF ESSEX (Continued) **1031848078**

Consent Number: Not reported
EPA Waste Indicator: Y
Federal Waste Codes: D002
Quantity Haz Kg: 15.873026
Quantity Haz Tons: 0.0175
Quantity Non Haz Kg: 0
Quantity Non Haz Tons: 0
State Waste Codes: Not reported

Manifest Tracking Number: 021599478JJK
Waste Line Number: 6
U.S. DOT Hazardous Indicator: Y
U.S. DOT ID Number: UN1993
U.S. DOT Description: Rq, Un1993, Waste Flammable Liquids, N.O.S. (Gasoline, Acetone), 3, Ii
Non-Hazardous Waste Description: Not reported
Number of Containers: 3
Container Type Code: DM
Container Type Description: Metal drums, barrels, kegs
Waste Quantity: 1500
Quantity Unit of Measure Code: P
Quantity Unit of Measure Description: Pounds
Waste Quantity, in Tons: 0.75
Acute Waste Quantity, in Tons: 0
Non-Acute Waste Quantity, in Tons: 0.75
Waste Quantity, in Kilograms: 680.2725
Acute Waste Quantity, in Kilograms: 0
Non-Acute Waste Quantity, in Kilorgrams: 680.2725
Management Method Code: H061
Management Method Description: FUEL BLENDING
Waste Residue Indicator: N
Quantity Discrepancy Indicator: N
Waste Type Discrepancy Indicator: N
Waste Density: Not reported
Waste Density Unit of Measure Code: Not reported
Waste Density Unit of Measure Description: Not reported
Form Code: Not reported
Form Code Description: Not reported
Source Code: Not reported
Source Code Description: Not reported
Waste Minimization Code: Not reported
Waste Minimization Code Description: Not reported
Consent Number: Not reported
EPA Waste Indicator: Y
Federal Waste Codes: D001, D018, D035, F003, F005
Quantity Haz Kg: 680.2725
Quantity Haz Tons: 0.75
Quantity Non Haz Kg: 0
Quantity Non Haz Tons: 0
State Waste Codes: Not reported

Manifest Tracking Number: 021599478JJK
Waste Line Number: 7
U.S. DOT Hazardous Indicator: Y
U.S. DOT ID Number: UN1993
U.S. DOT Description: Rq, Un1993, Waste Flammable Liquids, N.O.S. (Xylene, Toluene), 3, Ii
Non-Hazardous Waste Description: Not reported
Number of Containers: 2

ACV ENVIRONMENTAL SERVICES INC. FOR TOWN OF ESSEX (Continued) **1031848078**

Container Type Code:	DM
Container Type Description:	Metal drums, barrels, kegs
Waste Quantity:	500
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.25
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.25
Waste Quantity, in Kilograms:	226.7575
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	226.7575
Management Method Code:	H061
Management Method Description:	FUEL BLENDING
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D001, D018, F003, F005
Quantity Haz Kg:	226.7575
Quantity Haz Tons:	0.25
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0
State Waste Codes:	Not reported

Manifest Tracking Number:	021599478JJK
Waste Line Number:	8
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN1263
U.S. DOT Description:	Rq, Un1263, Waste Paint Related Material ,3, Iii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	2
Container Type Code:	DM
Container Type Description:	Metal drums, barrels, kegs
Waste Quantity:	1500
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.75
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.75
Waste Quantity, in Kilograms:	680.2725
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	680.2725
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N

ACV ENVIRONMENTAL SERVICES INC. FOR TOWN OF ESSEX (Continued) **1031848078**

Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D001, F003, F005
Quantity Haz Kg:	680.2725
Quantity Haz Tons:	0.75
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0
State Waste Codes:	Not reported
Manifest Tracking Number:	021599478JJK
Waste Line Number:	9
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN1263
U.S. DOT Description:	Rq, Un1263, Waste Paint Related Material, 3, Ii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	2
Container Type Code:	CF
Container Type Description:	Fiber or plastic boxes, cartons, cases
Waste Quantity:	2000
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	1
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	1
Waste Quantity, in Kilograms:	907.03
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	907.03
Management Method Code:	H061
Management Method Description:	FUEL BLENDING
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D001
Quantity Haz Kg:	907.03
Quantity Haz Tons:	1
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0

ACV ENVIRONMENTAL SERVICES INC. FOR TOWN OF ESSEX (Continued) **1031848078**

State Waste Codes: Not reported

Manifest Tracking Number: 021599478JJK
Waste Line Number: 10
U.S. DOT Hazardous Indicator: Y
U.S. DOT ID Number: UN1950
U.S. DOT Description: Rq, Un1950, Waste Aerosols, 2.1
Non-Hazardous Waste Description: Not reported
Number of Containers: 1
Container Type Code: CF
Container Type Description: Fiber or plastic boxes, cartons, cases
Waste Quantity: 450
Quantity Unit of Measure Code: P
Quantity Unit of Measure Description: Pounds
Waste Quantity, in Tons: 0.225
Acute Waste Quantity, in Tons: 0
Non-Acute Waste Quantity, in Tons: 0.225
Waste Quantity, in Kilograms: 204.08176
Acute Waste Quantity, in Kilograms: 0
Non-Acute Waste Quantity, in Kilorgrams: 204.08176
Management Method Code: H141
Management Method Description: STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator: N
Quantity Discrepancy Indicator: N
Waste Type Discrepancy Indicator: N
Waste Density: Not reported
Waste Density Unit of Measure Code: Not reported
Waste Density Unit of Measure Description: Not reported
Form Code: Not reported
Form Code Description: Not reported
Source Code: Not reported
Source Code Description: Not reported
Waste Minimization Code: Not reported
Waste Minimization Code Description: Not reported
Consent Number: Not reported
EPA Waste Indicator: Y
Federal Waste Codes: D001
Quantity Haz Kg: 204.08176
Quantity Haz Tons: 0.225
Quantity Non Haz Kg: 0
Quantity Non Haz Tons: 0
State Waste Codes: Not reported

Manifest Tracking Number: 021599478JJK
Waste Line Number: 11
U.S. DOT Hazardous Indicator: N
U.S. DOT ID Number: Not reported
U.S. DOT Description: Not reported
Non-Hazardous Waste Description: Non Rcra Non Dot Regulated Material (Resins, Adhesives)
Number of Containers: 1
Container Type Code: DM
Container Type Description: Metal drums, barrels, kegs
Waste Quantity: 350
Quantity Unit of Measure Code: P
Quantity Unit of Measure Description: Pounds
Waste Quantity, in Tons: 0.175
Acute Waste Quantity, in Tons: 0

ACV ENVIRONMENTAL SERVICES INC. FOR TOWN OF ESSEX (Continued) **1031848078**

Non-Acute Waste Quantity, in Tons:	0.175
Waste Quantity, in Kilograms:	158.73026
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	158.73026
Management Method Code:	Not reported
Management Method Description:	Not reported
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	158.73026
Quantity Non Haz Tons:	0.175
State Waste Codes:	MA-ID72
Manifest Tracking Number:	021599478JJK
Waste Line Number:	12
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported
U.S. DOT Description:	Not reported
Non-Hazardous Waste Description:	Non Dot Regulated-State Regulated Oily Material
Number of Containers:	6
Container Type Code:	DM
Container Type Description:	Metal drums, barrels, kegs
Waste Quantity:	3600
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	1.8
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	1.8
Waste Quantity, in Kilograms:	1632.654
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	1632.654
Management Method Code:	Not reported
Management Method Description:	Not reported
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported

ACV ENVIRONMENTAL SERVICES INC. FOR TOWN OF ESSEX (Continued) **1031848078**

Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	0
Quantity Haz Tons:	0
Quantity Non Haz Kg:	1632.654
Quantity Non Haz Tons:	1.8
State Waste Codes:	MA-ID72
Manifest Tracking Number:	021599478JJK
Waste Line Number:	13
U.S. DOT Hazardous Indicator:	Y
U.S. DOT ID Number:	UN3139
U.S. DOT Description:	Rq, Un3139, Waste Oxidizing Liquid, N.O.S. (Calcium Hypochlorite, Sodium Nitrate), 5.1, Ii
Non-Hazardous Waste Description:	Not reported
Number of Containers:	1
Container Type Code:	DF
Container Type Description:	Fiberboard or plastic drums, barrels, kegs
Waste Quantity:	3
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.0015
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.0015
Waste Quantity, in Kilograms:	1.360545
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	1.360545
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	Y
Federal Waste Codes:	D001, D007
Quantity Haz Kg:	1.360545
Quantity Haz Tons:	0.0015
Quantity Non Haz Kg:	0
Quantity Non Haz Tons:	0
State Waste Codes:	Not reported

C8 **BOTHWAY FARM** **MA SHWS** **S100257102**
NE **SOUTHERN AVE** **MA SWF/LF** **N/A**
< 1/8 **ESSEX, MA 01929** **MA INST CONTROL**
0.065 mi. **MA RELEASE**
341 ft. **Site 4 of 4 in cluster C** **MA ASBESTOS**

Relative:
Lower

Actual:
33 ft.

SHWS:

Name:	BOTHWAY FARM
Address:	SOUTHERN AVE
City,State,Zip:	ESSEX, MA 01929
Facility ID:	3-0011464
Source Type:	UNKNOWN
Release Town:	ESSEX
Notification Date:	08/15/1994
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	11/29/1995
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

LF:

Name:	ESSEX LANDFILL
Address:	30 LANDING RD
City,State,Zip:	ESSEX, MA 01929
Facility Phone:	Not reported
Annual Tons for 1995:	Not reported
Annual Tons for 1996:	Not reported
Annual Tons for 1997:	Not reported
Annual Tons for 1998:	Not reported
Annual Tons for 1999:	Not reported
Annual Tons for 2000:	Not reported
Annual Tons for 2001:	Not reported
Annual Tons for 2002:	Not reported
Annual Tons for 2003:	Not reported
Annual Tons for 2004:	Not reported
Annual Tons for 2005:	Not reported
Annual Tons for 2006:	Not reported
Annual Tons for 2007:	Not reported
Annual Tons for 2008:	Not reported
Annual Tons for 2009:	Not reported
Annual Tons for 2010:	Not reported
Annual Tons for 2011:	Not reported
Annual Tons for 2012:	Not reported
Annual Tons for 2013:	Not reported
Annual Tons for 2014:	Not reported
Annual Tons for 2015:	Not reported
Reg Obj Acct ID Num For Each Solid Waste Operation:	172508
Days of Operation:	Not reported
Note On The Physical Location Of The Site:	Not reported
Acres:	14
Active Year:	Not reported
Classification Group:	Land Disposal
Current Or Most Recent Closed Classification:	CSU-LF
Description Of The Last Classification:	Landfill Closure Status Unknown
Close Year:	Not reported
Name Of The Organization:	TOWN OF ESSEX
Contacts Organization Type:	Municipal

BOTHWAY FARM (Continued) **S100257102**

Contact Persons Name And Title:	BRUCE JULIAN, DPW DIRECTOR
Contact Phone Including Extension:	(978)768-6262
Contact Mailing Street Address:	MARTIN STREET
Contacts Mailing City, State, Zip:	ESSEX, MA 01929
Inactive Year:	1985
Land Disposal Closure Status:	Incomplete
Land Disposal Only, Category Waste Disposed:	MSW
Landfills Liner:	Not Lined
Municipality That The Operation Is Located In:	ESSEX
Alpha-Numeric Identification Code:	SL0092.001
Numeric-Only Portion Of The Identification Code:	92.001
Region:	Northeast (Wilmington)
Org That Pays Any Annual Compliance Fee And/Or Permittee:	Not reported
Responsible Party Organization Type:	Not reported
Responsible Party Mailing Street Address Line 1:	Not reported
Responsible Party Mailing Street Address Line 2:	Not reported
Responsible Party Mailing City, State, Zip:	Not reported
Responsible Party Telephone Inc Extension:	Not reported
Maximum Permitted Tons Per Day:	Not reported
Current Operational Status:	Inactive

Name:	ESSEX TRANSFER STATION
Address:	30 LANDING RD
City,State,Zip:	ESSEX, MA 01929
Facility Phone:	(978)768-6262
Annual Tons for 1995:	1417
Annual Tons for 1996:	Not reported
Annual Tons for 1997:	Not reported
Annual Tons for 1998:	1538
Annual Tons for 1999:	1578
Annual Tons for 2000:	1572
Annual Tons for 2001:	1635
Annual Tons for 2002:	1730
Annual Tons for 2003:	1678
Annual Tons for 2004:	1771
Annual Tons for 2005:	1808
Annual Tons for 2006:	1869
Annual Tons for 2007:	1726
Annual Tons for 2008:	1685
Annual Tons for 2009:	1724
Annual Tons for 2010:	Not reported
Annual Tons for 2011:	Not reported
Annual Tons for 2012:	Not reported
Annual Tons for 2013:	Not reported
Annual Tons for 2014:	Not reported
Annual Tons for 2015:	Not reported
Reg Obj Acct ID Num For Each Solid Waste Operation:	173155
Days of Operation:	208
Note On The Physical Location Of The Site:	Not reported
Acres:	Not reported
Active Year:	1983
Classification Group:	Handling/Transfer
Current Or Most Recent Closed Classification:	SMTRAN
Description Of The Last Classification:	Small Transfer Station
Close Year:	Not reported
Name Of The Organization:	TOWN OF ESSEX
Contacts Organization Type:	Municipal

BOTHWAY FARM (Continued) **S100257102**

Contact Persons Name And Title:	PAUL GOODWIN, SUPERINTENDENT
Contact Phone Including Extension:	(978)768-6262
Contact Mailing Street Address:	44 CENTENNIAL GROVE RD
Contacts Mailing City, State, Zip:	ESSEX, MA 01929
Inactive Year:	Not reported
Land Disposal Closure Status:	n/a
Land Disposal Only, Category Waste Disposed:	n/a
Landfills Liner:	n/a
Municipality That The Operation Is Located In:	ESSEX
Alpha-Numeric Identification Code:	TR0092.003
Numeric-Only Portion Of The Identification Code:	92.003
Region:	Northeast (Wilmington)
Org That Pays Any Annual Compliance Fee And/Or Permittee:	Not reported
Responsible Party Organization Type:	Not reported
Responsible Party Mailing Street Address Line 1:	Not reported
Responsible Party Mailing Street Address Line 2:	Not reported
Responsible Party Mailing City, State, Zip:	Not reported
Responsible Party Telephone Inc Extension:	Not reported
Maximum Permitted Tons Per Day:	6
Current Operational Status:	Active

LF PROFILES:

Site Type Code:	MSW
Site Type Desc:	Municipal Solid Waste
Status:	Inactive
Owner Type:	Municipal
Stat Active Yr:	Not reported
Stat Inactive Yr:	1985
Stat Close Yr:	Not reported
Lined?:	Not Lined
Cap Status:	Incomplete
Cap Cert Date:	Not reported
Post Closure Permit:	APPROV 8/20/2004
Post Closure Use:	POST-CLOSURE USE: DPW GARAGE
LF Gas Energy:	Not reported
Acres:	13.68
Acres Doc:	EL
Acres Doc Desc:	Estimated Location
Electrical Provider:	National Grid
Dist To Trans Miles:	8.01
Wind Speed 30m:	5.1688
Wind Speed 50m:	5.8088
Wind Speed 100m:	6.8485
Wind Speed 70m:	6.3484
Mass DEP FMF DB Id:	39261

INST CONTROL:

Name:	BOTHWAY FARM
Address:	SOUTHERN AVE
City,State,Zip:	ESSEX, MA 01929
Release Tracking Number:	3-0011464
Action Type:	AUL
Action Stat:	RECPT
Action Date:	11/29/1995
Response Action Outcome:	-

BOTHWAY FARM (Continued) **S100257102**

Name: BOTHWAY FARM
Address: SOUTHERN AVE
City,State,Zip: ESSEX, MA 01929
Release Tracking Number: 3-0011464
Action Type: AUL
Action Stat: TERMIN
Action Date: 08/13/2002
Response Action Outcome: -

Release:
Name: BOTHWAY FARM
Address: SOUTHERN AVE
City,State,Zip: ESSEX, MA 01929
Release Tracking Number/Current Status: 3-0011464 / RAO
Primary ID: Not reported
Official City: ESSEX
Notification: 08/15/1994
Category: TWO HR
Status Date: 11/29/1995
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/14/1994
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 10/14/1994
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 10/14/1994
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/29/1995
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/29/1995
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/24/1995
Response Action Outcome: Not reported

BOTHWAY FARM (Continued) **S100257102**

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/16/2002
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 4/16/2002
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/17/1995
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 7/23/1999
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 7/24/1995
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 7/6/1995
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 7/6/1995
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 8/12/1999
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Action Status or AUL Terminated
Action Date: 8/13/2002
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 8/13/2002
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 8/13/2002
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only

BOTHWAY FARM (Continued) **S100257102**

Action Date: 8/15/1994
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/15/1994
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 8/18/1995
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/25/1994
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 8/28/1995
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/28/1995
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 8/6/1999
Response Action Outcome: Not reported

Chemicals:
Chemical: ARSENIC
Quantity: 113 micrograms per gallon
Chemical: LEAD
Quantity: 810 parts per million
Chemical: LEAD
Quantity: 810 micrograms per gallon
Chemical: ARSENIC
Quantity: 130 parts per million
Location Type: RESIDNTIAL
Source: UNKNOWN

ASBESTOS:
Name: TOWN OF ESSEX
Address: 30 LANDING RD
City,State,Zip: ESSEX, MA
Notification: Not reported
DEP Region: Not reported
Notifiers Name: Not reported
Start Date: 08/07/2020
End Date: 08/07/2020
Date Entered: Not reported
Entry Date: 08/04/2020

BOTHWAY FARM (Continued) **S100257102**

Quantity Materical Removed SF:	0
Quantity Material Removed LF:	10
Project Description:	TRANSPIPE
AR Tracking ID:	347779
Super Lic Number:	AS901713
Monitor Lic Number:	AA000179
Lab Lic Number:	AA000179
Year:	2020
Sticker Number:	100331786
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	9783616158
Sub Town:	Not reported
Worksite:	GARAGE
Occupied:	0
Contractor:	AC000806
Contract Type:	WRITTEN
Hours:	0700-1530
Project Type:	Oth:PICK UP
Abatement Process:	Disp
Location:	OUTDOORS
Decon Process:	ALL APLLICABLE
Disposal Methods:	ALL APPLICABLE
Facility Usage:	PUBLIC WORKS
Waiver Given:	Not reported
DEP Waiver Number:	NAW2008598
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	TOWN OF ESSEX
Owner Address:	30 LANDING RD
Owner City:	ESSEX
Owner State:	MA
On Site Manager Name:	NA
On Site Manager Phone:	1111111111
Ins Comp:	HAYS COMPANIES
Policy Number:	R2WC528067
EXP Date:	11/11/2020
Facility Size:	45000
Transporter Name:	PENIEL ENVIRONMENTAL
Transporter Address:	778 ELM ST
Transporter City:	MILFORD
Transporter State:	NH
Final Site:	Not reported
Certified Name:	THOMAS MORNEAULT
Cert Sign Date:	08/04/2020
Certified Company:	PENIEL ENVIRONMENTAL
Certified Phone:	6033161691
Entered_by:	TMORNEAULT

9
NNE
< 1/8
0.091 mi.
480 ft.

ESSEX SANITARY LANDFILL
OFF LANDING ROAD
ESSEX, MA

ODI **1007444480**
N/A

Relative:
Lower

Actual:
6 ft.

ODI:
Non Compliance Category: 06
Latitude: 42 37 40
Longitude: 070 47 10

D10
WSW
1/8-1/4
0.205 mi.
1081 ft.

PAUL RUSSELL & COMPANY
106 WESTERN AVE
ESSEX, MA 01929
Site 1 of 6 in cluster D

PA MANIFEST **S113738554**
N/A

Relative:
Lower

Actual:
39 ft.

PA MANIFEST:

Name:	PAUL RUSSELL & COMPANY
Address:	106 WESTERN AVE
City,State,Zip:	ESSEX, MA 01929
Year:	2012
Manifest Number:	009789662JJK
Manifest Type:	T
Generator EPA ID:	MAD981064009
Generator Date:	10/24/2012
Mailing Address:	Not reported
Contact Name:	Not reported
Contact Phone:	Not reported
TSD EPA ID:	Not reported
TSD Date:	Not reported
TSD Facility Name:	CYCLE CHEM INC
TSD Facility Address:	217 S FIRST ST
TSD Facility City:	ELIZABETH
TSD Facility State:	NJ
Facility Telephone:	Not reported
Page Number:	1
Line Number:	1
Waste Number:	F002
Container Number:	1
Container Type:	DM
Waste Quantity:	500
Unit:	P
Handling Code:	Not reported
TSP EPA ID:	NJD002200046
Date TSP Sig:	Not reported

D11
WSW
1/8-1/4
0.205 mi.
1081 ft.

PAUL RUSSELL & CO.
106 WESTERN AVE
ESSEX, MA 01929
Site 2 of 6 in cluster D

RCRA-SQG **1000293176**
US AIRS **MAD981064009**
FINDS
ECHO
E MANIFEST
NJ MANIFEST

Relative:
Lower

Actual:
39 ft.

RCRA Listings:

Date Form Received by Agency:	19850221
Handler Name:	Gullwing Service Co Inc
Handler Address:	106 Western Ave

PAUL RUSSELL & CO. (Continued) **1000293176**

Handler City,State,Zip:		ESSEX, MA 01929
EPA ID:		MAD981064009
Contact Name:		PAUL RUSSELL
Contact Address:		BOX 954
Contact City,State,Zip:		ESSEX, MA 01929
Contact Telephone:		508-768-6919
Contact Fax:		Not reported
Contact Email:		Not reported
Contact Title:		Not reported
EPA Region:		01
Land Type:		Private
Federal Waste Generator Description:		Small Quantity Generator
Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Handler Activities, State-specific Activities
State District Owner:		Ma
State District:		N
Mailing Address:		BOX 954
Mailing City,State,Zip:		ESSEX, MA 01929
Owner Name:	Not reported	
Owner Type:		Not reported
Operator Name:	Gull Wing	
Operator Type:		Private
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		No
Universal Waste Destination Facility:		No
Federal Universal Waste:		No
Active Site State-Reg Handler:		--Y
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		N
Sub-Part K Indicator:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
202 GPRA Corrective Action Baseline:		No
Subject to Corrective Action Universe:		No
Non-TSDFs Where RCRA CA has Been Imposed Universe:		No
Corrective Action Priority Ranking:		No NCAPS ranking
Environmental Control Indicator:		No
Institutional Control Indicator:		No
Human Exposure Controls Indicator:		N/A
Groundwater Controls Indicator:		N/A
Significant Non-Complier Universe:		No
Unaddressed Significant Non-Complier Universe:		No
Addressed Significant Non-Complier Universe:		No
Significant Non-Complier With a Compliance Schedule Universe:		No
Financial Assurance Required:		Not reported
Handler Date of Last Change:		20171020

PAUL RUSSELL & CO. (Continued) **1000293176**

Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	Ignitable Waste

Handler - Owner Operator:

Owner/Operator Indicator:	Operator
Owner/Operator Name: GULL WING	
Legal Status:	Private
Date Became Current:	19911208
Date Ended Current:	Not reported
Owner/Operator Address:	BOX 954
Owner/Operator City,State,Zip:	ESSEX, MA 01929
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	19850221
Handler Name: GULLWING SERVICE CO INC	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Ma
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Codes:	No NAICS Codes Found

Has the Facility Received Notices of Violations:

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported

PAUL RUSSELL & CO. (Continued) **1000293176**

Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Listing - General
Date Violation was Determined:	19960228
Actual Return to Compliance Date:	19960513
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19960422
Enforcement Identifier:	000
Date of Enforcement Action:	19960322
Enforcement Responsible Agency:	State
Enforcement Docket Number:	9038-2
Enforcement Attorney:	R1
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	KRAMA
Enforcement Responsible Sub-Organization:	NE
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported

PAUL RUSSELL & CO. (Continued) **1000293176**

SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Listing - General
Date Violation was Determined: 19960228
Actual Return to Compliance Date: 19960513
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19960422
Enforcement Identifier: 000
Date of Enforcement Action: 19960322
Enforcement Responsible Agency: State
Enforcement Docket Number: 9038-2
Enforcement Attorney: R1
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: KRAMA
Enforcement Responsible Sub-Organization: NE
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: State Statute or Regulation
Date Violation was Determined: 19960228
Actual Return to Compliance Date: 19960513
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19960422
Enforcement Identifier: 000
Date of Enforcement Action: 19960322
Enforcement Responsible Agency: State

PAUL RUSSELL & CO. (Continued) **1000293176**

Enforcement Docket Number:	9038-2
Enforcement Attorney:	R1
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	KRAMA
Enforcement Responsible Sub-Organization:	NE
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	State Statute or Regulation
Date Violation was Determined:	19960228
Actual Return to Compliance Date:	19960513
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19960422
Enforcement Identifier:	000
Date of Enforcement Action:	19960322
Enforcement Responsible Agency:	State
Enforcement Docket Number:	9038-2
Enforcement Attorney:	R1
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	KRAMA
Enforcement Responsible Sub-Organization:	NE
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported

PAUL RUSSELL & CO. (Continued) **1000293176**

SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Pre-transport
Date Violation was Determined: 19960228
Actual Return to Compliance Date: 19960513
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19960422
Enforcement Identifier: 000
Date of Enforcement Action: 19960322
Enforcement Responsible Agency: State
Enforcement Docket Number: 9038-2
Enforcement Attorney: R1
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: KRAMA
Enforcement Responsible Sub-Organization: NE
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: State Statute or Regulation
Date Violation was Determined: 19960228
Actual Return to Compliance Date: 19960513
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19960422
Enforcement Identifier: 000
Date of Enforcement Action: 19960322
Enforcement Responsible Agency: State

PAUL RUSSELL & CO. (Continued) **1000293176**

Enforcement Docket Number:	9038-2
Enforcement Attorney:	R1
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	KRAMA
Enforcement Responsible Sub-Organization:	NE
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	State Statute or Regulation
Date Violation was Determined:	19960228
Actual Return to Compliance Date:	19960513
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19960422
Enforcement Identifier:	000
Date of Enforcement Action:	19960322
Enforcement Responsible Agency:	State
Enforcement Docket Number:	9038-2
Enforcement Attorney:	R1
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	KRAMA
Enforcement Responsible Sub-Organization:	NE
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported

PAUL RUSSELL & CO. (Continued) **1000293176**

SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19960228
Actual Return to Compliance Date: 19960513
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19960422
Enforcement Identifier: 000
Date of Enforcement Action: 19960322
Enforcement Responsible Agency: State
Enforcement Docket Number: 9038-2
Enforcement Attorney: R1
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: KRAMA
Enforcement Responsible Sub-Organization: NE
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Pre-transport
Date Violation was Determined: 19960228
Actual Return to Compliance Date: 19960513
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19960422
Enforcement Identifier: 000
Date of Enforcement Action: 19960322
Enforcement Responsible Agency: State

PAUL RUSSELL & CO. (Continued) **1000293176**

Enforcement Docket Number:	9038-2
Enforcement Attorney:	R1
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	KRAMA
Enforcement Responsible Sub-Organization:	NE
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	19960228
Actual Return to Compliance Date:	19960513
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19960422
Enforcement Identifier:	000
Date of Enforcement Action:	19960322
Enforcement Responsible Agency:	State
Enforcement Docket Number:	9038-2
Enforcement Attorney:	R1
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	KRAMA
Enforcement Responsible Sub-Organization:	NE
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported

PAUL RUSSELL & CO. (Continued) **1000293176**

SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - General
Date Violation was Determined: 19960228
Actual Return to Compliance Date: 19960513
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19960422
Enforcement Identifier: 000
Date of Enforcement Action: 19960322
Enforcement Responsible Agency: State
Enforcement Docket Number: 9038-2
Enforcement Attorney: R1
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number:Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: KRAMA
Enforcement Responsible Sub-Organization: NE
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:
Evaluation Date: 19960513
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE SCHEDULE EVALUATION
Evaluation Responsible Person Identifier: R1KAA
Evaluation Responsible Sub-Organization: NE
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported

PAUL RUSSELL & CO. (Continued) **1000293176**

Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19960228
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	KRAMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19960513
Scheduled Compliance Date:	19960422
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19960228
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	KRAMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19960513
Scheduled Compliance Date:	19960422
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19960228
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	KRAMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19960513
Scheduled Compliance Date:	19960422
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19960228
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	KRAMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19960513
Scheduled Compliance Date:	19960422
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19960228
Evaluation Responsible Agency:	State

PAUL RUSSELL & CO. (Continued) **1000293176**

Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	KRAMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19960513
Scheduled Compliance Date:	19960422
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19960228
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	KRAMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19960513
Scheduled Compliance Date:	19960422
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19960228
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	KRAMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19960513
Scheduled Compliance Date:	19960422
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19960228
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	KRAMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19960513
Scheduled Compliance Date:	19960422
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19960228
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	KRAMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19960513

PAUL RUSSELL & CO. (Continued) **1000293176**

Scheduled Compliance Date:	19960422
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19960228
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	KRAMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19960513
Scheduled Compliance Date:	19960422
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19960228
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	KRAMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19960513
Scheduled Compliance Date:	19960422
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

US AIRS MINOR:

Envid:	1000293176
Region Code:	01
Programmatic ID:	AIR MA0000002511903538
Facility Registry ID:	110009589917
D and B Number:	Not reported
Primary SIC Code:	Not reported
NAICS Code:	541990
Default Air Classification Code:	MIN
Facility Type of Ownership Code:	POF
Air CMS Category Code:	Not reported
HPV Status:	Not reported

FINDS:

Registry ID: 110001937860

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:

THE EMISSION INVENTORY SYSTEM (EIS) MAINTAINS AN INVENTORY OF LARGE STATIONARY SOURCES AND VOLUNTARILY-REPORTED SMALLER SOURCES OF AIR POINT POLLUTANT EMITTERS. IT CONTAINS INFORMATION ABOUT FACILITY SITES AND THEIR PHYSICAL LOCATION, EMISSIONS UNITS, EMISSIONS PROCESSES, RELEASE POINTS, CONTROL APPROACHES, AND REGULATIONS. FACILITY

PAUL RUSSELL & CO. (Continued) **1000293176**

INVENTORY DATA ARE KEPT SEPARATE FROM THE EMISSIONS DATA AND HAVE STABLE IDENTIFIERS TO IMPROVE CONTINUITY FROM YEAR TO YEAR AND TO HELP IDENTIFY DUPLICATE OR MISSING FACILITIES
The Air Facility System (AFS) contains compliance and permit data for stationary sources of air pollution regulated by the EPA, state, and local air pollution agencies.
ICIS-Air (AIR) AIR is the modernization of the Air Facility System (AFS) into the Integrated Compliance Information System (ICIS). AIR contains enforcement, compliance, and permit data for stationary sources of air pollution regulated by the EPA, State, and Local air pollution agencies.
The Massachusetts - Environmental Protection Integrated Computer System (MA-EPICS) is the central repository for all environmental protection data for the State of Massachusetts.
The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

Registry ID: 110009589917

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
The Air Facility System (AFS) contains compliance and permit data for stationary sources of air pollution regulated by the EPA, state, and local air pollution agencies.
ICIS-Air (AIR) AIR is the modernization of the Air Facility System (AFS) into the Integrated Compliance Information System (ICIS). AIR contains enforcement, compliance, and permit data for stationary sources of air pollution regulated by the EPA, State, and Local air pollution agencies.
The Massachusetts - Environmental Protection Integrated Computer System (MA-EPICS) is the central repository for all environmental protection data for the State of Massachusetts.
The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000293176
Registry ID: 110009589917

DFR URL:
Name: GULLWING SERVICES CO
Address: 106 Western Ave
City,State,Zip: ESSEX, MA 01929

Envid: 1000293176
Registry ID: 110001937860

PAUL RUSSELL & CO. (Continued) **1000293176**

DFR URL:
Name: MARK RICHEY WOODWORK
Address: 106 Western Avenue
City,State,Zip: ESSEX, MA 01929

E MANIFEST:

Manifest Tracking Number:	008737514SKS
Last Updated Date:	20230309
Shipped Date:	20230217
Received Date:	20230217
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAD981064009
Generator Name:	Paul Russell & Company
Generator Location Street Number:	Not reported
Generator Location Street 1:	106 WESTERN AVENUE
Generator Location Street 2:	Not reported
Generator Location City:	ESSEX
Generator Location State:	MA
Generator Location Zip:	01929
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	106 Western Avenue
Generator Mail Street 2:	Not reported
Generator Mail City:	Essex
Generator Mail Zip:	01929
Generator Mail State:	MA
Generator Contact Company Name:	Paul Russell & Company
Designated Facility EPA ID:	MAD066588005
Designated Facility Name:	Murphy'S Waste Oil Service Inc.
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	252 Salem Street
Designated Facility Mail City:	Woburn
Designated Facility Mail Zip:	01801
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	252 Salem Street
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	Woburn
Designated Facility Location Zip:	01801
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	009151516SKS
Last Updated Date:	20240710
Shipped Date:	20240606
Received Date:	20240620
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAD981064009
Generator Name:	Paul Russell & Company
Generator Location Street Number:	Not reported

PAUL RUSSELL & CO. (Continued) **1000293176**

Generator Location Street 1:	106 WESTERN AVENUE
Generator Location Street 2:	Not reported
Generator Location City:	ESSEX
Generator Location State:	MA
Generator Location Zip:	01929
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	106 WESTERN AVENUE
Generator Mail Street 2:	Not reported
Generator Mail City:	ESSEX
Generator Mail Zip:	01929
Generator Mail State:	MA
Generator Contact Company Name:	PAUL RUSSELL & COMPANY
Designated Facility EPA ID:	MAD053452637
Designated Facility Name:	Clean Harbors Of Braintree Inc
Designated Facility Mail Street Number:	1
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	HILL AVENUE
Designated Facility Mail City:	BRAINTREE
Designated Facility Mail Zip:	02184
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	1
Designated Facility Location Street 1:	HILL AVENUE
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	BRAINTREE
Designated Facility Location Zip:	02184
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	007209663SKS
Last Updated Date:	20191023
Shipped Date:	20190927
Received Date:	20190927
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAD981064009
Generator Name:	Paul Russell & Company
Generator Location Street Number:	Not reported
Generator Location Street 1:	106 WESTERN AVENUE
Generator Location Street 2:	Not reported
Generator Location City:	ESSEX
Generator Location State:	MA
Generator Location Zip:	01929
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	106 Western Avenue
Generator Mail Street 2:	Not reported
Generator Mail City:	Essex
Generator Mail Zip:	01929
Generator Mail State:	MA
Generator Contact Company Name:	Not reported
Designated Facility EPA ID:	MAD082303777
Designated Facility Name:	Cyn Oil Corporation
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	1771 Washington St

PAUL RUSSELL & CO. (Continued) **1000293176**

Designated Facility Mail City:	Stoughton
Designated Facility Mail Zip:	02072
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	1771 Washington St
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	Stoughton
Designated Facility Location Zip:	02072
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	007217838SKS
Last Updated Date:	20200319
Shipped Date:	20200228
Received Date:	20200228
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAD981064009
Generator Name:	Paul Russell & Company
Generator Location Street Number:	Not reported
Generator Location Street 1:	106 WESTERN AVENUE
Generator Location Street 2:	Not reported
Generator Location City:	ESSEX
Generator Location State:	MA
Generator Location Zip:	01929
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	106 Western Avenue
Generator Mail Street 2:	Not reported
Generator Mail City:	Essex
Generator Mail Zip:	01929
Generator Mail State:	MA
Generator Contact Company Name:	Paul Russell & Company
Designated Facility EPA ID:	MAD082303777
Designated Facility Name:	Cyn Oil Corporation
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	1771 Washington St
Designated Facility Mail City:	Stoughton
Designated Facility Mail Zip:	02072
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	1771 Washington St
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	Stoughton
Designated Facility Location Zip:	02072
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	007217851SKS
Last Updated Date:	20200227
Shipped Date:	20200204
Received Date:	20200206

PAUL RUSSELL & CO. (Continued) **1000293176**

Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAD981064009
Generator Name:	Paul Russell & Company
Generator Location Street Number:	Not reported
Generator Location Street 1:	106 WESTERN AVENUE
Generator Location Street 2:	Not reported
Generator Location City:	ESSEX
Generator Location State:	MA
Generator Location Zip:	01929
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	106 Western Avenue
Generator Mail Street 2:	Not reported
Generator Mail City:	Essex
Generator Mail Zip:	01929
Generator Mail State:	MA
Generator Contact Company Name:	Paul Russell & Company
Designated Facility EPA ID:	MAD053452637
Designated Facility Name:	Clean Harbors Of Braintree Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	1 Hill Avenue
Designated Facility Mail City:	Braintree
Designated Facility Mail Zip:	02184
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	1 Hill Avenue
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	Braintree
Designated Facility Location Zip:	02184
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	007601573SKS
Last Updated Date:	20210421
Shipped Date:	20210401
Received Date:	20210401
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAD981064009
Generator Name:	Paul Russell & Company
Generator Location Street Number:	Not reported
Generator Location Street 1:	106 WESTERN AVENUE
Generator Location Street 2:	Not reported
Generator Location City:	ESSEX
Generator Location State:	MA
Generator Location Zip:	01929
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	106 Western Avenue
Generator Mail Street 2:	Not reported
Generator Mail City:	Essex
Generator Mail Zip:	01929
Generator Mail State:	MA

PAUL RUSSELL & CO. (Continued) **1000293176**

Generator Contact Company Name:	Paul Russell & Company
Designated Facility EPA ID:	MAD082303777
Designated Facility Name:	Cyn Oil Corporation
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	1771 Washington St
Designated Facility Mail City:	Stoughton
Designated Facility Mail Zip:	02072
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	1771 Washington St
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	Stoughton
Designated Facility Location Zip:	02072
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	009164899SKS
Last Updated Date:	20240627
Shipped Date:	20240607
Received Date:	20240607
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAD981064009
Generator Name:	Paul Russell & Company
Generator Location Street Number:	Not reported
Generator Location Street 1:	106 WESTERN AVENUE
Generator Location Street 2:	Not reported
Generator Location City:	ESSEX
Generator Location State:	MA
Generator Location Zip:	01929
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	106 WESTERN AVENUE
Generator Mail Street 2:	Not reported
Generator Mail City:	ESSEX
Generator Mail Zip:	01929
Generator Mail State:	MA
Generator Contact Company Name:	PAUL RUSSELL & COMPANY
Designated Facility EPA ID:	MAD066588005
Designated Facility Name:	Murphy'S Waste Oil Service Inc.
Designated Facility Mail Street Number:	252
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	SALEM STREET
Designated Facility Mail City:	WOBURN
Designated Facility Mail Zip:	01801
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	252
Designated Facility Location Street 1:	SALEM STREET
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	WOBURN
Designated Facility Location Zip:	01801
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N

PAUL RUSSELL & CO. (Continued) **1000293176**

Rejection Indicator:	N
Manifest Tracking Number:	016471926FLE
Last Updated Date:	20220310
Shipped Date:	20220218
Received Date:	20220218
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MV9787680106
Generator Name:	Stephen Terhune Woodworking
Generator Location Street Number:	Not reported
Generator Location Street 1:	106 WESTERN AVENUE
Generator Location Street 2:	Not reported
Generator Location City:	ESSEX
Generator Location State:	MA
Generator Location Zip:	01929
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	106 Western Avenue
Generator Mail Street 2:	Not reported
Generator Mail City:	Essex
Generator Mail Zip:	01929
Generator Mail State:	MA
Generator Contact Company Name:	Stephen Terhune Woodworking
Designated Facility EPA ID:	MAD053452637
Designated Facility Name:	Clean Harbors Of Braintree Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	1 Hill Avenue
Designated Facility Mail City:	Braintree
Designated Facility Mail Zip:	02184
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	1 Hill Avenue
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	Braintree
Designated Facility Location Zip:	02184
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N
Manifest Tracking Number:	006093764GBF
Last Updated Date:	20210316
Shipped Date:	20210224
Received Date:	20210224
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAD981064009
Generator Name:	Paul Russell & Company
Generator Location Street Number:	Not reported
Generator Location Street 1:	106 WESTERN AVENUE
Generator Location Street 2:	Not reported
Generator Location City:	ESSEX
Generator Location State:	MA
Generator Location Zip:	01929

PAUL RUSSELL & CO. (Continued) **1000293176**

Generator Mail Street Number:	Not reported
Generator Mail Street 1:	106 Western Avenue
Generator Mail Street 2:	Not reported
Generator Mail City:	Essex
Generator Mail Zip:	01929
Generator Mail State:	MA
Generator Contact Company Name:	Paul Russell & Company
Designated Facility EPA ID:	MAD053452637
Designated Facility Name:	Not reported
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	1 Hill Avenue
Designated Facility Mail City:	Braintree
Designated Facility Mail Zip:	02184
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	1 Hill Avenue
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	Braintree
Designated Facility Location Zip:	02184
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Clean Harbors Of Braintree Inc
Manifest Residue Indicator:	N
Rejection Indicator:	N

Manifest Tracking Number:	006093765GBF
Last Updated Date:	20210322
Shipped Date:	20210224
Received Date:	20210301
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAD981064009
Generator Name:	Paul Russell & Company
Generator Location Street Number:	Not reported
Generator Location Street 1:	106 WESTERN AVENUE
Generator Location Street 2:	Not reported
Generator Location City:	ESSEX
Generator Location State:	MA
Generator Location Zip:	01929
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	106 Western Avenue
Generator Mail Street 2:	Not reported
Generator Mail City:	Essex
Generator Mail Zip:	01929
Generator Mail State:	MA
Generator Contact Company Name:	Paul Russell & Company
Designated Facility EPA ID:	MAD082303777
Designated Facility Name:	Not reported
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	1771 Washington St
Designated Facility Mail City:	Stoughton
Designated Facility Mail Zip:	02072
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	1771 Washington St

PAUL RUSSELL & CO. (Continued) **1000293176**

Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	Stoughton
Designated Facility Location Zip:	02072
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Cyn Oil Corporation
Manifest Residue Indicator:	N
Rejection Indicator:	N
Manifest Tracking Number:	008625151SKS
Last Updated Date:	20230504
Shipped Date:	20230215
Received Date:	20230414
Manifest Status:	Signed
Submission Type:	DataImage5Copy
Origin Type:	Service
Generator EPA ID:	MAD981064009
Generator Name:	Paul Russell & Company
Generator Location Street Number:	Not reported
Generator Location Street 1:	106 WESTERN AVENUE
Generator Location Street 2:	Not reported
Generator Location City:	ESSEX
Generator Location State:	MA
Generator Location Zip:	01929
Generator Mail Street Number:	Not reported
Generator Mail Street 1:	106 Western Avenue
Generator Mail Street 2:	Not reported
Generator Mail City:	Essex
Generator Mail Zip:	01929
Generator Mail State:	MA
Generator Contact Company Name:	Paul Russell & Company
Designated Facility EPA ID:	MAD053452637
Designated Facility Name:	Clean Harbors Of Braintree Inc
Designated Facility Mail Street Number:	Not reported
Designated Facility Mail Street 1:	Not reported
Designated Facility Mail Street 2:	1 Hill Avenue
Designated Facility Mail City:	Braintree
Designated Facility Mail Zip:	02184
Designated Facility Mail State:	MA
Designated Facility Location Street Number:	Not reported
Designated Facility Location Street 1:	1 Hill Avenue
Designated Facility Location Street 2:	Not reported
Designated Facility Location City:	Braintree
Designated Facility Location Zip:	02184
Designated Facility Location State:	MA
Designated Facility Contact Company Name:	Not reported
Manifest Residue Indicator:	N
Rejection Indicator:	N

Transporter:

Manifest Tracking Number:	008625152SKS
Transporter Line Number:	1
Transporter EPA ID:	TXR000081205
Transporter Name:	Safety-Kleen Systems, Inc.
Manifest Tracking Number:	008625152SKS
Transporter Line Number:	2
Transporter EPA ID:	MAD039322250

PAUL RUSSELL & CO. (Continued) **1000293176**

Transporter Name: Clean Harbors Environmental Services, Inc.

Waste Line:

Manifest Tracking Number:	008625152SKS
Waste Line Number:	1
U.S. DOT Hazardous Indicator:	N
U.S. DOT ID Number:	Not reported
U.S. DOT Description:	Not reported
Non-Hazardous Waste Description:	None, None, Non Dot Regulated Material,), N/ (State Regulated Oil), N/A, None
Number of Containers:	1
Container Type Code:	DM
Container Type Description:	Metal drums, barrels, kegs
Waste Quantity:	400
Quantity Unit of Measure Code:	P
Quantity Unit of Measure Description:	Pounds
Waste Quantity, in Tons:	0.2
Acute Waste Quantity, in Tons:	0
Non-Acute Waste Quantity, in Tons:	0.2
Waste Quantity, in Kilograms:	181.406
Acute Waste Quantity, in Kilograms:	0
Non-Acute Waste Quantity, in Kilorgrams:	181.406
Management Method Code:	H141
Management Method Description:	STORAGE, BULKING AND/OR TRANSFER OFF SITE
Waste Residue Indicator:	N
Quantity Discrepancy Indicator:	N
Waste Type Discrepancy Indicator:	N
Waste Density:	Not reported
Waste Density Unit of Measure Code:	Not reported
Waste Density Unit of Measure Description:	Not reported
Form Code:	Not reported
Form Code Description:	Not reported
Source Code:	Not reported
Source Code Description:	Not reported
Waste Minimization Code:	Not reported
Waste Minimization Code Description:	Not reported
Consent Number:	Not reported
EPA Waste Indicator:	N
Federal Waste Codes:	Not reported
Quantity Haz Kg:	Not reported
Quantity Haz Tons:	Not reported
Quantity Non Haz Kg:	181.406
Quantity Non Haz Tons:	0.2
State Waste Codes:	MA-MA01

Click this hyperlink while viewing on your computer to access
9 additional US EManifest: record(s) in the EDR Site Report.

NJ MANIFEST:

EPA ID:	MAD981064009
Name:	GULLWING SERVICE CO INC
Address:	106 WESTERN AVE
City,State,Zip:	ESSEX, MA 01929
County:	Not reported
Mailing Address:	BOX 954
Mailing City,State,Zip:	ESSEX, MA 01929

PAUL RUSSELL & CO. (Continued) **1000293176**

Telephone:	Not reported
Emergency Telephone:	Not reported
Contact:	PAUL RUSSELL
Comments:	Not reported
SIC Code:	Not reported
County:	MA009
Municipal:	Not reported
Previous EPAID:	Not reported
Generator Flag:	Not reported
Transporter Flag:	Not reported
TSDF Flag:	Not reported
Name Change:	Not reported
Date Change:	Not reported

Manifest Data:

EPA ID:	MAD981064009
Manifest Number:	007966323JJK
Date Shipped:	2/9/2011
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	Not reported
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported

PAUL RUSSELL & CO. (Continued) **1000293176**

Waste Code:	D001
Hand Code:	H061
Quantity:	165.00
Unit:	gallons

EPA ID:	MAD981064009
Manifest Number:	NJA5078511
Date Shipped:	06/16/2004
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	06/16/2004
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	06/24/2004
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	08020425
Was Load Rejected:	N
Reason Load Was Rejected:	Not reported

EPA ID:	MAD981064009
Manifest Number:	NJA5243954
Date Shipped:	08/08/2005
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported

PAUL RUSSELL & CO. (Continued) **1000293176**

Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	08/08/2005
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	08/19/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	09300522
Was Load Rejected:	N
Reason Load Was Rejected:	Not reported

EPA ID:	MAD981064009
Manifest Number:	NJA5114773
Date Shipped:	12/28/2004
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	12/28/2004
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	01/05/2005
TSDF EPA Facility Name:	Not reported

PAUL RUSSELL & CO. (Continued) **1000293176**

QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	02010521
Was Load Rejected:	N
Reason Load Was Rejected:	Not reported

Generator EPA Facility Name:	GULLWING SERVICES CO
Transporter-1 EPA Facility Name:	CLEAN VENTURE INC
EPA ID:	MAD981064009
Manifest Number:	016820269JJK
Date Shipped:	2/27/2018
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
TSDF EPA Facility Name:	CYCLE CHEM INC
QTY Units:	gallons
Transporter SEQ ID:	Not reported
Transporter-1 Date:	2/27/2018
Waste SEQ ID:	1
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	3/23/2018
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	Not reported
Reason Load Was Rejected:	Not reported

PAUL RUSSELL & CO. (Continued) **1000293176**

EPA ID:	MAD981064009
Manifest Number:	000843243JJK
Date Shipped:	06/06/2007
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	06/06/2007
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	06/15/2007
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	N
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H06
Quantity:	55
Unit:	G

EPA ID:	MAD981064009
Manifest Number:	NJA5243767
Date Shipped:	06/21/2006
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported

PAUL RUSSELL & CO. (Continued) **1000293176**

Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	06/21/2006
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	07/06/2006
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	08090622
Was Load Rejected:	N
Reason Load Was Rejected:	Not reported

EPA ID:	MAD981064009
Manifest Number:	NJA5007616
Date Shipped:	01/23/2004
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	01/23/2004
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	02/10/2004

PAUL RUSSELL & CO. (Continued) **1000293176**

TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	03190425
Was Load Rejected:	N
Reason Load Was Rejected:	Not reported

EPA ID:	MAD981064009
Manifest Number:	008784817JJK
Date Shipped:	1/3/2012
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	Not reported
Reason Load Was Rejected:	Not reported

PAUL RUSSELL & CO. (Continued) **1000293176**

Waste:

Manifest Year:	Not reported
Waste Code:	D001 D018
Hand Code:	Not reported
Quantity:	165.00
Unit:	gallons

EPA ID:	MAD981064009
Manifest Number:	004885986JJK
Date Shipped:	01/21/2009
TSDF EPA ID:	NJD002182897
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	01/21/2009
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	01/27/2009
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	N
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	55
Unit:	G

PAUL RUSSELL & CO. (Continued) **1000293176**

EPA ID:	MAD981064009
Manifest Number:	005873122JJK
Date Shipped:	10/08/2009
TSDF EPA ID:	NJD002182897
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	10/08/2009
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	10/20/2009
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	N
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	165
Unit:	G

Click this hyperlink while viewing on your computer to access
2 additional NJ MANIFEST: record(s) in the EDR Site Report.

D12 **STEPHEN TERHUNE WOODWORKING** **MA HW GEN** **S133075128**
WSW **106 WESTERN AVE** **N/A**
1/8-1/4 **ESSEX, MA 01929**
0.205 mi.
1081 ft. **Site 3 of 6 in cluster D**

Relative: HW GEN:
Lower
Actual: Name: STEPHEN TERHUNE WOODWORKING
39 ft. Address: 106 WESTERN AVE
City,State,Zip: ESSEX, MA 01929
EPA Id: MV9787680106
RCRA Generator Status: VSQG
State Generator Status: Not reported

D13 **GULLWING SERVICE CO INC** **MA HW GEN** **S133071957**
WSW **106 WESTERN AVE** **N/A**
1/8-1/4 **ESSEX, MA 01929**
0.205 mi.
1081 ft. **Site 4 of 6 in cluster D**

Relative: HW GEN:
Lower
Actual: Name: GULLWING SERVICE CO INC
39 ft. Address: 106 WESTERN AVE
City,State,Zip: ESSEX, MA 01929
EPA Id: MAD981064009
RCRA Generator Status: SQG
State Generator Status: SQG-MA

D14 **MARK RICHEY WOODWORKING & DESIGN INC** **RCRA NonGen / NLR** **1000245485**
WSW **106 WESTERN AVE** **MAD980916720**
1/8-1/4 **ESSEX, MA 01929**
0.205 mi.
1081 ft. **Site 5 of 6 in cluster D**

Relative: RCRA Listings:
Lower
Actual: Date Form Received by Agency: 20050511
39 ft. Handler Name: Mark Richey Woodworking & Design Inc
Handler Address: 106 Western Ave
Handler City,State,Zip: ESSEX, MA 01929
EPA ID: MAD980916720
Contact Name: GREGORY A PORFIDO
Contact Address: 106 WESTERN AVE
Contact City,State,Zip: ESSEX, MA 01929-0000
Contact Telephone: 978-499-3800
Contact Fax: Not reported
Contact Email: Not reported
Contact Title: Not reported
EPA Region: 01
Land Type: Private
Federal Waste Generator Description: Not a generator, verified
Non-Notifier: Not reported
Biennial Report Cycle: Not reported
Accessibility: Not reported
Active Site Indicator: Not reported
State District Owner: Ma
State District: N
Mailing Address: 106 WESTERN AVE
Mailing City,State,Zip: ESSEX, MA 01929-0000

MARK RICHEY WOODWORKING & DESIGN INC (Continued) **1000245485**

Owner Name:	Mark Richey Woodworking & Design Inc
Owner Type:	Private
Operator Name:	Mark Richey Woodworking & Design Inc
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20171020
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	U226
Waste Description:	Ethane, 1,1,1-Trichloro- (Or) Methyl Chloroform

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	MARK RICHEY WOODWORKING & DESIGN INC
Legal Status:	Private
Date Became Current:	19970813
Date Ended Current:	Not reported

MARK RICHEY WOODWORKING & DESIGN INC (Continued) **1000245485**

Owner/Operator Address: 106 WESTERN AVE
Owner/Operator City,State,Zip: ESSEX, MA 01929-0000
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: MARK RICHEY WOODWORKING & DESIGN INC
Legal Status: Private
Date Became Current: 19970813
Date Ended Current: Not reported
Owner/Operator Address: 106 WESTERN AVE
Owner/Operator City,State,Zip: ESSEX, MA 01929-0000
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: MARK RICHEY WOODWORKING & DESIGN INC
Legal Status: Private
Date Became Current: 19970813
Date Ended Current: Not reported
Owner/Operator Address: 106 WESTERN AVE
Owner/Operator City,State,Zip: ESSEX, MA 01929
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: MARK RICHEY WOODWORKING & DESIGN INC
Legal Status: Private
Date Became Current: 20041016
Date Ended Current: Not reported
Owner/Operator Address: 106 WESTERN AVE
Owner/Operator City,State,Zip: ESSEX, MA 01929
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 20050511
Handler Name: MARK RICHEY WOODWORKING & DESIGN INC
Federal Waste Generator Description: Not a generator, verified
State District Owner: Ma
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

MARK RICHEY WOODWORKING & DESIGN INC (Continued) **1000245485**

Receive Date: 19840914
Handler Name: MARK RICHEY WOODWORKING & DESIGN INC
Federal Waste Generator Description: Very Small Quantity Generator (formerly Conditionally-Exempt Small Quantity Generator
State District Owner: Ma
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 337212
NAICS Description: Custom Architectural Woodwork And Millwork Manufacturing

Has the Facility Received Notices of Violations:
Found Violation: No
Agency Which Determined Violation: Not reported
Violation Short Description: Not reported
Date Violation was Determined: Not reported
Actual Return to Compliance Date: Not reported
Return to Compliance Qualifier: Not reported
Violation Responsible Agency: Not reported
Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

MARK RICHEY WOODWORKING & DESIGN INC (Continued) **1000245485**

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	19970812
Actual Return to Compliance Date:	19971124
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19971022
Enforcement Identifier:	000
Date of Enforcement Action:	19970917
Enforcement Responsible Agency:	State
Enforcement Docket Number:	97-9124-27
Enforcement Attorney:	R1
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

MARK RICHEY WOODWORKING & DESIGN INC (Continued) **1000245485**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: DPLMA
Enforcement Responsible Sub-Organization: NE
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Pre-transport
Date Violation was Determined: 19970812
Actual Return to Compliance Date: 19971124
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19971022
Enforcement Identifier: 000
Date of Enforcement Action: 19970917
Enforcement Responsible Agency: State
Enforcement Docket Number: 97-9124-27
Enforcement Attorney: R1
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: DPLMA
Enforcement Responsible Sub-Organization: NE
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

MARK RICHEY WOODWORKING & DESIGN INC (Continued) **1000245485**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	19970812
Actual Return to Compliance Date:	19971124
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19971022
Enforcement Identifier:	000
Date of Enforcement Action:	19970917
Enforcement Responsible Agency:	State
Enforcement Docket Number:	97-9124-27
Enforcement Attorney:	R1
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	DPLMA
Enforcement Responsible Sub-Organization:	NE
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	19970812
Actual Return to Compliance Date:	19971124
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19971022
Enforcement Identifier:	000
Date of Enforcement Action:	19970917
Enforcement Responsible Agency:	State
Enforcement Docket Number:	97-9124-27
Enforcement Attorney:	R1
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

MARK RICHEY WOODWORKING & DESIGN INC (Continued) **1000245485**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: DPLMA
Enforcement Responsible Sub-Organization: NE
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Manifest
Date Violation was Determined: 19970812
Actual Return to Compliance Date: 19971124
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19971022
Enforcement Identifier: 000
Date of Enforcement Action: 19970917
Enforcement Responsible Agency: State
Enforcement Docket Number: 97-9124-27
Enforcement Attorney: R1
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: DPLMA
Enforcement Responsible Sub-Organization: NE
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

MARK RICHEY WOODWORKING & DESIGN INC (Continued) **1000245485**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - General
Date Violation was Determined:	19970812
Actual Return to Compliance Date:	19971124
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19971022
Enforcement Identifier:	000
Date of Enforcement Action:	19970917
Enforcement Responsible Agency:	State
Enforcement Docket Number:	97-9124-27
Enforcement Attorney:	R1
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	DPLMA
Enforcement Responsible Sub-Organization:	NE
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Manifest
Date Violation was Determined:	19970812
Actual Return to Compliance Date:	19971124
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19971022
Enforcement Identifier:	000
Date of Enforcement Action:	19970917
Enforcement Responsible Agency:	State
Enforcement Docket Number:	97-9124-27
Enforcement Attorney:	R1
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

MARK RICHEY WOODWORKING & DESIGN INC (Continued) **1000245485**

Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: DPLMA
Enforcement Responsible Sub-Organization: NE
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Found Violation: Yes
Agency Which Determined Violation: State
Violation Short Description: Generators - Manifest
Date Violation was Determined: 19970812
Actual Return to Compliance Date: 19971124
Return to Compliance Qualifier: Observed
Violation Responsible Agency: State
Scheduled Compliance Date: 19971022
Enforcement Identifier: 000
Date of Enforcement Action: 19970917
Enforcement Responsible Agency: State
Enforcement Docket Number: 97-9124-27
Enforcement Attorney: R1
Corrective Action Component: No
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: DPLMA
Enforcement Responsible Sub-Organization: NE
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

MARK RICHEY WOODWORKING & DESIGN INC (Continued) **1000245485**

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	19970812
Actual Return to Compliance Date:	19971124
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19971022
Enforcement Identifier:	000
Date of Enforcement Action:	19970917
Enforcement Responsible Agency:	State
Enforcement Docket Number:	97-9124-27
Enforcement Attorney:	R1
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	DPLMA
Enforcement Responsible Sub-Organization:	NE
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	Yes
Agency Which Determined Violation:	State
Violation Short Description:	Generators - Pre-transport
Date Violation was Determined:	19970812
Actual Return to Compliance Date:	19971124
Return to Compliance Qualifier:	Observed
Violation Responsible Agency:	State
Scheduled Compliance Date:	19971022
Enforcement Identifier:	000
Date of Enforcement Action:	19970917
Enforcement Responsible Agency:	State
Enforcement Docket Number:	97-9124-27
Enforcement Attorney:	R1
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported

MARK RICHEY WOODWORKING & DESIGN INC (Continued) **1000245485**

Consent/Final Order Sequence Number:Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: WRITTEN INFORMAL
Enforcement Responsible Person: DPLMA
Enforcement Responsible Sub-Organization: NE
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:
Evaluation Date: 20050511
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: FOCUSED COMPLIANCE INSPECTION
Evaluation Responsible Person Identifier: DPLMA
Evaluation Responsible Sub-Organization: NE
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 19971124
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE SCHEDULE EVALUATION
Evaluation Responsible Person Identifier: DPLMA
Evaluation Responsible Sub-Organization: NE
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 19970812
Evaluation Responsible Agency: State
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier: DPLMA
Evaluation Responsible Sub-Organization: NE
Actual Return to Compliance Date: 19971124
Scheduled Compliance Date: 19971022
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported

MARK RICHEY WOODWORKING & DESIGN INC (Continued) **1000245485**

Former Citation:	Not reported
Evaluation Date:	19970812
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	DPLMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19971124
Scheduled Compliance Date:	19971022
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19970812
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	DPLMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19971124
Scheduled Compliance Date:	19971022
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19970812
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	DPLMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19971124
Scheduled Compliance Date:	19971022
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19970812
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	DPLMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19971124
Scheduled Compliance Date:	19971022
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported
Evaluation Date:	19970812
Evaluation Responsible Agency:	State
Found Violation:	Yes

MARK RICHEY WOODWORKING & DESIGN INC (Continued) **1000245485**

Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	DPLMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19971124
Scheduled Compliance Date:	19971022
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19970812
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	DPLMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19971124
Scheduled Compliance Date:	19971022
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19970812
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	DPLMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19971124
Scheduled Compliance Date:	19971022
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19970812
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	DPLMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19971124
Scheduled Compliance Date:	19971022
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Evaluation Date:	19970812
Evaluation Responsible Agency:	State
Found Violation:	Yes
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier:	DPLMA
Evaluation Responsible Sub-Organization:	NE
Actual Return to Compliance Date:	19971124
Scheduled Compliance Date:	19971022

MARK RICHEY WOODWORKING & DESIGN INC (Continued) **1000245485**

Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

D15 **MARK RICHEY WOODWORKING** **NY MANIFEST** **1009222648**
WSW **106 WESTERN AVENUE** **N/A**
1/8-1/4 **ESSEX, MA 01929**
0.205 mi.
1081 ft. **Site 6 of 6 in cluster D**

Relative:
Lower

Actual:
39 ft.

NY MANIFEST:

EPA ID:	MAD981064009
Country:	USA
Name:	Paul Russell And Company
Address:	106 WESTERN AVE
Address 2:	Not reported
City,State,Zip:	ESSEX, MA 01929
Zip 4:	Not reported
Location Address 1:	106 WESTERN AVE
Location Address 2:	Not reported
Location City,State,Zip:	ESSEX, MA 01929
Location Zip 4:	Not reported
Facility Status:	Not reported
Total Tanks:	Not reported
Code:	BP

Mailing:

Mailing Name:	Paul Russell And Company
Mailing Contact:	Paul Russell And Company
Mailing Address 1:	106 WESTERN AVE
Mailing Address 2:	Not reported
Mailing City,State,Zip:	ESSEX, MA 01929
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	Not reported

Manifest Data:

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	NJ0000027193
Year:	2018
Trans2 State ID:	CTD021816889
Generator Ship Date:	01/20/2017
Trans1 Recv Date:	01/20/2017
Trans2 Recv Date:	01/01/2017
TSD Site Recv Date:	01/21/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	MAD981064009
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD080469935
TSDF ID 2:	Not reported
Manifest Tracking Number:	014393957JJK
Import Indicator:	N
Export Indicator:	N

MARK RICHEY WOODWORKING (Continued) **1009222648**

Discr Quantity Indicator: N
Discr Type Indicator: N
Discr Residue Indicator: N
Discr Partial Reject Indicator: N
Discr Full Reject Indicator: N
Manifest Ref Number: Not reported
Alt Facility RCRA ID: Not reported
Alt Facility Sign Date: Not reported
MGMT Method Type Code: H050
Waste Code a: Ignitable Waste
Waste Code b: Benzene
Waste Code c: Not reported
Waste Code e: Not reported
Waste Code f: Not reported
Waste Code g: Not reported
Waste Code 1: Not reported
Waste Code 2: Not reported
Waste Code 3: Not reported
Waste Code 4: Not reported
Waste Code 5: Not reported
Waste Code 6: Not reported
Quantity: 100
Units: Gallons (liquids only)
Number of Containers: 2
Container Type: Fiberboard or plastic drums, barrels, kegs
Handling Method: Burn
Specific Gravity: 1

EPA ID: MAP000065413
Country: USA
Name: Mark Richey Woodworking
Address: 106 WESTERN AVENUE
Address 2: Not reported
City,State,Zip: ESSEX, MA 01929
Zip 4: Not reported
Location Address 1: 106 WESTERN AVENUE
Location Address 2: Not reported
Location City,State,Zip: ESSEX, MA 01929
Location Zip 4: Not reported
Facility Status: Not reported
Total Tanks: Not reported
Code: BP

Mailing:
Mailing Name: Mark Richey Woodworking
Mailing Contact: James R Richey
Mailing Address 1: 106 WESTERN AVENUE
Mailing Address 2: Not reported
Mailing City,State,Zip: ESSEX, MA 01929
Mailing Zip 4: Not reported
Mailing Country: USA
Mailing Phone: 5087683356

Manifest Data:
Document ID: NYB7735644
Manifest Status: Not reported

MARK RICHEY WOODWORKING (Continued) **1009222648**

Trans1 State ID:	PD1964
Year:	1996
Trans2 State ID:	Not reported
Generator Ship Date:	07/17/1996
Trans1 Recv Date:	07/17/1996
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	07/22/1996
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	MAP000065413
Trans1 EPA ID:	NYD980769947
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD049836679
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code 1:	Ignitable Waste
Waste Code 2:	Not reported
Waste Code 3:	Not reported
Waste Code 4:	Not reported
Waste Code 5:	Not reported
Waste Code 6:	Not reported
Quantity:	00110
Units:	Gallons (liquids only)
Number of Containers:	002
Container Type:	Metal drums, barrels, kegs
Handling Method:	Recycle
Specific Gravity:	01.00

16
NNW
1/8-1/4
0.243 mi.
1282 ft.

NO LOCATION AID
60 WESTERN AVE
ESSEX, MA 01929

MA SHWS **S102967526**
MA RELEASE **N/A**

Relative:
Higher

Actual:
79 ft.

SHWS:

Name:	NO LOCATION AID
Address:	60 WESTERN AVE
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0015915
Source Type:	PIPE
Release Town:	ESSEX
Notification Date:	01/14/1998
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	01/17/2001

NO LOCATION AID (Continued) **S102967526**

Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Not reported

Release:

Name:	NO LOCATION AID
Address:	60 WESTERN AVE
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0015915 / RAO
Primary ID:	Not reported
Official City:	ESSEX
Notification:	01/14/1998
Category:	TWO HR
Status Date:	01/17/2001
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	FLDISS
Action Date:	1/14/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	1/14/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	RLFA
Action Status:	FOLFLD
Action Date:	1/14/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/14/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	1/17/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	1/17/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been

NO LOCATION AID (Continued) **S102967526**

reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 1/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/31/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 10/27/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 11/3/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/12/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/12/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action

NO LOCATION AID (Continued) **S102967526**

Action Status: Modified Revised or Updated Plan Received
Action Date: 5/19/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/19/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/21/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/26/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/18/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/19/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL #2
Quantity: 400 gallons
Chemical: FUEL OIL #2
Quantity: 10 gallons
Location Type: RESIDNTIAL
Source: PIPE

17
North
1/4-1/2
0.329 mi.
1737 ft.

NO LOCATION AID **MA SHWS S108962859**
ACROSS FROM 3 BROOK PASTURE LN **MA RELEASE N/A**
ESSEX, MA

Relative: Lower
Actual: 30 ft.

SHWS:
Name: NO LOCATION AID
Address: ACROSS FROM 3 BROOK PASTURE LN
City,State,Zip: ESSEX, MA
Facility ID: 3-0027443
Source Type: 50 KVA
Release Town: ESSEX
Notification Date: 01/16/2008

NO LOCATION AID (Continued) **S108962859**

Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	07/16/2008
Phase:	Not reported
Response Action Outcome:	A1
Oil Or Haz Material:	Oil

Name:	NO LOCATION AID
Address:	ACROSS FROM 3 BROOK PASTURE LN
City,State,Zip:	ESSEX, MA
Facility ID:	3-0027443
Source Type:	PADMOUNT
Release Town:	ESSEX
Notification Date:	01/16/2008
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	07/16/2008
Phase:	Not reported
Response Action Outcome:	A1
Oil Or Haz Material:	Oil

Name:	NO LOCATION AID
Address:	ACROSS FROM 3 BROOK PASTURE LN
City,State,Zip:	ESSEX, MA
Facility ID:	3-0027443
Source Type:	TRANSFORM
Release Town:	ESSEX
Notification Date:	01/16/2008
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	07/16/2008
Phase:	Not reported
Response Action Outcome:	A1
Oil Or Haz Material:	Oil

Release:

Name:	NO LOCATION AID
Address:	ACROSS FROM 3 BROOK PASTURE LN
City,State,Zip:	ESSEX, MA
Release Tracking Number/Current Status:	3-0027443 / RAO
Primary ID:	Not reported
Official City:	ESSEX
Notification:	01/16/2008
Category:	TWO HR
Status Date:	07/16/2008
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

NO LOCATION AID (Continued) **S108962859**

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 1/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/13/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 3/17/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/17/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/17/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/18/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 3/19/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 3/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 7/16/2008

NO LOCATION AID (Continued) **S108962859**

Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: NON-PCB MINERAL OIL DIELECTRIC FLUID
Quantity: 30 gallons
Chemical: MODF NON PCB
Quantity: 30 gallons
Location Type: RESIDNTIAL
Source: 50 KVA
Source: PADMOUNT
Source: TRANSFORM

E18 **FMR LIBERTY RESEARCH FACILITY** **MA SHWS S132536735**
WSW **7 ESSEX PARK RD** **MA RELEASE N/A**
1/4-1/2 **ESSEX, MA 01929**
0.336 mi.
1775 ft. **Site 1 of 4 in cluster E**

Relative:
Higher

Actual:
40 ft.

SHWS:
Name: FMR LIBERTY RESEARCH FACILITY
Address: 7 ESSEX PARK RD
City,State,Zip: ESSEX, MA 019290000
Facility ID: 3-0020280
Source Type: UNKNOWN
Release Town: ESSEX
Notification Date: 01/04/2001
Category: 72 HR
Associated ID: 3-0019187
Current Status: TMPS
Status Date: 10/01/2021
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Hazardous Material

Release:
Name: FMR LIBERTY RESEARCH FACILITY
Address: 7 ESSEX PARK RD
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number/Current Status: 3-0020280 / TMPS
Primary ID: 3-0019187
Official City: ESSEX
Notification: 01/04/2001
Category: 72 HR
Status Date: 10/01/2021
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

FMR LIBERTY RESEARCH FACILITY (Continued) **S132536735**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	1/22/2001
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 1A Classification
Action Date:	1/25/2001
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/25/2001
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/25/2001
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/4/2001
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	IRA Assessment Only
Action Date:	1/4/2001
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	TSNRCD
Action Date:	10/1/2021
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	11/5/2001
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Imminent Hazard Evaluation Received
Action Date:	11/5/2001
Response Action Outcome:	Not reported
Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	12/6/2001
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Minor Permit Modification
Action Date:	12/6/2001
Response Action Outcome:	Not reported

FMR LIBERTY RESEARCH FACILITY (Continued) **S132536735**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/12/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via IRA Completion Statement
Action Date: 2/3/2009
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/7/2001
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/7/2001
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/4/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 6/5/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 7/13/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 1B Classification
Action Date: 7/13/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: DEP Disagrees with Classification
Action Date: 7/13/2001
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/24/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Extension Received
Action Date: 7/29/2006
Response Action Outcome: Not reported

Chemicals:
Chemical: CIS-1,2-DICHLOROETHENE

FMR LIBERTY RESEARCH FACILITY (Continued) **S132536735**

Quantity:	2800 micrograms per liter
Chemical:	TRICHLOROETHENE
Quantity:	4800 micrograms per liter
Chemical:	VINYL CHLORIDE
Quantity:	16 micrograms per liter
Chemical:	1,1-DICHLOROETHENE
Quantity:	13 micrograms per liter
Location Type:	COMMERCIAL
Source:	UNKNOWN

E19 **NO LOCATION AID** **MA SHWS** **S132539686**
WSW **7 ESSEX PARK RD** **MA RELEASE** **N/A**
1/4-1/2 **ESSEX, MA**
0.336 mi.
1775 ft. **Site 2 of 4 in cluster E**

Relative:
Higher

Actual:
40 ft.

SHWS:

Name:	NO LOCATION AID
Address:	7 ESSEX PARK RD
City,State,Zip:	ESSEX, MA
Facility ID:	3-0027639
Source Type:	UNKNOWN
Release Town:	ESSEX
Notification Date:	04/03/2008
Category:	72 HR
Associated ID:	3-0019187
Current Status:	TMPS
Status Date:	10/01/2021
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Name:	NO LOCATION AID
Address:	7 ESSEX PARK RD
City,State,Zip:	ESSEX, MA
Facility ID:	3-0027639
Source Type:	SOLVENTS
Release Town:	ESSEX
Notification Date:	04/03/2008
Category:	72 HR
Associated ID:	3-0019187
Current Status:	TMPS
Status Date:	10/01/2021
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Name:	NO LOCATION AID
Address:	7 ESSEX PARK RD
City,State,Zip:	ESSEX, MA
Facility ID:	3-0027639
Source Type:	INBED
Release Town:	ESSEX
Notification Date:	04/03/2008
Category:	72 HR
Associated ID:	3-0019187
Current Status:	TMPS
Status Date:	10/01/2021

NO LOCATION AID (Continued) **S132539686**

Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Hazardous Material

Name: NO LOCATION AID
Address: 7 ESSEX PARK RD
City,State,Zip: ESSEX, MA
Facility ID: 3-0027639
Source Type: ROCKFRAC
Release Town: ESSEX
Notification Date: 04/03/2008
Category: 72 HR
Associated ID: 3-0019187
Current Status: TMPS
Status Date: 10/01/2021
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Hazardous Material

Name: NO LOCATION AID
Address: 7 ESSEX PARK RD
City,State,Zip: ESSEX, MA
Facility ID: 3-0027639
Source Type: TURES
Release Town: ESSEX
Notification Date: 04/03/2008
Category: 72 HR
Associated ID: 3-0019187
Current Status: TMPS
Status Date: 10/01/2021
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Hazardous Material

Release:
Name: NO LOCATION AID
Address: 7 ESSEX PARK RD
City,State,Zip: ESSEX, MA
Release Tracking Number/Current Status: 3-0027639 / TMPS
Primary ID: 3-0019187
Official City: ESSEX
Notification: 04/03/2008
Category: 72 HR
Status Date: 10/01/2021
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/25/2001
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S132539686**

Action Type:	Tier Classification
Action Status:	Tier 1A Classification
Action Date:	1/25/2001
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	TSNRCD
Action Date:	10/1/2021
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Minor Permit Modification
Action Date:	12/6/2001
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	2/3/2009
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	2/3/2009
Response Action Outcome:	Not reported
Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	2/3/2009
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	4/18/2008
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/3/2008
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	IRA Assessment Only
Action Date:	4/3/2008
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	5/13/2008
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	5/15/2008
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.

NO LOCATION AID (Continued) **S132539686**

Action Date: 5/15/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/15/2009
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/8/2008
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/8/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/8/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 6/5/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 1B Classification
Action Date: 7/13/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 7/13/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: DEP Disagrees with Classification
Action Date: 7/13/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Extension Received
Action Date: 7/29/2006
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 8/18/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/4/2008
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S132539686**

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 9/2/2008
Response Action Outcome: Not reported

Chemicals:
Chemical: CHLORINATED SOLVENTS
Quantity: Not reported
Chemical: TRICHLOROETHENE
Quantity: 62.2 micrograms per liter
Chemical: VINYL CHLORIDE
Quantity: 11.6 micrograms per liter
Location Type: INDUSTRIAL
Location Type: RESIDNTIAL
Source: TURES
Source: ROCKFRAC
Source: UNKNOWN
Source: SOLVENTS
Source: INBED

E20
WSW
1/4-1/2
0.336 mi.
1775 ft.
Relative: Higher
Actual: 40 ft.

NO LOCATION AID **MA SHWS** **S132539050**
7 ESSEX PARK RD **MA RELEASE** **N/A**
ESSEX, MA 01929

Site 3 of 4 in cluster E

SHWS:
Name: NO LOCATION AID
Address: 7 ESSEX PARK RD
City,State,Zip: ESSEX, MA 019290000
Facility ID: 3-0026038
Source Type: DRUMS
Release Town: ESSEX
Notification Date: 07/10/2006
Category: TWO HR
Associated ID: Not reported
Current Status: TMPS
Status Date: 10/01/2021
Phase: PHASE III
Response Action Outcome: TN
Oil Or Haz Material: Hazardous Material

Release:
Name: NO LOCATION AID
Address: 7 ESSEX PARK RD
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number/Current Status: 3-0026038 / TMPS
Primary ID: Not reported
Official City: ESSEX
Notification: 07/10/2006
Category: TWO HR
Status Date: 10/01/2021
Phase: PHASE III
Response Action Outcome: TN - TN
Oil / Haz Material Type: Hazardous Material

NO LOCATION AID (Continued) **S132539050**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	1/10/2007
Response Action Outcome:	TN
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/10/2007
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/10/2007
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	1/11/2007
Response Action Outcome:	TN
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	1/12/2007
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/12/2007
Response Action Outcome:	TN
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	1/18/2012
Response Action Outcome:	TN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/18/2012
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/2/2007
Response Action Outcome:	TN
Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	1/24/2022
Response Action Outcome:	TN
Action Type:	Immediate Response Action
Action Status:	Modified Revised or Updated Plan Received
Action Date:	1/26/2007
Response Action Outcome:	TN

NO LOCATION AID (Continued) **S132539050**

Action Type:	Phase 2
Action Status:	Level I - Technical Screen Audit
Action Date:	1/26/2010
Response Action Outcome:	TN
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	1/27/2020
Response Action Outcome:	TN
Action Type:	Phase 4
Action Status:	Status or Interim Report Received
Action Date:	1/27/2020
Response Action Outcome:	TN
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/3/2007
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/3/2007
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	1/3/2014
Response Action Outcome:	TN
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	1/31/2012
Response Action Outcome:	TN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/31/2012
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FLDD1A
Action Date:	1/5/2007
Response Action Outcome:	TN
Action Type:	Immediate Response Action
Action Status:	Oral Approval of a Modified Plan
Action Date:	1/5/2007
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/9/2007
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FLDRAN

NO LOCATION AID (Continued) **S132539050**

Action Date: 1/9/2007
Response Action Outcome: TN

Action Type: Response Action Outcome - RAO
Action Status: TSNRCD
Action Date: 10/1/2021
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 10/1/2021
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 10/15/2012
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 10/15/2012
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/3/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/30/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 10/30/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/14/2014
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/15/2013
Response Action Outcome: TN

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 11/17/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/21/2012
Response Action Outcome: TN

NO LOCATION AID (Continued) **S132539050**

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 11/9/2007
Response Action Outcome: TN

Action Type: Response Action Outcome - RAO
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 12/18/2013
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/19/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/21/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 12/21/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 12/28/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/8/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FLDRUN
Action Date: 2/13/2007
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/17/2021
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 2/17/2021
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 2/5/2007
Response Action Outcome: TN

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued

NO LOCATION AID (Continued) **S132539050**

Action Date: 2/5/2007
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/5/2009
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/15/2012
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Modified Revised or Updated Plan Received
Action Date: 4/30/2019
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 4/30/2019
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 4/30/2019
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 4/5/2017
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 4/5/2018
Response Action Outcome: TN

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 4/9/2010
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 4/9/2010
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/10/2013
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/21/2007
Response Action Outcome: TN

NO LOCATION AID (Continued) **S132539050**

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/30/2014
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 5/31/2007
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/9/2008
Response Action Outcome: TN

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 6/29/2012
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 6/4/2015
Response Action Outcome: TN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 6/7/2007
Response Action Outcome: TN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/10/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 7/10/2006
Response Action Outcome: TN

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 7/10/2007
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/10/2007
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 7/10/2007
Response Action Outcome: TN

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received

NO LOCATION AID (Continued) **S132539050**

Action Date: 7/13/2009
Response Action Outcome: TN

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 7/13/2009
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 7/16/2007
Response Action Outcome: TN

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 7/24/2009
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: TCEXT
Action Date: 7/31/2020
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/31/2020
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 7/31/2020
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 8/14/2008
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: TCEXT
Action Date: 8/2/2018
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/24/2016
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/28/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/30/2006
Response Action Outcome: TN

NO LOCATION AID (Continued) **S132539050**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/30/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/30/2017
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/4/2008
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: TCEXT
Action Date: 8/4/2016
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/7/2009
Response Action Outcome: TN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/8/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/8/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 9/15/2006
Response Action Outcome: TN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 9/15/2006
Response Action Outcome: TN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 9/15/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/15/2011
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF

NO LOCATION AID (Continued) **S132539050**

Action Date: 9/19/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/6/2006
Response Action Outcome: TN

Chemicals:
Chemical: CHROMIUM (TOTAL)
Quantity: Not reported
Chemical: TOLUENE
Quantity: Not reported
Chemical: ETHYLBENZENE
Quantity: Not reported
Chemical: PCBS
Quantity: Not reported
Chemical: METHYL ETHYL KETONE (MEK)
Quantity: Not reported
Location Type: INDUSTRIAL
Source: DRUMS

E21 **LIBERTY RESEARCH FACILITY FMR** **MA SHWS** **S132536273**
WSW **7 ESSEX PARK DR** **MA RELEASE** **N/A**
1/4-1/2 **ESSEX, MA 01929**
0.336 mi.
1775 ft. **Site 4 of 4 in cluster E**

Relative: Higher
Actual: 40 ft.

SHWS:
Name: LIBERTY RESEARCH FACILITY FMR
Address: 7 ESSEX PARK DR
City,State,Zip: ESSEX, MA 019290000
Facility ID: 3-0019187
Source Type: Not reported
Release Town: ESSEX
Notification Date: 01/18/2000
Category: 120 DY
Associated ID: 3-0019187
Current Status: TMPS
Status Date: 10/01/2021
Phase: PHASE V
Response Action Outcome: TN
Oil Or Haz Material: Hazardous Material

Release:
Name: LIBERTY RESEARCH FACILITY FMR
Address: 7 ESSEX PARK DR
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number/Current Status: 3-0019187 / TMPS
Primary ID: 3-0019187
Official City: ESSEX
Notification: 01/18/2000
Category: 120 DY
Status Date: 10/01/2021
Phase: PHASE V
Response Action Outcome: TN - TN
Oil / Haz Material Type: Hazardous Material

LIBERTY RESEARCH FACILITY FMR (Continued) **S132536273**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Phase 4
Action Status:	Completion Statement Received
Action Date:	1/13/2004
Response Action Outcome:	TN
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	1/18/2000
Response Action Outcome:	TN
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/18/2000
Response Action Outcome:	TN
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	1/18/2012
Response Action Outcome:	TN
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	1/22/2001
Response Action Outcome:	TN
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	1/25/2001
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/25/2001
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	Tier 1A Classification
Action Date:	1/25/2001
Response Action Outcome:	TN
Action Type:	Response Action Outcome - RAO
Action Status:	TSNRCD
Action Date:	10/1/2021
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	10/11/2006
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	10/11/2006
Response Action Outcome:	TN

LIBERTY RESEARCH FACILITY FMR (Continued) **S132536273**

Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	10/21/2005
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	10/6/2006
Response Action Outcome:	TN
Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	11/28/2001
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Minor Permit Modification
Action Date:	12/6/2001
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	2/23/2007
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	2/23/2007
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	2/3/2009
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	2/3/2010
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	2/3/2010
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	2/4/2008
Response Action Outcome:	TN
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	3/6/2000
Response Action Outcome:	TN
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only

LIBERTY RESEARCH FACILITY FMR (Continued) **S132536273**

Action Date:	3/7/2000
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	4/1/2008
Response Action Outcome:	TN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/20/2000
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	4/20/2005
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Level II - Audit Inspection
Action Date:	4/20/2005
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	4/7/2008
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	5/11/2009
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	5/11/2009
Response Action Outcome:	TN
Action Type:	An activity type that is related to an Audit
Action Status:	NAFNVD
Action Date:	5/3/2005
Response Action Outcome:	TN
Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	6/23/2009
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Level II - Audit Inspection
Action Date:	6/23/2009
Response Action Outcome:	TN
Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	6/27/2003
Response Action Outcome:	TN

LIBERTY RESEARCH FACILITY FMR (Continued) **S132536273**

Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	6/28/2005
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	Legal Notice Published
Action Date:	6/5/2006
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	6/7/2006
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	6/8/2006
Response Action Outcome:	TN
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	7/1/2004
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	Permit Effective Date
Action Date:	7/13/2001
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	Tier 1B Classification
Action Date:	7/13/2001
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	DEP Disagrees with Classification
Action Date:	7/13/2001
Response Action Outcome:	TN
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	7/15/2002
Response Action Outcome:	TN
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	7/15/2002
Response Action Outcome:	TN
Action Type:	Tier Classification
Action Status:	Permit Extension Received
Action Date:	7/29/2006
Response Action Outcome:	TN
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued

LIBERTY RESEARCH FACILITY FMR (Continued) **S132536273**

Action Date: 8/1/2006
Response Action Outcome: TN

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/14/2000
Response Action Outcome: TN

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 8/15/2006
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 8/26/2008
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 8/26/2008
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Level II - Audit Inspection
Action Date: 8/8/2006
Response Action Outcome: TN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 8/8/2006
Response Action Outcome: TN

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 9/14/2009
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 9/16/2014
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Level I - Technical Screen Audit
Action Date: 9/22/2010
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 9/3/2009
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 9/3/2009
Response Action Outcome: TN

LIBERTY RESEARCH FACILITY FMR (Continued) **S132536273**

Action Type: BWS01
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: TN

Action Type: BWS20
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: TN

Chemicals:
Chemical: ALIPHATIC HYDROCARBONS C19 THROUGH C36
Quantity: 15500 parts per million
Chemical: VPH
Quantity: 1640 micrograms per liter
Chemical: cis-1,3-DICHLOROPROPENE
Quantity: 2 milligrams per kilogram
Chemical: EPH
Quantity: 354400 micrograms per liter
Chemical: AROMATIC HYDROCARBONS C11 THROUGH C22
Quantity: 2760 parts per million
Chemical: TRICHLOROETHYLENE
Quantity: 13 milligrams per kilogram
Chemical: TETRACHLOROETHENE
Quantity: 0.51 milligrams per kilogram

F22 **NO LOCATION AID** **MA SHWS** **S106512763**
NNE **MARTIN ST AND SHEPARD MEMORIAL** **MA RELEASE** **N/A**
1/4-1/2 **ESSEX, MA 01929**
0.446 mi.
2355 ft. **Site 1 of 2 in cluster F**

Relative: **Lower**
Actual: **22 ft.**

SHWS:
Name: NO LOCATION AID
Address: MARTIN ST AND SHEPARD MEMORIAL
City,State,Zip: ESSEX, MA 019290000
Facility ID: 3-0022999
Source Type: DRUMS
Release Town: ESSEX
Notification Date: 07/10/2003
Category: 120 DY
Associated ID: Not reported
Current Status: URAM
Status Date: 07/17/2003
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Hazardous Material

Release:
Name: NO LOCATION AID
Address: MARTIN ST AND SHEPARD MEMORIAL
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number/Current Status: 3-0022999 / URAM
Primary ID: Not reported
Official City: ESSEX
Notification: 07/10/2003
Category: 120 DY

NO LOCATION AID (Continued) **S106512763**

Status Date: 07/17/2003
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/3/2003
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/17/2003
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notice of Intent to Conduct a URAM
Action Date: 7/10/2003
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/10/2003
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/17/2003
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notification of URAM Received
Action Date: 7/17/2003
Response Action Outcome: Not reported

Chemicals:

Chemical: ASPHALT
Quantity: Not reported
Chemical: UNKNOWN
Quantity: 41000 milligrams per kilogram
Location Type: ROADWAY
Source: DRUMS

F23 **WHITEY'S GARAGE** **MA SHWS** **1000404179**
NNE **16 MARTIN ST** **MA UST** **N/A**
1/4-1/2 **ESSEX, MA 01929** **MA RELEASE**
0.467 mi.
2464 ft. **Site 2 of 2 in cluster F**

Relative: **Lower**
Actual: **20 ft.**

SHWS:

Name: NO LOCATION AID
Address: 16 MARTIN ST
City,State,Zip: ESSEX, MA 019290000
Facility ID: 3-0021187

WHITEY'S GARAGE (Continued) **1000404179**

Source Type:	Not reported
Release Town:	ESSEX
Notification Date:	10/09/2001
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	07/29/2003
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Hazardous Material

UST:

Facility ID:	19184
Name:	WHITEY'S GARAGE
Address:	16 MARTIN ST
Address 2:	Not reported
City,State,Zip:	ESSEX, MA 01929
Owner ID:	8871
Owner:	TERMINAL GARAGE INC
Owner Address:	11 COUNTY RD
Owner Address 2:	Not reported
Owner City,State,Zip:	ESSEX, MA 01929
Telephone:	Not reported
Description:	Retail Motor Vehicle Fuel Dispensing
Contact Name:	Not reported
Contact Address:	Not reported
Contact Address 2:	Not reported
Contact City,State,Zip:	Not reported
Contact Email:	Not reported
Update:	2009-02-06 00:00:00
Update By:	Not reported
Facility Status:	CLOSED
Longitude:	-70.78171
Latitude:	42.63242

URL:

UST:

Facility ID:	19184
Tank ID:	2
Capacity:	1000.00000
Substance:	Diesel
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	05/06/1936
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N

WHITEY'S GARAGE (Continued) **1000404179**

Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	10/01/1988
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

Facility ID:	19184
Tank ID:	7
Capacity:	4000.00000
Substance:	Gasoline
Tank Construct:	Single-walled metal tank (cathodic protection required)
Tank Usage:	Motor Vehicle
Pipe Construct:	Single-walled metal (Corrosion protection required)
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	12/01/1988
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	08/18/1999
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	In-Tank Monitoring System
Pipe Leak Detection:	Not reported

Facility ID:	19184
Tank ID:	4
Capacity:	1000.00000
Substance:	Gasoline
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	05/06/1936
Number of Compartment:	Not reported

WHITEY'S GARAGE (Continued) **1000404179**

Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	10/01/1988
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

Facility ID:	19184
Tank ID:	3
Capacity:	1000.00000
Substance:	Gasoline
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	05/06/1936
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	10/01/1988
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

Facility ID:	19184
Tank ID:	6
Capacity:	4000.00000
Substance:	Diesel
Tank Construct:	Single-walled metal tank (cathodic protection required)

WHITEY'S GARAGE (Continued) **1000404179**

Tank Usage:	Motor Vehicle
Pipe Construct:	Single-walled metal (Corrosion protection required)
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	12/01/1988
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	08/18/1999
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	In-Tank Monitoring System
Pipe Leak Detection:	Not reported

Facility ID:	19184
Tank ID:	5
Capacity:	4000.00000
Substance:	Gasoline
Tank Construct:	Single-walled metal tank (cathodic protection required)
Tank Usage:	Motor Vehicle
Pipe Construct:	Single-walled metal (Corrosion protection required)
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	12/01/1988
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	08/18/1999
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	In-Tank Monitoring System

WHITEY'S GARAGE (Continued) **1000404179**

Pipe Leak Detection:	Not reported
Facility ID:	19184
Tank ID:	1
Capacity:	4000.00000
Substance:	Gasoline
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	05/06/1974
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	10/01/1988
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

Release:

Name:	NO LOCATION AID
Address:	16 MARTIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0021187 / RAO
Primary ID:	Not reported
Official City:	ESSEX
Notification:	10/09/2001
Category:	120 DY
Status Date:	07/29/2003
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/15/2002

WHITEY'S GARAGE (Continued) **1000404179**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 1/21/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/15/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/15/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/15/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/9/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/9/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 3/26/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/26/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

WHITEY'S GARAGE (Continued) **1000404179**

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/19/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: LEAD
Quantity: 301 milligrams per kilogram
Chemical: 2-METHYLNAPHTHALENE
Quantity: 28 milligrams per kilogram
Chemical: NAPHTHALENE
Quantity: 69 milligrams per kilogram

24
NNW
1/4-1/2
0.468 mi.
2470 ft.

NO LOCATION AID
17 STORY ST
ESSEX, MA 01929

MA SHWS **S104545374**
MA RELEASE **N/A**

Relative:
Higher

Actual:
73 ft.

SHWS:
Name: NO LOCATION AID
Address: 17 STORY ST
City,State,Zip: ESSEX, MA 019290000
Facility ID: 3-0012521
Source Type: TRANSFORM
Release Town: ESSEX
Notification Date: 05/26/1995
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 07/10/1995
Phase: Not reported
Response Action Outcome: A1
Oil Or Haz Material: Oil

Release:
Name: NO LOCATION AID
Address: 17 STORY ST
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number/Current Status: 3-0012521 / RAO
Primary ID: Not reported
Official City: ESSEX
Notification: 05/26/1995
Category: TWO HR
Status Date: 07/10/1995
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E

NO LOCATION AID (Continued) **S104545374**

Action Date: 5/26/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 5/26/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 5/30/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/8/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/10/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/10/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: TRANSFORMER OIL
Quantity: 25 gallons
Chemical: MINERAL OIL
Quantity: 25 gallons
Location Type: ROADWAY
Source: TRANSFORM

25
NE
1/4-1/2
0.468 mi.
2472 ft.

ESSEX FIRE STATION
MARTIN ST
ESSEX, MA 01929

MA LUST **S104545597**
MA RELEASE **N/A**

Relative: Lower
Actual: 17 ft.

LUST:

Facility:
Name: ESSEX FIRE STATION
Address: MARTIN ST
City,State,Zip: ESSEX, MA 019290000
Current Status: **Response Action Outcome**
Release Tracking Number/Current Status: 3-0013690 / RAO
Status Date: 07/29/1996
Source Type: UST

ESSEX FIRE STATION (Continued) **S104545597**

Release Town:	ESSEX
Notification Date:	04/22/1996
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Not reported
Location Type:	MUNICIPAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	315 parts per million

Actions:

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	4/22/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/22/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	4/22/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	5/3/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	6/21/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	6/21/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

ESSEX FIRE STATION (Continued) **S104545597**

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	7/29/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release:

Name:	ESSEX FIRE STATION
Address:	MARTIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0013690 / RAO
Primary ID:	Not reported
Official City:	ESSEX
Notification:	04/22/1996
Category:	72 HR
Status Date:	07/29/1996
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	4/22/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/22/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	4/22/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	5/3/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	6/21/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Immediate Response Action

ESSEX FIRE STATION (Continued) **S104545597**

Action Status: Written Plan Received
Action Date: 6/21/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/29/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL #2
Quantity: 315 parts per million
Location Type: MUNICIPAL
Source: UST

G26 **ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC** **MA SHWS** **S132532869**
NE **66 MAIN ST** **MA INST CONTROL** **N/A**
1/2-1 **ESSEX, MA 01929** **MA RELEASE**
0.586 mi.
3096 ft. **Site 1 of 2 in cluster G**

Relative: Lower
Actual: 12 ft.

SHWS:
Name: ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC
Address: 66 MAIN ST
City,State,Zip: ESSEX, MA 019290000
Facility ID: 3-0004552
Source Type: UNKNOWN
Release Town: ESSEX
Notification Date: 10/01/1993
Category: NONE
Associated ID: 3-0004552
Current Status: RAO
Status Date: 02/18/2012
Phase: Not reported
Response Action Outcome: A3
Oil Or Haz Material: Not reported

INST CONTROL:
Name: ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC
Address: 66 MAIN ST
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number: 3-0004552
Action Type: AUL
Action Stat: RECPT
Action Date: 06/09/2008
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:
Name: ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC
Address: 66 MAIN ST
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number/Current Status: 3-0004552 / RAO

ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC (Continued) **S132532869**

Primary ID:	3-0004552
Official City:	ESSEX
Notification:	10/01/1993
Category:	NONE
Status Date:	02/18/2012
Phase:	Not reported
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	1/27/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	10/1/1993
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	10/9/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	11/21/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	11/21/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type:	TREGS
Action Status:	WAVSIG
Action Date:	12/13/1993
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type:	Tier Classification

ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC (Continued) **S132532869**

Action Status: RTN Linked to TCLASS Via IRA Completion Statement
Action Date: 12/30/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/18/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 2/18/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 3/2/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 6/13/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 6/18/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Partial RAO for this RTN
Action Status: RAO Statement Received
Action Date: 6/18/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 6/28/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Partial RAO for this RTN
Action Status: Fee Received - FMCRA Use Only

ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC (Continued) **S132532869**

Action Date: 6/6/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 6/7/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 6/9/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/9/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Partial RAO for this RTN
Action Status: Fee Not Required - Fee Refunded-FMCRA Use Only
Action Date: 7/15/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: TREGS
Action Status: WAVREC
Action Date: 7/22/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 7/3/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 7/8/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 8/14/1996

ESSEX SHIPBLDG MUSEUM FMR CAPE ANN SC (Continued) **S132532869**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 8/6/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/6/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 8/6/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: TREGS
Action Status: LSPFA
Action Date: 9/9/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 9/9/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/9/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: PETROLEUM BASED OIL
Quantity: Not reported
Location Type: BOAT YARD
Location Type: FORMER
Source: UNKNOWN

G27 **ESSEX SHIPBUILDING MUSEUM** **MA SHWS** **S132538511**
NE **66 MAIN ST** **MA INST CONTROL** **N/A**
1/2-1 **ESSEX, MA 01929** **MA RELEASE**
0.586 mi.
3096 ft. **Site 2 of 2 in cluster G**

Relative:
Lower

Actual:
12 ft.

SHWS:

Name:	ESSEX SHIPBUILDING MUSEUM
Address:	66 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0024673
Source Type:	UNKNOWN
Release Town:	ESSEX
Notification Date:	03/03/2005
Category:	TWO HR
Associated ID:	3-0004552
Current Status:	RTNCLOSED
Status Date:	12/30/2005
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

INST CONTROL:

Name:	ESSEX SHIPBUILDING MUSEUM
Address:	66 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number:	3-0024673
Action Type:	AUL
Action Stat:	RECPT
Action Date:	06/09/2008
Response Action Outcome:	-

Release:

Name:	ESSEX SHIPBUILDING MUSEUM
Address:	66 MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0024673 / RTNCLOSED
Primary ID:	3-0004552
Official City:	ESSEX
Notification:	03/03/2005
Category:	TWO HR
Status Date:	12/30/2005
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	12/30/2005
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via IRA Completion Statement
Action Date:	12/30/2005
Response Action Outcome:	Not reported

ESSEX SHIPBUILDING MUSEUM (Continued) **S132538511**

Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	12/30/2005
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	3/2/2010
Response Action Outcome:	Not reported

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/22/2005
Response Action Outcome:	Not reported

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/3/2005
Response Action Outcome:	Not reported

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	3/3/2005
Response Action Outcome:	Not reported

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/7/2005
Response Action Outcome:	Not reported

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/12/2005
Response Action Outcome:	Not reported

Action Type:	RLFA
Action Status:	FLDD1U
Action Date:	4/12/2005
Response Action Outcome:	Not reported

Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	4/29/2005
Response Action Outcome:	Not reported

Action Type:	Immediate Response Action
Action Status:	Imminent Hazard Evaluation Received
Action Date:	4/29/2005
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	6/13/2005
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	Tier 2 Extension

ESSEX SHIPBUILDING MUSEUM (Continued) **S132538511**

Action Date: 6/18/2003
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 6/28/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 6/7/2006
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/9/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 7/8/2004
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/2/2005
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 8/6/1997
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/6/1997
Response Action Outcome: Not reported

Chemicals:
Chemical: ARSENIC
Quantity: 80.3 parts per million
Chemical: ZINC
Quantity: 3340 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 44 milligrams per kilogram
Chemical: ARSENIC
Quantity: 80.3 milligrams per kilogram
Location Type: COMMERCIAL
Source: UNKNOWN

28
NE
1/2-1
0.587 mi.
3097 ft.

CONSTRUCTION SITE
91 MAIN STREET ADJ
ESSEX, MA

MA SHWS **S125163254**
MA RELEASE **N/A**

Relative:
Lower

Actual:
8 ft.

SHWS:

Name:	CONSTRUCTION SITE
Address:	91 MAIN STREET ADJ
City,State,Zip:	ESSEX, MA
Facility ID:	3-0035511
Source Type:	LINE
Release Town:	ESSEX
Notification Date:	03/19/2019
Category:	TWO HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	05/17/2019
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Oil

Name:	CONSTRUCTION SITE
Address:	91 MAIN STREET ADJ
City,State,Zip:	ESSEX, MA
Facility ID:	3-0035511
Source Type:	VEHICLE
Release Town:	ESSEX
Notification Date:	03/19/2019
Category:	TWO HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	05/17/2019
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Oil

Release:

Name:	CONSTRUCTION SITE
Address:	91 MAIN STREET ADJ
City,State,Zip:	ESSEX, MA
Release Tracking Number/Current Status:	3-0035511 / PSNC
Primary ID:	Not reported
Official City:	ESSEX
Notification:	03/19/2019
Category:	TWO HR
Status Date:	05/17/2019
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	3/19/2019
Response Action Outcome:	PN

CONSTRUCTION SITE (Continued) **S125163254**

Action Type: RLFA
Action Status: FLDD1U
Action Date: 3/19/2019
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/19/2019
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/25/2019
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 5/17/2019
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/17/2019
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/17/2019
Response Action Outcome: PN

Chemicals:
Chemical: HYDRAULIC FLUID
Quantity: 18 gallons
Location Type: ROADWAY
Location Type: COMMERCIAL
Source: VEHICLE
Source: LINE

29
ENE
1/2-1
0.606 mi.
3199 ft.

NO LOCATION AID **MA SHWS** **S107517212**
109 MAIN ST **MA RELEASE** **N/A**
ESSEX, MA 01929

Relative:
Lower

Actual:
6 ft.

SHWS:
Name: NO LOCATION AID
Address: 109 MAIN ST
City,State,Zip: ESSEX, MA 019290000
Facility ID: 3-0025296
Source Type: UNKNOWN
Release Town: ESSEX
Notification Date: 10/07/2005
Category: 120 DY
Associated ID: Not reported
Current Status: URAM
Status Date: 10/18/2005
Phase: Not reported

NO LOCATION AID (Continued) **S107517212**

Response Action Outcome: Not reported
Oil Or Haz Material: Hazardous Material

Release:
Name: NO LOCATION AID
Address: 109 MAIN ST
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number/Current Status: 3-0025296 / URAM
Primary ID: Not reported
Official City: ESSEX
Notification: 10/07/2005
Category: 120 DY
Status Date: 10/18/2005
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 1/19/2006
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notification of URAM Received
Action Date: 10/18/2005
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/18/2005
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/7/2005
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notice of Intent to Conduct a URAM
Action Date: 10/7/2005
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/9/2005
Response Action Outcome: Not reported

Chemicals:
Chemical: TOTAL PETROLEUM HYDROCARBONS (TPH)
Quantity: Not reported
Chemical: NAPHTHALENE
Quantity: 9.85 milligrams per kilogram
Chemical: AROMATIC HYDROCARBONS C9 THROUGH C10

NO LOCATION AID (Continued) **S107517212**

Quantity:	374 milligrams per kilogram
Chemical:	ALIPHATIC HYDROCARBONS C5 THROUGH C8
Quantity:	1110 milligrams per kilogram
Chemical:	ALIPHATIC HYDROCARBONS C9 THROUGH C12
Quantity:	1100 milligrams per kilogram
Location Type:	ROADWAY
Source:	UNKNOWN

30
NNE
1/2-1
0.636 mi.
3360 ft.

ERNIE'S SERVICE STATION
8 MAIN STREET
ESSEX, MA

MA SHWS **S132542190**
MA LUST **N/A**
MA INST CONTROL
MA RELEASE

Relative:
Lower

Actual:
22 ft.

SHWS:

Name:	ERNIE'S SERVICE STATION
Address:	8 MAIN STREET
City,State,Zip:	ESSEX, MA
Facility ID:	3-0034160
Source Type:	TANK
Release Town:	ESSEX
Notification Date:	04/06/2017
Category:	72 HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	04/13/2018
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Not reported

LUST:

Facility:

Name:	ERNIE'S SERVICE STATION
Address:	8 MAIN STREET
City,State,Zip:	ESSEX, MA
Current Status:	**Permanent Solution with No Conditions**
Release Tracking Number/Current Status:	3-0034160 / PSNC
Status Date:	04/13/2018
Source Type:	USTPIPE
Release Town:	ESSEX
Notification Date:	04/06/2017
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil Or Haz Material:	Not reported
Location Type:	COMMERCIAL
Source:	UST
Source:	USTOTHER
Source:	TANK
Source:	USTPIPE

Click here to access the MA DEP site for this facility:

ERNIE'S SERVICE STATION (Continued) **S132542190**

Chemicals:
Chemical: GASOLINE
Quantity: 327 parts per million

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 2/8/2018
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 4/13/2018
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 4/19/2018
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 5/11/2018
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.

ERNIE'S SERVICE STATION (Continued) **S132542190**

Action Date: 6/21/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/23/2017
Response Action Outcome: PN

Facility:
Name: ERNIE'S SERVICE STATION
Address: 8 MAIN STREET
City,State,Zip: ESSEX, MA
Current Status: **Permanent Solution with No Conditions**
Release Tracking Number/Current Status: 3-0034160 / PSNC
Status Date: 04/13/2018
Source Type: UST
Release Town: ESSEX
Notification Date: 04/06/2017
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: PN - PN
Oil Or Haz Material: Not reported

Location Type: COMMERCIAL
Source: UST
Source: USTOTHER
Source: TANK
Source: USTPIPE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 327 parts per million

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 2/8/2018
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 4/13/2018
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 4/19/2018
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E

ERNIE'S SERVICE STATION (Continued) **S132542190**

Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 5/11/2018
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/21/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/23/2017
Response Action Outcome: PN

Facility:
Name: ERNIE'S SERVICE STATION
Address: 8 MAIN STREET
City,State,Zip: ESSEX, MA
Current Status: **Permanent Solution with No Conditions**
Release Tracking Number/Current Status: 3-0034160 / PSNC
Status Date: 04/13/2018
Source Type: USTOTHER
Release Town: ESSEX
Notification Date: 04/06/2017
Category: 72 HR
Associated ID: Not reported
Phase: Not reported

ERNIE'S SERVICE STATION (Continued) **S132542190**

Response Action Outcome: PN - PN
Oil Or Haz Material: Not reported

Location Type: COMMERCIAL
Source: UST
Source: USTOTHER
Source: TANK
Source: USTPIPE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 327 parts per million

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 2/8/2018
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 4/13/2018
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 4/19/2018
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 5/11/2018
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/12/2017
Response Action Outcome: PN

ERNIE'S SERVICE STATION (Continued) **S132542190**

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/21/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/23/2017
Response Action Outcome: PN

INST CONTROL:
Name: ERNIE'S SERVICE STATION
Address: 8 MAIN STREET
City,State,Zip: ESSEX, MA
Release Tracking Number: 3-0034160
Action Type: AUL
Action Stat: LEGNOT
Action Date: 05/11/2018
Response Action Outcome: PN - PN

Release:
Name: ERNIE'S SERVICE STATION
Address: 8 MAIN STREET
City,State,Zip: ESSEX, MA
Release Tracking Number/Current Status: 3-0034160 / PSNC
Primary ID: Not reported
Official City: ESSEX
Notification: 04/06/2017
Category: 72 HR
Status Date: 04/13/2018
Phase: Not reported
Response Action Outcome: PN - PN
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 2/8/2018
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 4/13/2018

ERNIE'S SERVICE STATION (Continued) **S132542190**

Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 4/19/2018
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/6/2017
Response Action Outcome: PN

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 5/11/2018
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/12/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/13/2017
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/21/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/23/2017
Response Action Outcome: PN

Chemicals:
Chemical: GASOLINE
Quantity: 327 parts per million
Location Type: COMMERCIAL
Source: UST

ERNIE'S SERVICE STATION (Continued) **S132542190**

Source: USTOTHER
Source: TANK
Source: USTPIPE

---

31 **COMMERCIAL PROPERTY** **MA SHWS** **S100361172**
ENE **9 SOUTHERN AVE** **MA BROWNFIELDS** **N/A**
1/2-1 **ESSEX, MA 01929** **MA RELEASE**
0.763 mi.
4027 ft.

Relative:
Lower

Actual:
14 ft.

SHWS:

Name:	COMMERCIAL PROPERTY
Address:	9 SOUTHERN AVE
City,State,Zip:	ESSEX, MA 01929
Facility ID:	3-0003021
Source Type:	UNKNOWN
Release Town:	ESSEX
Notification Date:	04/15/1990
Category:	120 DY
Associated ID:	Not reported
Current Status:	TIERII
Status Date:	08/09/2006
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Name:	COMMERCIAL PROPERTY
Address:	9 SOUTHERN AVE
City,State,Zip:	ESSEX, MA 01929
Facility ID:	3-0003021
Source Type:	DRUMS
Release Town:	ESSEX
Notification Date:	04/15/1990
Category:	120 DY
Associated ID:	Not reported
Current Status:	TIERII
Status Date:	08/09/2006
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Name:	COMMERCIAL PROPERTY
Address:	9 SOUTHERN AVE
City,State,Zip:	ESSEX, MA 01929
Facility ID:	3-0003021
Source Type:	VEHICLE
Release Town:	ESSEX
Notification Date:	04/15/1990
Category:	120 DY
Associated ID:	Not reported
Current Status:	TIERII
Status Date:	08/09/2006
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

BROWNFIELDS 2:

COMMERCIAL PROPERTY (Continued) **S100361172**

Name:	Not reported
Address:	9 SOUTHERN AVE
City,State,Zip:	ESSEX, MA
RTN:	3-0003021
RAO Class:	Not reported
Other RTNs:	Not reported
Current Owner:	Managed by Court Appointed Receiver-Richard T. Cuffe, Jr., Esq.
MCP Status:	TIER 2
AUL:	Not reported
COCs:	Metals, PCBs, Petroleum, PAHs
Former Use:	Commercial/Residential
Current Use:	Vacant
Total Acreage:	14

Fact Sheet:

Release:

Name:	COMMERCIAL PROPERTY
Address:	9 SOUTHERN AVE
City,State,Zip:	ESSEX, MA 01929
Release Tracking Number/Current Status:	3-0003021 / TIERII
Primary ID:	Not reported
Official City:	ESSEX
Notification:	04/15/1990
Category:	120 DY
Status Date:	08/09/2006
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/30/2025
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	1/30/2025
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	10/17/2018
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Modified Revised or Updated Plan Received
Action Date:	11/15/2014
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	11/15/2014

COMMERCIAL PROPERTY (Continued) **S100361172**

Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/17/2014
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1A
Action Date: 12/27/2018
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 12/29/2005
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/6/2015
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 4/15/1990
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: EPETOP
Action Date: 4/30/2025
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 4/30/2025
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 4/30/2025
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/30/2025
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 4/8/2014
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 6/14/2002
Response Action Outcome: Not reported

COMMERCIAL PROPERTY (Continued) **S100361172**

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 6/30/2006
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Fee Not Required - Fee Refunded-FMCRA Use Only
Action Date: 7/10/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 8/11/2006
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 8/29/2005
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 8/29/2005
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 8/9/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 8/9/2006
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/9/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/9/2006
Response Action Outcome: Not reported

Chemicals:
Chemical: LEAD
Quantity: 635 milligrams per kilogram
Chemical: NICKEL
Quantity: 31.5 milligrams per kilogram
Chemical: WASTE OIL
Quantity: Not reported
Chemical: ALIPHATIC HYDROCARBONS C5 THROUGH C8
Quantity: 1430 milligrams per kilogram
Chemical: BENZO[B]FLUORANTHENE
Quantity: 83.5 milligrams per kilogram
Chemical: 2-METHYLNAPHTHALENE

COMMERCIAL PROPERTY (Continued) **S100361172**

Quantity:	8.8 milligrams per kilogram
Chemical:	NAPHTHALENE
Quantity:	10.4 milligrams per kilogram
Chemical:	PHENANTHRENE
Quantity:	190 milligrams per kilogram
Chemical:	BENZO[A]PYRENE
Quantity:	3.4 milligrams per kilogram
Chemical:	AROMATIC HYDROCARBONS C11 THROUGH C22
Quantity:	2480 milligrams per kilogram
Chemical:	ACENAPHTHENE
Quantity:	42.4 milligrams per kilogram
Chemical:	BENZO(K)FLUORANTHENE
Quantity:	93.9 milligrams per kilogram
Chemical:	CHROMIUM (TOTAL)
Quantity:	33.4 milligrams per kilogram
Chemical:	THALLIUM
Quantity:	10.1 milligrams per kilogram
Chemical:	MTBE
Quantity:	1.45 milligrams per kilogram
Chemical:	POLYCHLORINATED BIPHENYLS (PCBS)
Quantity:	12.2 milligrams per kilogram
Chemical:	BENZO[A]PYRENE
Quantity:	97.2 milligrams per kilogram
Chemical:	DIBENZO[A,H]ANTHRACENE
Quantity:	8.5 milligrams per kilogram
Chemical:	ALIPHATIC HYDROCARBONS C9 THROUGH C18
Quantity:	2700 milligrams per kilogram
Chemical:	ALIPHATIC HYDROCARBONS C9 THROUGH C12
Quantity:	776 milligrams per kilogram
Chemical:	BERYLLIUM
Quantity:	1.34 milligrams per kilogram
Chemical:	BENZO[A]ANTHRACENE
Quantity:	106 milligrams per kilogram
Chemical:	CHRYSENE
Quantity:	122 milligrams per kilogram
Chemical:	INDENO(1,2,3-CD)PYRENE
Quantity:	50.6 milligrams per kilogram
Chemical:	BENZENE
Quantity:	2.27 milligrams per kilogram
Chemical:	ALIPHATIC HYDROCARBONS C19 THROUGH C36
Quantity:	7500 milligrams per kilogram
Location Type:	JUNKYARD
Source:	VEHICLE
Source:	UNKNOWN
Source:	DRUMS

H32 **RICHDALE CONVENIENCE STORE** **MA SHWS** **S132538087**
ENE **156 NORTH MAIN ST** **MA LUST** **N/A**
1/2-1 **ESSEX, MA 01929** **MA INST CONTROL**
0.767 mi. **MA RELEASE**
4049 ft. **Site 1 of 2 in cluster H**

Relative: **Lower**
Actual: **13 ft.**

SHWS:

Name:	RICHDALE CONVENIENCE STORE
Address:	156 NORTH MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0023545
Source Type:	UNKNOWN

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Release Town:	ESSEX
Notification Date:	01/26/2004
Category:	72 HR
Associated ID:	3-0023545
Current Status:	RAO
Status Date:	06/09/2010
Phase:	Not reported
Response Action Outcome:	A3
Oil Or Haz Material:	Not reported

LUST:

Facility:

Name:	RICHDALE CONVENIENCE STORE
Address:	156 NORTH MAIN ST
City,State,Zip:	ESSEX, MA 019290000
Current Status:	**Response Action Outcome**
Release Tracking Number/Current Status:	3-0023545 / RAO
Status Date:	06/09/2010
Source Type:	UST
Release Town:	ESSEX
Notification Date:	01/26/2004
Category:	72 HR
Associated ID:	3-0023545
Phase:	Not reported
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material:	Not reported
Location Type:	COMMERCIAL
Source:	UNKNOWN
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	GASOLINE
Quantity:	200 parts per million
Chemical:	GASOLINE
Quantity:	200 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	1/20/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Immediate Response Action
Action Status:	Modified Revised or Updated Plan Received
Action Date:	1/20/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/26/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 1/26/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 10/10/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 10/10/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level III - Comprehensive Audit
Action Date: 11/18/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 11/18/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level II - Audit Inspection
Action Date: 12/13/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 12/18/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Action Type:	An activity type that is related to an Audit
Action Status:	Audit Follow-up Completion Statement Received
Action Date:	12/18/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	12/29/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	12/30/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	3/17/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/24/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	3/24/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	3/24/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	4/14/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Release Abatement Measure

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Action Status: Completion Statement Received
Action Date: 4/29/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 5/11/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/19/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 5/19/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 5/19/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/27/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 5/7/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 6/17/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Action Date: 6/22/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 6/9/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 6/9/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/9/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/9/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 9/26/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/26/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NON-A
Action Date: 9/26/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

INST CONTROL:
Name: RICHDALE CONVENIENCE STORE

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Address: 156 NORTH MAIN ST
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number: 3-0023545
Action Type: AUL
Action Stat: AMEND
Action Date: 12/18/2012
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Name: RICHDALE CONVENIENCE STORE
Address: 156 NORTH MAIN ST
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number: 3-0023545
Action Type: AUL
Action Stat: LEGNOT
Action Date: 06/17/2010
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Name: RICHDALE CONVENIENCE STORE
Address: 156 NORTH MAIN ST
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number: 3-0023545
Action Type: AUL
Action Stat: RECPT
Action Date: 06/09/2010
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:
Name: RICHDALE CONVENIENCE STORE
Address: 156 NORTH MAIN ST
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number/Current Status: 3-0023545 / RAO
Primary ID: 3-0023545
Official City: ESSEX
Notification: 01/26/2004
Category: 72 HR
Status Date: 06/09/2010
Phase: Not reported
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/20/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

been implemented.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 1/20/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/26/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 1/26/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 10/10/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 10/10/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level III - Comprehensive Audit
Action Date: 11/18/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 11/18/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level II - Audit Inspection
Action Date: 12/13/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Action Type:	Activity and Use Limitation
Action Status:	Amendment Received or Issued
Action Date:	12/18/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	An activity type that is related to an Audit
Action Status:	Audit Follow-up Completion Statement Received
Action Date:	12/18/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	12/29/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	12/30/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	3/17/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/24/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	3/24/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	3/24/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Compliance and Enforcement Action

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Action Status: Notice of Non-Compliance Issued
Action Date: 4/14/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 4/29/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 5/11/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/19/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 5/19/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 5/19/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/27/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 5/7/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Action Date: 6/17/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 6/22/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 6/9/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 6/9/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/9/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/9/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 9/26/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/26/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NON-A
Action Date: 9/26/2012

RICHDALE CONVENIENCE STORE (Continued) **S132538087**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
- Chemical: GASOLINE
- Quantity: 200 parts per million
- Chemical: GASOLINE
- Quantity: 200 parts per million
- Location Type: COMMERCIAL
- Source: UNKNOWN
- Source: UST

H33 **RICHDALE CONVENIENCE STORE** **MA SHWS** **S132539523**
ENE **156 NORTH MAIN ST** **MA RELEASE** **N/A**
1/2-1 **ESSEX, MA 01929**
0.767 mi.
4049 ft. **Site 2 of 2 in cluster H**

Relative:
Lower

Actual:
13 ft.

SHWS:
- Name: RICHDALE CONVENIENCE STORE
- Address: 156 NORTH MAIN ST
- City,State,Zip: ESSEX, MA 019290000
- Facility ID: 3-0027206
- Source Type: Not reported
- Release Town: ESSEX
- Notification Date: 10/10/2007
- Category: 120 DY
- Associated ID: 3-0023545
- Current Status: RTNCLOSED
- Status Date: 06/09/2008
- Phase: Not reported
- Response Action Outcome: Not reported
- Oil Or Haz Material: Hazardous Material

Release:
- Name: RICHDALE CONVENIENCE STORE
- Address: 156 NORTH MAIN ST
- City,State,Zip: ESSEX, MA 019290000
- Release Tracking Number/Current Status: 3-0027206 / RTNCLOSED
- Primary ID: 3-0023545
- Official City: ESSEX
- Notification: 10/10/2007
- Category: 120 DY
- Status Date: 06/09/2008
- Phase: Not reported
- Response Action Outcome: -
- Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
- Action Type: RNF
- Action Status: Reportable Release under MGL 21E
- Action Date: 10/10/2007
- Response Action Outcome: Not reported

RICHDALE CONVENIENCE STORE (Continued) **S132539523**

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/10/2007
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/14/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/19/2005
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 5/19/2005
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 6/9/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 6/9/2008
Response Action Outcome: Not reported

Chemicals:
Chemical: LEAD
Quantity: 11700 milligrams per kilogram

34
NNE
1/2-1
0.789 mi.
4165 ft.

NO LOCATION AID **MA SHWS** **S103811985**
22 JOHN WISE AVE **MA RELEASE** **N/A**
ESSEX, MA 01929

Relative:
Higher

Actual:
54 ft.

SHWS:
Name: NO LOCATION AID
Address: 22 JOHN WISE AVE
City,State,Zip: ESSEX, MA 019290000
Facility ID: 3-0017866
Source Type: PIPE
Release Town: ESSEX
Notification Date: 01/15/1999
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 05/21/1999
Phase: Not reported
Response Action Outcome: A2
Oil Or Haz Material: Not reported

Name: NO LOCATION AID

NO LOCATION AID (Continued) **S103811985**

Address:	22 JOHN WISE AVE
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0017866
Source Type:	TRUCK
Release Town:	ESSEX
Notification Date:	01/15/1999
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	05/21/1999
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Not reported

Release:

Name:	NO LOCATION AID
Address:	22 JOHN WISE AVE
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0017866 / RAO
Primary ID:	Not reported
Official City:	ESSEX
Notification:	01/15/1999
Category:	TWO HR
Status Date:	05/21/1999
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/15/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/15/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	1/15/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FLDD1U
Action Date:	1/16/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

NO LOCATION AID (Continued) **S103811985**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 1/19/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 1/19/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 1/19/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/19/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/20/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/12/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/12/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 5/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL #2
Quantity: 20 gallons
Chemical: DIESEL FUEL
Quantity: 8 gallons
Location Type: COMMERCIAL
Source: PIPE
Source: TRUCK

35
ENE
1/2-1
0.916 mi.
4837 ft.

RESIDENCE
42 EASTERN AVENUE
ESSEX, MA

MA SHWS **S113411789**
MA LAST **N/A**
MA RELEASE

Relative:
Lower

Actual:
15 ft.

SHWS:

Name:	RESIDENCE
Address:	42 EASTERN AVENUE
City,State,Zip:	ESSEX, MA
Facility ID:	3-0031447
Source Type:	LINE
Release Town:	ESSEX
Notification Date:	03/29/2013
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	04/08/2014
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Not reported

LAST:

Name:	RESIDENCE
Address:	42 EASTERN AVENUE
City,State,Zip:	ESSEX, MA
Release Tracking Number/Current Status:	3-0031447 / RAO
Source Type:	AST
Release Town:	ESSEX
Notification Date:	03/29/2013
Category:	TWO HR
Associated ID:	Not reported
Status Date:	04/08/2014
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Not reported

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	75 gallons
Source:	AST
Source:	LINE

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	1/29/2015
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	1/29/2015
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	1/8/2014

RESIDENCE (Continued) **S113411789**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/13/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/4/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 3/29/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 3/29/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 3/29/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/29/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 4/1/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 4/1/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/12/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

RESIDENCE (Continued) **S113411789**

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/24/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/29/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: SHPFAC
Action Date: 4/8/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 4/8/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 4/8/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 4/9/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/16/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/28/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/28/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/28/2013

RESIDENCE (Continued) **S113411789**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 5/29/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 5/30/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 5/5/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: SHPFAC
Action Date: 8/13/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/5/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 8/7/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/9/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Name: RESIDENCE
Address: 42 EASTERN AVENUE
City,State,Zip: ESSEX, MA
Release Tracking Number/Current Status: 3-0031447 / RAO
Primary ID: Not reported
Official City: ESSEX
Notification: 03/29/2013
Category: TWO HR
Status Date: 04/08/2014
Phase: Not reported

RESIDENCE (Continued) **S113411789**

Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 1/29/2015
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/29/2015
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 1/8/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/13/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/4/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 3/29/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 3/29/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 3/29/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E

RESIDENCE (Continued) **S113411789**

Action Date: 3/29/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 4/1/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 4/1/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/12/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/24/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/29/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: SHPFAC
Action Date: 4/8/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 4/8/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 4/8/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 4/9/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

RESIDENCE (Continued) **S113411789**

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/16/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/28/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/28/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/28/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 5/29/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 5/30/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 5/5/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: SHPFAC
Action Date: 8/13/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/5/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 8/7/2013

RESIDENCE (Continued) **S113411789**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/9/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL #2
Quantity: 75 gallons
Source: AST
Source: LINE

---

36 AT 25-27 CENTENIAL GROVE ROAD **MA SHWS S126024567**
WSW 27 CENTENNIAL GROVE ROAD ADJ **MA RELEASE N/A**
1/2-1 ESSEX, MA 01929
0.978 mi.
5163 ft.

Relative: Higher
Actual: 48 ft.

SHWS:
Name: AT 25-27 CENTENIAL GROVE ROAD
Address: 27 CENTENNIAL GROVE ROAD ADJ
City,State,Zip: ESSEX, MA 019290000
Facility ID: 3-0035768
Source Type: FUELTANK
Release Town: ESSEX
Notification Date: 08/02/2019
Category: TWO HR
Associated ID: Not reported
Current Status: PSNC
Status Date: 09/25/2019
Phase: Not reported
Response Action Outcome: PN
Oil Or Haz Material: Not reported

Name: AT 25-27 CENTENIAL GROVE ROAD
Address: 27 CENTENNIAL GROVE ROAD ADJ
City,State,Zip: ESSEX, MA 019290000
Facility ID: 3-0035768
Source Type: VEHICLE
Release Town: ESSEX
Notification Date: 08/02/2019
Category: TWO HR
Associated ID: Not reported
Current Status: PSNC
Status Date: 09/25/2019
Phase: Not reported
Response Action Outcome: PN
Oil Or Haz Material: Not reported

Release:
Name: AT 25-27 CENTENIAL GROVE ROAD
Address: 27 CENTENNIAL GROVE ROAD ADJ
City,State,Zip: ESSEX, MA 019290000
Release Tracking Number/Current Status: 3-0035768 / PSNC

AT 25-27 CENTENIAL GROVE ROAD (Continued) **S126024567**

Primary ID:	Not reported
Official City:	ESSEX
Notification:	08/02/2019
Category:	TWO HR
Status Date:	09/25/2019
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	8/2/2019
Response Action Outcome:	PN
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	8/2/2019
Response Action Outcome:	PN
Action Type:	RLFA
Action Status:	FLDD1U
Action Date:	8/2/2019
Response Action Outcome:	PN
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	9/25/2019
Response Action Outcome:	PN
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	9/25/2019
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	9/25/2019
Response Action Outcome:	PN

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	75 gallons
Location Type:	RESIDNTIAL
Location Type:	ROADWAY
Location Type:	RIGHTOFWAY
Source:	VEHICLE
Source:	FUELTANK

37
ENE
1/2-1
0.999 mi.
5273 ft.

TRANSFORMER RELEASE
4 ESSEX REACH ROAD
ESSEX, MA 01929

MA SHWS **S132122006**
MA RELEASE **N/A**

Relative:
Higher

Actual:
63 ft.

SHWS:

Name:	TRANSFORMER RELEASE
Address:	4 ESSEX REACH ROAD
City,State,Zip:	ESSEX, MA 019290000
Facility ID:	3-0038645
Source Type:	TRANSFORM
Release Town:	ESSEX
Notification Date:	02/26/2024
Category:	TWO HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	04/24/2024
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Not reported

Release:

Name:	TRANSFORMER RELEASE
Address:	4 ESSEX REACH ROAD
City,State,Zip:	ESSEX, MA 019290000
Release Tracking Number/Current Status:	3-0038645 / PSNC
Primary ID:	Not reported
Official City:	ESSEX
Notification:	02/26/2024
Category:	TWO HR
Status Date:	04/24/2024
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	11/21/2024
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	2/26/2024
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	2/26/2024
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	4/24/2024
Response Action Outcome:	Not reported

TRANSFORMER RELEASE (Continued) **S132122006**

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/24/2024
Response Action Outcome: Not reported

Chemicals:
Chemical: MINERAL OIL
Quantity: 35 gallons
Location Type: PRIVPROP
Location Type: RESIDNTIAL
Source: TRANSFORM

Count: 3 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ESSEX	S108034574	POLE NO 558	ADJ TO 198 WESTERN AVE	01929	MA SHWS, MA RELEASE
ESSEX	S109330202	ESSEX DUMP	MARTIN ST	01929	MA SWF/LF
ESSEX	S109489628	NO LOCATION AID	STORY ST		MA SHWS, MA RELEASE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/05/2025
Date Data Arrived at EDR: 06/20/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 68

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 06/20/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/03/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 13

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 03/11/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 83

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 07/29/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 05/19/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/15/2025
Next Scheduled EDR Contact: 12/02/2024
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 05/19/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/15/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/10/2025
Date Data Arrived at EDR: 06/12/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 4

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

SHWS: Site Transition List

Contains information on releases of oil and hazardous materials that have been reported to DEP.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF: Solid Waste Facility Database/Transfer Stations

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 06/28/2024
Date Data Arrived at EDR: 06/28/2024
Date Made Active in Reports: 09/24/2024
Number of Days to Update: 88

Source: Department of Environmental Protection
Telephone: 617-292-5989
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Annually

LF PROFILES: Landfill Profiles Listing

This spreadsheet describes landfills that have actively accepted waste or have closed under MassDEP Solid Waste Regulations first adopted in 1971 (310 CMR 16.00 and 310 CMR 19.00). The list does not include landfills that closed before 1971 (and which never had a MassDEP permit or approval), or for which agency data is incomplete.

Date of Government Version: 07/01/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 12/14/2015
Number of Days to Update: 48

Source: Department of Environmental Protection
Telephone: 617-292-5868
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Varies

Lists of state and tribal leaking storage tanks

LUST: Leaking Underground Storage Tank Listing

Sites within the Leaking Underground Storage Tank Listing that have a UST listed as its source.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

LAST: Leaking Aboveground Storage Tank Sites
Sites within the Releases Database that have a AST listed as its source.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23
Source: Department of Environmental Protection
Telephone: 617-292-5500
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 01/07/2025
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/07/2025
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 04/08/2025
Date Data Arrived at EDR: 04/23/2025
Date Made Active in Reports: 04/24/2025
Number of Days to Update: 1
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 06/24/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

UST: Summary Listing of all the Tanks Registered in the State of Massachusetts
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 02/26/2025
Date Data Arrived at EDR: 05/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 84
Source: Department of Fire Services, Office of the Public Safety
Telephone: 617-556-1035
Last EDR Contact: 07/29/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Quarterly

AST 2: Aboveground Storage Tanks
Aboveground storage tanks

Date of Government Version: 04/03/2025
Date Data Arrived at EDR: 04/03/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 82
Source: Department of Fire Services
Telephone: 978-567-3181
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

AST: Aboveground Storage Tank Database
Registered Aboveground Storage Tanks.

Date of Government Version: 03/15/2025
Date Data Arrived at EDR: 04/08/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 77
Source: Department of Public Safety
Telephone: 617-556-1035
Last EDR Contact: 07/03/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: No Update Planned

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 11/08/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/15/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 01/07/2025
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 11/18/2024
Date Data Arrived at EDR: 01/16/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 81

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Sites With Activity and Use Limitation

Activity and Use Limitations establish limits and conditions on the future use of contaminated property, and therefore allow cleanups to be tailored to these uses.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/09/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS 2: Potential Brownfields Listing

A listing of potential brownfields site locations in the state.

Date of Government Version: 07/11/2023
Date Data Arrived at EDR: 07/27/2023
Date Made Active in Reports: 10/16/2023
Number of Days to Update: 81

Source: Department of Environmental Protection
Telephone: 617-556-1007
Last EDR Contact: 07/24/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

BROWNFIELDS: Completed Brownfields Covenants Listing

Under Massachusetts law, M.G.L. c. 21E is the statute that governs the cleanup of releases of oil and/or hazardous material to the environment. The Brownfields Act of 1998 amended M.G.L. c. 21E by establishing significant liability relief and financial incentives to spur the redevelopment of brownfields, while ensuring that the Commonwealth's environmental standards are met. Most brownfields are redeveloped with the benefit of liability protections that operate automatically under M.G.L. c. 21E.

Date of Government Version: 12/31/2024
Date Data Arrived at EDR: 01/22/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 75

Source: Office of the Attorney General
Telephone: 617-963-2423
Last EDR Contact: 07/21/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Annually

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 09/09/2024
Date Data Arrived at EDR: 09/11/2024
Date Made Active in Reports: 12/06/2024
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/04/2025
Next Scheduled EDR Contact: 12/22/2025
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/15/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/08/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 02/07/2024
Date Data Arrived at EDR: 11/13/2024
Date Made Active in Reports: 11/19/2024
Number of Days to Update: 6

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/17/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 04/04/2025
Date Data Arrived at EDR: 06/02/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 04/04/2025
Date Data Arrived at EDR: 06/02/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Quarterly

Local Land Records

LIENS: Liens Information Listing

A listing of environmental liens.

Date of Government Version: 03/07/2018
Date Data Arrived at EDR: 03/09/2018
Date Made Active in Reports: 06/21/2018
Number of Days to Update: 104

Source: Department of Environmental Protection
Telephone: 617-292-5628
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/11/2025
Date Data Arrived at EDR: 06/12/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 4

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

MA SPILLS: Historical Spill List

The Spills Database was the release notification tracking system for spills that occurred prior to October 1, 1993. This information should be considered to be primarily of historical interest since all of the listed spills have either been cleaned up or assigned new tracking numbers and moved to the Reportable Releases or Sites Transition List databases.

Date of Government Version: 09/30/1993
Date Data Arrived at EDR: 12/03/2003
Date Made Active in Reports: 12/31/2003
Number of Days to Update: 28

Source: Department of Environmental Protection
Telephone: 617-292-5720
Last EDR Contact: 12/03/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

RELEASE: Reportable Releases

Contains information on all releases of oil and hazardous materials that have been reported to DEP

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 12/11/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/08/2013
Number of Days to Update: 36

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 03/10/1998
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/05/2013
Number of Days to Update: 61

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 07/23/2025
Date Data Arrived at EDR: 07/23/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 6

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 07/23/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/07/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 06/25/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/07/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/03/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EPA WATCH LIST: EPA Watch List

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/24/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 07/31/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/11/2025
Next Scheduled EDR Contact: 12/22/2025
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/11/2025
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 7

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/11/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 04/14/2025
Date Data Arrived at EDR: 04/15/2025
Date Made Active in Reports: 07/08/2025
Number of Days to Update: 84

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/14/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/29/2025
Date Data Arrived at EDR: 08/04/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 8

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/05/2025
Date Data Arrived at EDR: 04/11/2025
Date Made Active in Reports: 07/08/2025
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/09/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 28

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 10/02/2024
Date Made Active in Reports: 01/10/2025
Number of Days to Update: 100

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/02/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 05/07/2025
Date Data Arrived at EDR: 05/07/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 27

Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 07/08/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 10/16/2024
Date Made Active in Reports: 01/14/2025
Number of Days to Update: 90

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 08/28/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 07/31/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 06/17/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 03/31/2025
Date Data Arrived at EDR: 04/22/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 86
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/17/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 03/31/2025
Date Data Arrived at EDR: 05/02/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 76

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/24/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/19/2025
Date Made Active in Reports: 03/07/2025
Number of Days to Update: 16

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 06/25/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/28/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 05/15/2025
Date Data Arrived at EDR: 05/15/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 75

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/11/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/17/2025
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 10/06/2025
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/01/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/18/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 04/01/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 83

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 04/08/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 84

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 05/28/2025
Date Data Arrived at EDR: 05/28/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 6

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/09/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 06/04/2024
Date Data Arrived at EDR: 11/22/2024
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 88

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/22/2025
Date Data Arrived at EDR: 05/05/2025
Date Made Active in Reports: 05/21/2025
Number of Days to Update: 16

Source: EPA
Telephone: (617) 918-1111
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/22/2025
Date Data Arrived at EDR: 06/25/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 06/25/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 02/14/2025
Date Data Arrived at EDR: 03/11/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 84

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/02/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/12/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/07/2025
Date Data Arrived at EDR: 05/13/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 77

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/07/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 03/23/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 05/05/2025
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 07/16/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS PROJECT: NORTHEASTERN UNIVERSITY PFAS PROJECT

The PFAS Contamination Site Tracker records qualitative and quantitative data from each site in a chart, specifically examining discovery, contamination levels, government response, litigation, health impacts, media coverage, and community characteristics. All data presented in the chart were extracted from government websites, such as state health departments or the Environmental Protection Agency, and news articles.

Date of Government Version: 05/15/2024
Date Data Arrived at EDR: 03/06/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 89

Source: Social Science Environmental Health Research Institute
Telephone: N/A
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS ECHO FIRE TRAIN: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PFAS PT 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 06/26/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 12/16/2016
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 03/10/2017
Number of Days to Update: 63

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: No Update Planned

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data

The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 04/13/2025
Date Data Arrived at EDR: 04/15/2025
Date Made Active in Reports: 07/08/2025
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 07/10/2025
Next Scheduled EDR Contact: 10/27/2025
Data Release Frequency: Varies

UST FINDER: UST Finder Database

EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 106

Source: Environmental Protection Agency
Telephone: 202-564-0394
Last EDR Contact: 08/13/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

UST FINDER RELEASE: UST Finder Releases Database

US EPA’s UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA’s Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/31/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 79

Source: Environmental Protecton Agency
Telephone: 202-564-0394
Last EDR Contact: 08/13/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Semi-Annually

E MANIFEST: Hazardous Waste Electronic Manifest System

EPA established a national system for tracking hazardous waste shipments electronically. This system, known as ?e-Manifest,? will modernize the nation?s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 08/13/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 833-501-6826
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Varies

PFAS: PFAS Contaminated Sites Listing

Detection of Per- and Polyfluoroalkyl Substances (PFAS) in drinking water.

Date of Government Version: 03/24/2025
Date Data Arrived at EDR: 03/25/2025
Date Made Active in Reports: 06/13/2025
Number of Days to Update: 80

Source: Department of Environmental Protection
Telephone: 617-292-6770
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Varies

AIRS: Permitted Facilities Listing

A listing of Air Quality permit applications.

Date of Government Version: 04/07/2025
Date Data Arrived at EDR: 04/08/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 77

Source: Department of Environmental Protection
Telephone: 617-292-5789
Last EDR Contact: 07/20/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

ASBESTOS: Asbestos Notification Listing

Asbestos sites

Date of Government Version: 05/21/2025
Date Data Arrived at EDR: 05/21/2025
Date Made Active in Reports: 08/20/2025
Number of Days to Update: 91

Source: Department of Environmental Protection
Telephone: 617-292-5982
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

DRYCLEANERS: Regulated Drycleaning Facilities

A listing of Department of Environmental Protection regulated drycleaning facilities that use perchloroethylene under the Environmental Results Program.

Date of Government Version: 04/25/2025
Date Data Arrived at EDR: 05/01/2025
Date Made Active in Reports: 07/25/2025
Number of Days to Update: 85

Source: Department of Environmental Protection
Telephone: 617-292-5633
Last EDR Contact: 08/12/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

ENFORCEMENT: Enforcement Action Cases

A listing of enforcement action cases tracked by Department of Environmental Protection programs, including Solid Waste and Hazardous Waste.

Date of Government Version: 04/03/2025
Date Data Arrived at EDR: 04/08/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 77

Source: Department of Environmental Quality
Telephone: 617-292-5979
Last EDR Contact: 07/15/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

FIN ASSURANCE 1: Financial Assurance Information Listing

Information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 12/01/2010
Date Data Arrived at EDR: 12/23/2010
Date Made Active in Reports: 02/03/2011
Number of Days to Update: 42

Source: Department of Environmental Protection
Telephone: 617-292-5970
Last EDR Contact: 08/26/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Varies

FIN ASSURANCE 2: Financial Assurance Information Listing

A listing of financial assurance information for underground storage tanks. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/26/2025
Date Data Arrived at EDR: 05/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 84

Source: Office of State Fire Marshal
Telephone: 978-567-3100
Last EDR Contact: 07/29/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Varies

FIN ASSURANCE 3: Financial Assurance Information listing

Information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay

Date of Government Version: 03/27/2025
Date Data Arrived at EDR: 03/27/2025
Date Made Active in Reports: 06/13/2025
Number of Days to Update: 78

Source: Department of Environmental Protection
Telephone: 617-292-5970
Last EDR Contact: 07/08/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Varies

GWDP: Ground Water Discharge Permits

The Ground Water Discharge Permits datalayer (formerly known as Groundwater Discharge Points) is a statewide point dataset containing approximate locations of permitted discharges to groundwater.

Date of Government Version: 01/10/2025
Date Data Arrived at EDR: 01/22/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 75

Source: MassGIS
Telephone: 617-556-1150
Last EDR Contact: 07/17/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Varies

HW GEN: List of Massachusetts Hazardous Waste Generators

Permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities.

Date of Government Version: 06/04/2025
Date Data Arrived at EDR: 06/16/2025
Date Made Active in Reports: 09/11/2025
Number of Days to Update: 87

Source: Department of Environmental Protection
Telephone: 617-292-5500
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Semi-Annually

MERCURY: Mercury Product Recyling Drop-Off Locations Listing

A listing of locations, collecting and recycling for mercury-added products. Mercury is toxic to the human nervous system, as well as fish and animals. Mercury can enter the body either through skin absorption or through inhalation of mercury vapors. At room temperature, small beads of mercury will vaporize.

Date of Government Version: 04/02/2025
Date Data Arrived at EDR: 05/13/2025
Date Made Active in Reports: 07/25/2025
Number of Days to Update: 73

Source: Department of Environmental Protection
Telephone: 617-292-5632
Last EDR Contact: 08/07/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

NPDES: NPDES Permit Listing
Listing of treatment plants in Massachusetts that hold permits to discharge to groundwater.

Date of Government Version: 05/05/2025
Date Data Arrived at EDR: 05/06/2025
Date Made Active in Reports: 07/30/2025
Number of Days to Update: 85
Source: Department of Environmental Protection
Telephone: 508-767-2781
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

TIER 2: Tier 2 Information Listing
A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 08/07/2024
Date Made Active in Reports: 11/06/2024
Number of Days to Update: 91
Source: Massachusetts Emergency Management Agency
Telephone: 508-820-2019
Last EDR Contact: 07/29/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Annually

TSD: TSD Facility
List of Licensed Hazardous Waste Treatment, Storage Disposal Facilities (TSDFs) in Massachusetts.

Date of Government Version: 06/04/2025
Date Data Arrived at EDR: 06/16/2025
Date Made Active in Reports: 09/11/2025
Number of Days to Update: 87
Source: Department of Environmental Protection
Telephone: 617-292-5580
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Varies

UIC: Underground Injection Control Listing
A list of UIC registration data and their locations

Date of Government Version: 05/05/2025
Date Data Arrived at EDR: 05/06/2025
Date Made Active in Reports: 05/13/2025
Number of Days to Update: 7
Source: Department of Environmental Protection
Telephone: 617-566-1172
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A
Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/04/2025
Date Data Arrived at EDR: 05/06/2025
Date Made Active in Reports: 07/21/2025
Number of Days to Update: 76

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 07/31/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/23/2025
Next Scheduled EDR Contact: 10/13/2025
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 1

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/17/2025
Next Scheduled EDR Contact: 11/03/2025
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/06/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/09/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 07/02/2025
Next Scheduled EDR Contact: 10/20/2025
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 08/27/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

30 APPLE STREET
30 APPLE STREET
ESSEX, MA 01929

TARGET PROPERTY COORDINATES

Latitude (North):	42.625289 - 42° 37' 31.04''
Longitude (West):	70.787641 - 70° 47' 15.51''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	353403.9
UTM Y (Meters):	4720539.5
Elevation:	40 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	19019791 IPSWICH, MA
Version Date:	2021
South Map:	19019793 MARBLEHEAD NORTH, MA
Version Date:	2021

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

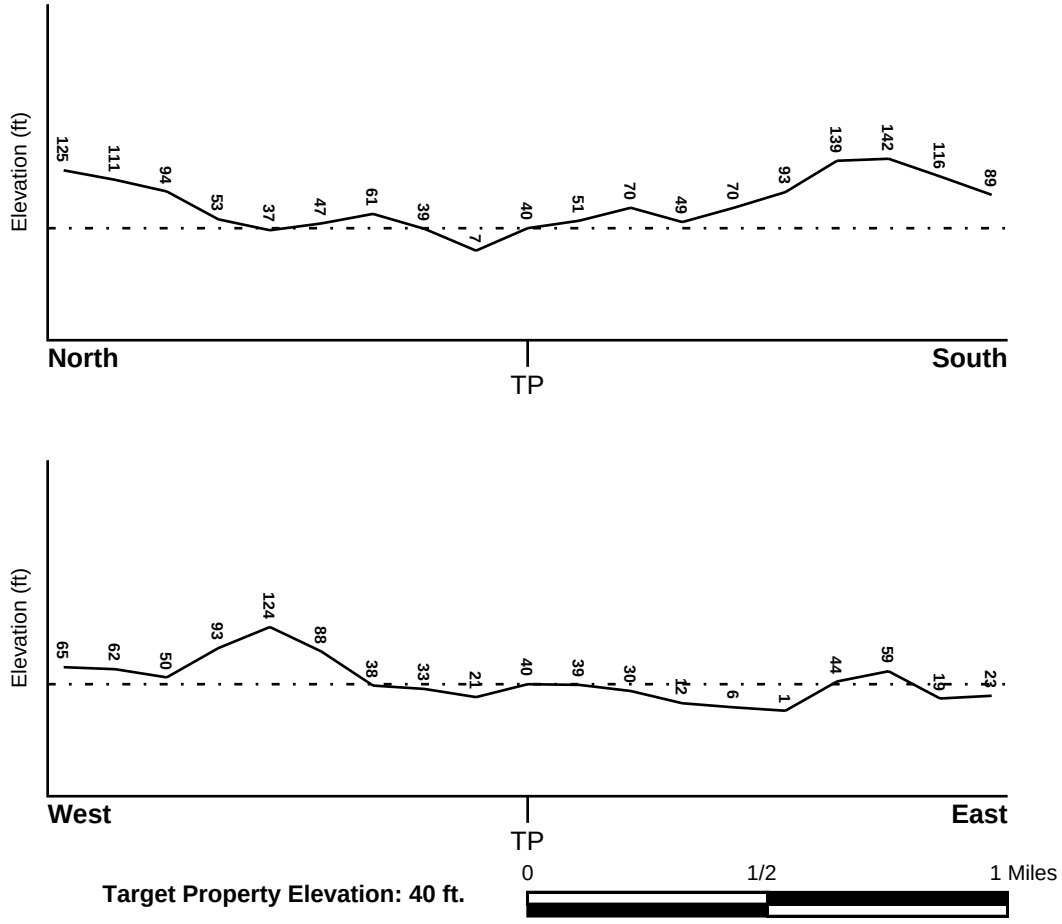
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NNE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 40 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
25009C0293G	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
25009C0294G	FEMA FIRM Flood data
25009C0431G	FEMA FIRM Flood data
25009C0432G	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
EAST HALF OF IPSWICH	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

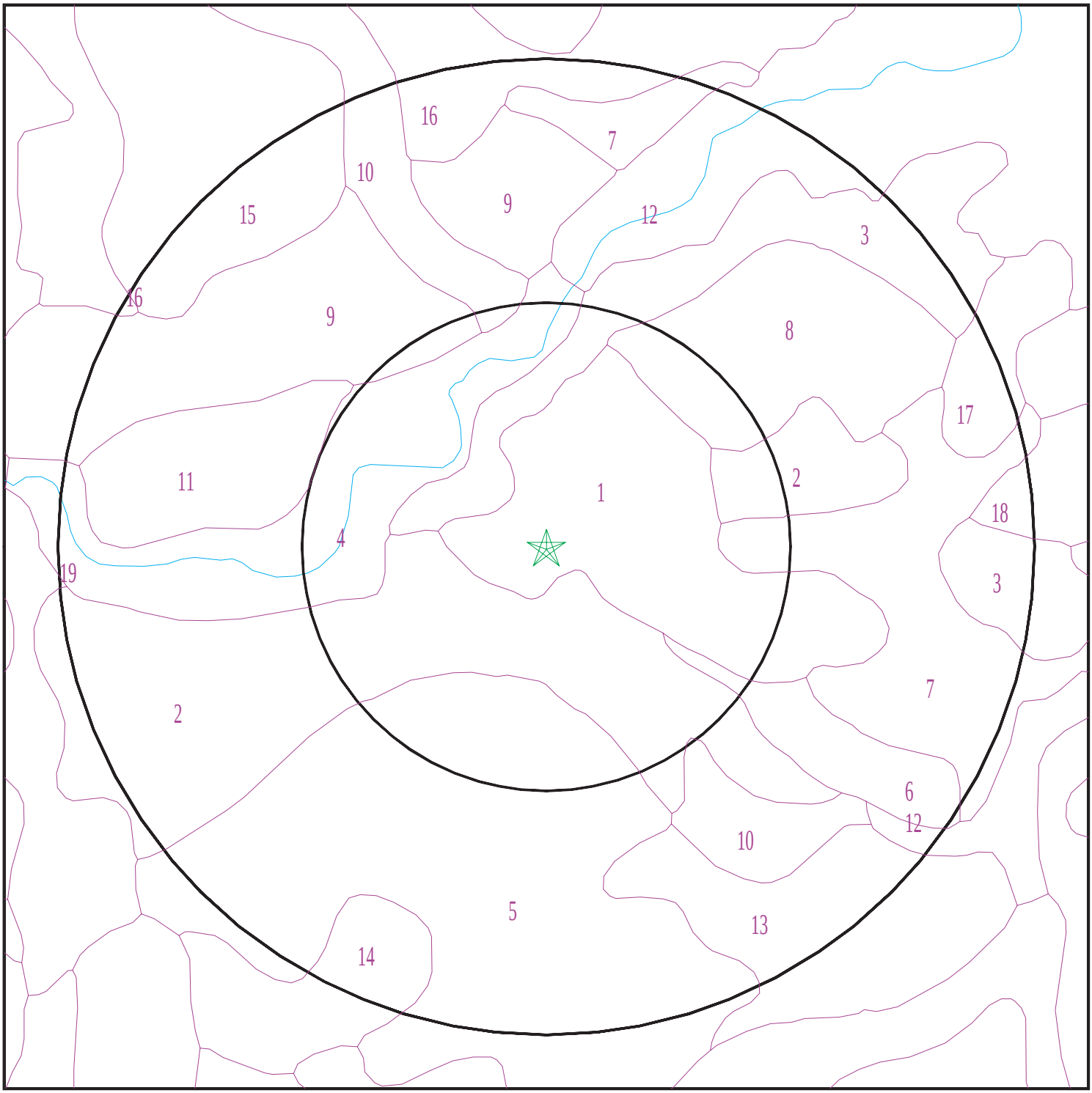
Era:	Paleozoic
System:	Ordovian
Series:	Lower Paleozoic granitic rocks
Code:	Pzg1 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 8109451.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	30 Apple Street	CLIENT:	Mabbett & Assoc.
ADDRESS:	30 Apple Street Essex MA 01929	CONTACT:	Cassidy Way
		INQUIRY #:	8109451.2s
LAT/LONG:	42.625289 / 70.787641	DATE:	September 17, 2025 11:25 am

Copyright © 2025 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Merrimac

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	9 inches	14 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	14 inches	22 inches	gravelly sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
4	22 inches	59 inches	stratified very gravelly coarse sand to sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 2

Soil Component Name: Belgrade

Soil Surface Texture: very fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 77 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	very fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 0.42	Max: 7.8 Min: 6.1
2	9 inches	42 inches	very fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 0.42	Max: 7.8 Min: 6.1
3	42 inches	59 inches	silt loam	Not reported	Not reported	Max: 42.34 Min: 0.42	Max: 7.8 Min: 6.1

Soil Map ID: 3

Soil Component Name: Melrose

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.3 Min: 5.1
2	9 inches	29 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.3 Min: 5.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	29 inches	59 inches	silty clay	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.3 Min: 5.1

Soil Map ID: 4

Soil Component Name: Fluvaquents

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Very poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 15 inches

No Layer Information available.

Soil Map ID: 5

Soil Component Name: Chatfield

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:
2	5 inches	33 inches	gravelly very fine sandy loam	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:
3	33 inches	59 inches	unweathered bedrock	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 6

Soil Component Name: Pollux

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 4.23 Min: 0.42	Max: 7.3 Min: 4.5
2	9 inches	35 inches	fine sandy loam	Not reported	Not reported	Max: 4.23 Min: 0.42	Max: 7.3 Min: 4.5
3	35 inches	59 inches	stratified very fine sand to silt loam	Not reported	Not reported	Max: 4.23 Min: 0.42	Max: 7.3 Min: 4.5

Soil Map ID: 7

Soil Component Name: Boxford

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.3 Min: 5.1
2	9 inches	16 inches	silt loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.3 Min: 5.1
3	16 inches	44 inches	silty clay loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.3 Min: 5.1
4	44 inches	59 inches	silty clay loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.3 Min: 5.1

Soil Map ID: 8

Soil Component Name: Dumps

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class:
Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 9

Soil Component Name: Merrimac

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	9 inches	14 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	14 inches	22 inches	gravelly sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
4	22 inches	59 inches	stratified very gravelly coarse sand to sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 10

Soil Component Name: Scitico

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 15 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6
2	7 inches	42 inches	silty clay loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6
3	42 inches	57 inches	silty clay loam	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6
4	57 inches	70 inches	silty clay	Not reported	Not reported	Max: 0.42 Min: 0.01	Max: 7.8 Min: 5.6

Soil Map ID: 11

Soil Component Name: Windsor

Soil Surface Texture: loamy sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6.5 Min: 4.5
2	9 inches	29 inches	loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6.5 Min: 4.5
3	29 inches	59 inches	sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6.5 Min: 4.5

Soil Map ID: 12

Soil Component Name: Ipswich

Soil Surface Texture: peat

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Very poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	16 inches	peat	Not reported	Not reported	Max: 141.14 Min: 4.23	Max: Min:
2	16 inches	42 inches	mucky peat	Not reported	Not reported	Max: 141.14 Min: 4.23	Max: Min:
3	42 inches	59 inches	mucky peat	Not reported	Not reported	Max: 141.14 Min: 4.23	Max: Min:

Soil Map ID: 13

Soil Component Name: Chatfield

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:
2	5 inches	33 inches	gravelly very fine sandy loam	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:
3	33 inches	59 inches	unweathered bedrock	Not reported	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 14

Soil Component Name: Ridgebury

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 23 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5
2	9 inches	20 inches	gravelly sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5
3	20 inches	59 inches	gravelly sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5

Soil Map ID: 15

Soil Component Name: Canton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	3 inches	27 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	27 inches	59 inches	gravelly loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 16

Soil Component Name: Scituate

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 69 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0.42	Max: 6 Min: 4.5
2	9 inches	33 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0.42	Max: 6 Min: 4.5
3	33 inches	59 inches	gravelly loamy sand	Not reported	Not reported	Max: 1.41 Min: 0.42	Max: 6 Min: 4.5

Soil Map ID: 17

Soil Component Name: Maybid

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Very poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	silt loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.3 Min: 6.1
2	5 inches	18 inches	silty clay loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.3 Min: 6.1
3	18 inches	59 inches	silty clay	Not reported	Not reported	Max: 1.41 Min: 0	Max: 7.3 Min: 6.1

Soil Map ID: 18

Soil Component Name: Canton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	3 inches	27 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	27 inches	59 inches	gravelly loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 19

Soil Component Name: Walpole

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 15 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 7.3 Min: 4.5
2	9 inches	22 inches	sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 7.3 Min: 4.5
3	22 inches	59 inches	stratified gravelly coarse sand to loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 7.3 Min: 4.5

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	0.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40000478964	0 - 1/8 Mile NNE
2	USGS40000478954	1/8 - 1/4 Mile West
3	USGS40000479044	1/4 - 1/2 Mile NNE
5	USGS40000478856	1/2 - 1 Mile WSW
6	USGS40000478955	1/2 - 1 Mile West
A7	USGS40000478857	1/2 - 1 Mile WSW
A8	USGS40000481153	1/2 - 1 Mile WSW
9	USGS40000479178	1/2 - 1 Mile NNE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
4	MA3092001	1/2 - 1 Mile NE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

Note: PWS System location is not always the same as well location.

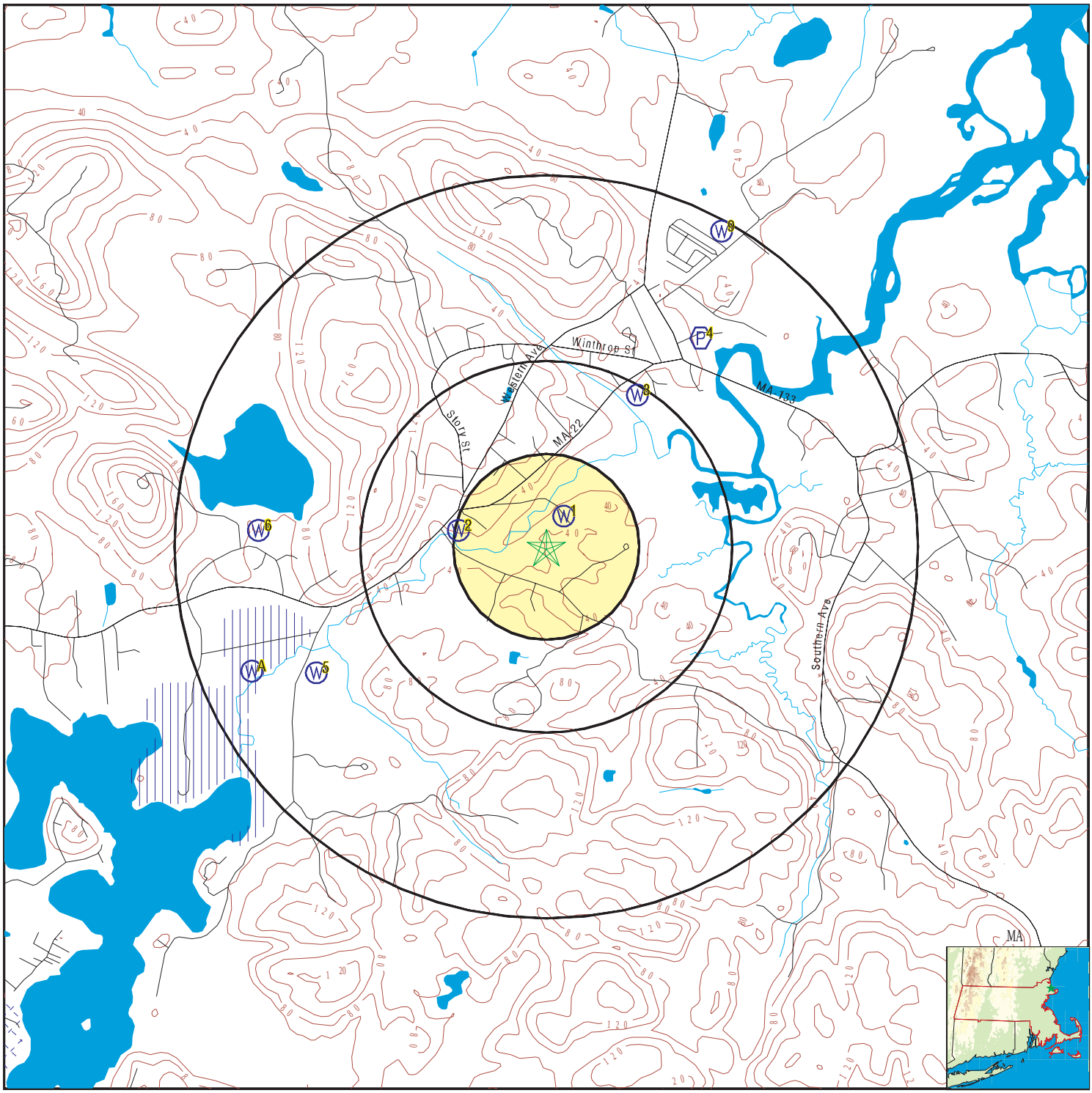
STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

No Wells Found

OTHER STATE DATABASE INFORMATION

PHYSICAL SETTING SOURCE MAP - 8109451.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

- Potentially Productive Aquifers
- Not Potentially Productive Aquifers
- DEP Approved Zone IIs
- EPA Designated Sole Src. Aq.

SITE NAME:	30 Apple Street	CLIENT:	Mabbett & Assoc.
ADDRESS:	30 Apple Street Essex MA 01929	CONTACT:	Cassidy Way
		INQUIRY #:	8109451.2s
LAT/LONG:	42.625289 / 70.787641	DATE:	September 17, 2025 11:25 am

Copyright © 2025 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NNE **FED USGS** **USGS40000478964**
0 - 1/8 Mile
Lower

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-EXA 3	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1959
Well Depth:	11	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

2
West **FED USGS** **USGS40000478954**
1/8 - 1/4 Mile
Higher

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-EXA 2	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1959
Well Depth:	24	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

3
NNE **FED USGS** **USGS40000479044**
1/4 - 1/2 Mile
Lower

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-EXW 14	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1967
Well Depth:	75	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1967-01-01
Feet below surface:	4.00	Feet to sea level:	Not Reported
Note:	Not Reported		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

4
NE | **FRDS PWS** | **MA3092001**
1/2 - 1 Mile
Lower

Epa region:	01	State:	MA
Pwsid:	MA3092001	Pwsname:	CAMP MENORAH
Cityserved:	Not Reported	Stateserved:	MA
Zipserved:	Not Reported	Fipscounty:	25009
Status:	Closed	Retpopsrvd:	25
Pwssvcconn:	1	Psource longname:	Groundwater
Pwstype:	TNCWS	Owner:	Private
Contact:	CAMP MENORAH	Contactorgname:	Not Reported
Contactphone:	Not Reported	Contactaddress1:	BOX 555
Contactaddress2:	Not Reported	Contactcity:	ESSEX
Contactstate:	MA	Contactzip:	019290000
Pwsactivitycode:	I		
PWS ID:	MA3092001	PWS type:	Mailing
PWS name:	CAMP MENORAL	PWS address:	?
PWS city:	ESSEX	PWS state:	MA
PWS zip:	019290000	PWS ID:	MA3092001
Activity status:	Active	Date system activated:	9003
Date system deactivated:	Not Reported	Retail population:	00000025
System name:	CAMP MENORAH	System address:	BOX 555
System city:	ESSEX	System state:	MA
System zip:	019290000		
Population served:	Under 101 Persons	Treatment:	Treated
Latitude:	423800	Longitude:	0704648

5
WSW | **FED USGS** | **USGS40000478856**
1/2 - 1 Mile
Higher

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-EXW 12	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1966
Well Depth:	7	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

6
West | **FED USGS** | **USGS40000478955**
1/2 - 1 Mile
Higher

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-EXW 18	Type:	Well
Description:	Not Reported	HUC:	01090001

Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1957
Well Depth:	57	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1957-09-01
Feet below surface:	6.00	Feet to sea level:	Not Reported
Note:	Not Reported		

A7
WSW **FED USGS** **USGS40000478857**
1/2 - 1 Mile
Higher

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-EXW 15	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1955
Well Depth:	36	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

A8
WSW **FED USGS** **USGS40000481153**
1/2 - 1 Mile
Higher

Organization ID:	USGS-NH		
Organization Name:	USGS New Hampshire Water Science Center		
Monitor Location:	MA-EXW 11	Type:	Well
Description:	GWSI data verified by J. Ayotte on		
HUC:	01090001	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported		
Aquifer:	Sand and gravel aquifers (glaciated regions)		
Formation Type:	Stratified Deposits, Undifferentiated		
Aquifer Type:	Unconfined single aquifer	Construction Date:	1949
Well Depth:	39	Well Depth Units:	ft
Well Hole Depth:	39	Well Hole Depth Units:	ft

Ground water levels,Number of Measurements:	1	Level reading date:	1947-09-01
Feet below surface:	3.00	Feet to sea level:	Not Reported
Note:	Not Reported		

9
NNE **FED USGS** **USGS40000479178**
1/2 - 1 Mile
Lower

Organization ID:	USGS-MA
Organization Name:	USGS Massachusetts Water Science Center

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Monitor Location:	MA-EXA 1	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1959
Well Depth:	40	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1959-10-01
Feet below surface:	22.00	Feet to sea level:	Not Reported
Note:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database | EDR ID Number

MA_ACECS_ID 3

MA_ACECS_ID 3

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: MA Radon

Radon Test Results

County	% of sites>4 pCi/L	Median
ESSEX	36	2.8

Federal EPA Radon Zone for ESSEX County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 01929

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	3.900 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Massachusetts Geographic Information System (MassGIS) Datalayers
Source: Executive Office of Environmental Affairs
Telephone:

Public Water Supply Database

Telephone:
The Public Water Supply datalayer contains the locations of public community surface and groundwater supply sources and public non-community supply sources as defined in 310 CMR 22.00.

Areas of Critical Environmental Concern

Telephone:
The Areas of Critical Environmental Concern (ACEC) datalayer shows the location of areas that have been designated ACECs by the Secretary of Environmental Affairs. ACEC designation requires greater environmental review of certain kinds of proposed development under state jurisdiction within the ACEC boundaries. The ACEC Program is administered by the Department of Environmental Management (DEM) on behalf of the Secretary of Environmental Affairs. The Massachusetts Coastal Zone Management (MCZM) Office managed the original Coastal ACEC Program from 1978 to 1993, and continues to play a key role in monitoring coastal ACECs. Procedures for ACEC designation and the general policies governing the effects of designation are contained in the ACEC regulations (301 CMR 12.00). The ACEC datalayer has been compiled by MCZM and DEM and includes both coastal and inland areas.

EPA Designated Sole Source Aquifers

Telephone:
The Sole Source Aquifer datalayer was compiled by the Department of Environmental Protection (DEP) Division of Water Supply (DWS). Seven Sole Source Aquifers have been designated by the US Environmental Protection Agency (EPA) for Massachusetts. A Sole Source Aquifer (SSA) is an aquifer designated by US EPA as the sole or principal source of drinking water for a given aquifer service area; that is, an aquifer which is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should that aquifer become contaminated. The aquifers were defined by an EPA hydrogeologist.

Aquifers

Telephone:
MassGIS produced an aquifer datalayer composed of 20 individual panels, generally based on the boundaries of the major drainage basins. Areas of high and medium yield were mapped. This datalayer includes polygon attribute coding to help in the identification of areas in which cleanup of hazardous waste sites must meet drinking water standards, as defined in the Massachusetts Contingency Plan (MCP) (310 CMR 40.00000).

Non-Potential Drinking Water Source Areas

Telephone:
Non-Potential Drinking Water Source Areas (NPDWSA) are regulatory in nature representing one of many considerations used in determining the standards to which ground water must be cleaned in the event of a release of oil or hazardous material. NPDWSAs are not based on existing water quality and do not indicate poor ambient conditions.

DEP Approved Zone IIs

Telephone:
The Department of Environmental Protection (DEP) approved Zone IIs datalayer was compiled by the DEP Division of Water Supply (DWS). The database contains 281 approved Zone IIs statewide. As stated in 310 CMR 22.02, a Zone II is 'that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation.) It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone IIs shall extend up gradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary).' These data are used in association with the Public Water Supplies datalayer. The following describes certain unique features of this association.\n - Any proposed new well which will pump at least 100,000 gallons per day must have a Zone II delineation completed and approved by DEP prior to the well coming on line. \n- Additionally, a new source may not be on-line yet, but other, older wells may fall within its Zone II boundary.\n - Further, existing wells must have a Zone II delineated as a condition of receiving a water withdrawal permit under the Water Management Act.

OTHER STATE DATABASE INFORMATION

RADON

State Database: MA Radon
Source: Department of Health
Telephone: 413-586-7525
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

APPENDIX E

ADDITIONAL EDR REPORTS

Historical USGS Topography Maps
Historical Aerial Photographs
Historical City Directories
Certified Sanborn® Map Report

30 Apple Street

30 Apple Street

Essex, MA 01929

Inquiry Number: 8109451.4

September 16, 2025

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

09/16/25

Site Name:

30 Apple Street
30 Apple Street
Essex, MA 01929
EDR Inquiry # 8109451.4

Client Name:

Mabbett & Assoc.
105 Central Street, Suite 4100
Stoneham, MA 02180
Contact: Cassidy Way

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Mabbett & Assoc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA
Project: P2025201

Coordinates:

Latitude:	42.625289 42° 37' 31" North
Longitude:	-70.787641 -70° 47' 16" West
UTM Zone:	Zone 19 North
UTM X Meters:	353408.04
UTM Y Meters:	4720754.06
Elevation:	40.06' above sea level

Maps Provided:

2021	1966, 1970	1888
2018	1956	
2015	1950	
2012	1945	
2005	1943	
1997	1919	
1985	1915	
1977	1893	

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT. Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2025 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2021 Source Sheets



Ipswich
2021
7.5-minute, 24000



Marblehead North
2021
7.5-minute, 24000

2018 Source Sheets



Ipswich
2018
7.5-minute, 24000



Marblehead North
2018
7.5-minute, 24000

2015 Source Sheets



Ipswich
2015
7.5-minute, 24000



Marblehead North
2015
7.5-minute, 24000

2012 Source Sheets



Ipswich
2012
7.5-minute, 24000



Marblehead North
2012
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2005 Source Sheets



Salem
2005
7.5-minute, 25000
Aerial Photo Revised 1978

1997 Source Sheets



Ipswich
1997
7.5-minute, 25000
Aerial Photo Revised 1978

1985 Source Sheets



Ipswich
1985
7.5-minute, 25000
Aerial Photo Revised 1978



Salem
1985
7.5-minute, 25000
Aerial Photo Revised 1978

1977 Source Sheets



Marblehead North
1977
7.5-minute, 25000
Aerial Photo Revised 1977

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1966, 1970 Source Sheets



Ipswich
1966
7.5-minute, 24000



Marblehead North
1970
7.5-minute, 24000
Aerial Photo Revised 1969

1956 Source Sheets



Marblehead North
1956
7.5-minute, 24000
Aerial Photo Revised 1955

1950 Source Sheets



Ipswich
1950
7.5-minute, 24000

1945 Source Sheets



Ipswich
1945
7.5-minute, 31680



Marblehead North
1945
7.5-minute, 31680

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1943 Source Sheets



Cape Ann
1943
30-minute, 125000

1919 Source Sheets



Salem
1919
15-minute, 62500

1915 Source Sheets



SALEM
1915
15-minute, 62500

1893 Source Sheets



Salem
1893
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

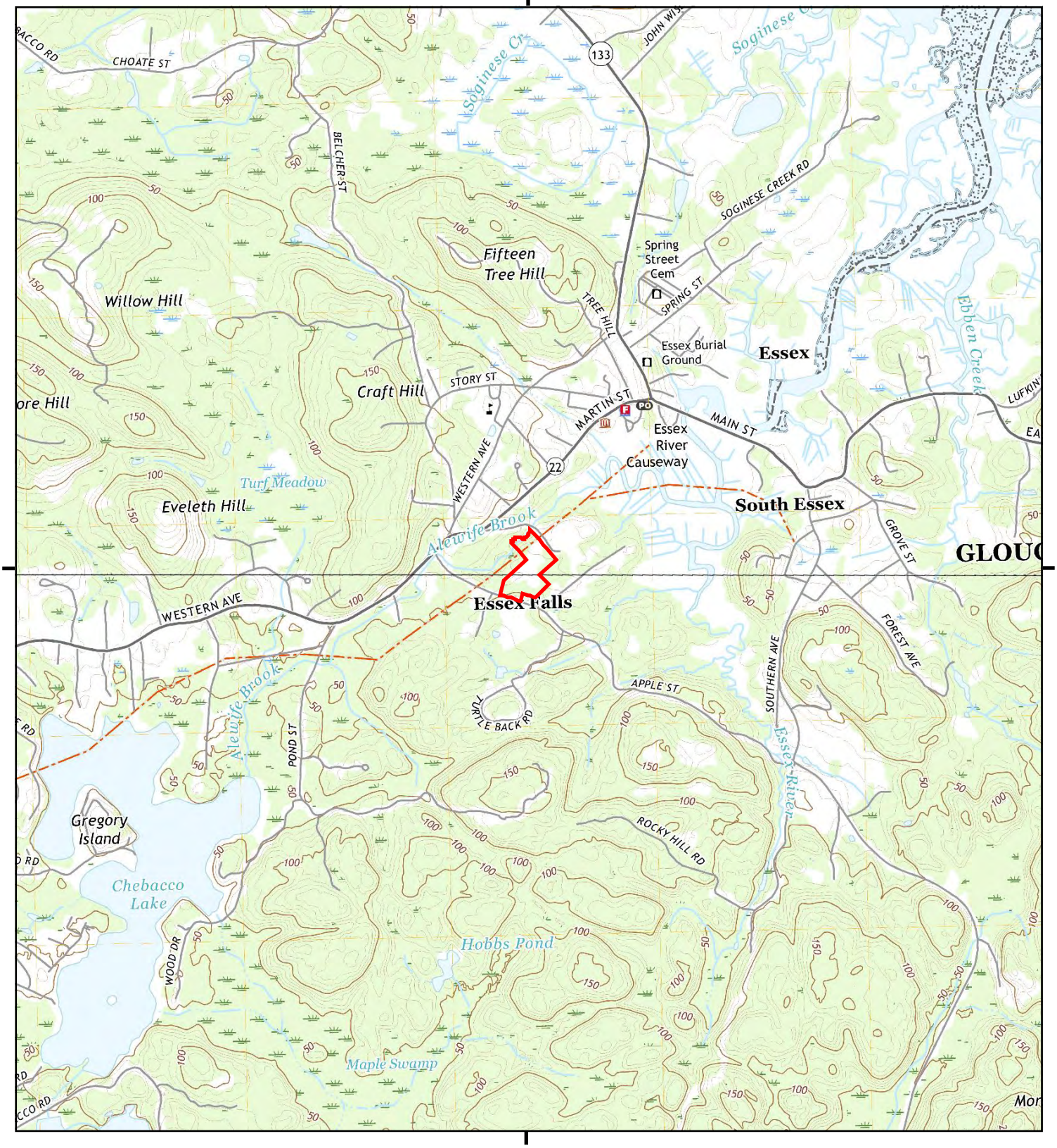
1888 Source Sheets



Salem
1888
15-minute, 62500

Historical Topo Map

2021



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

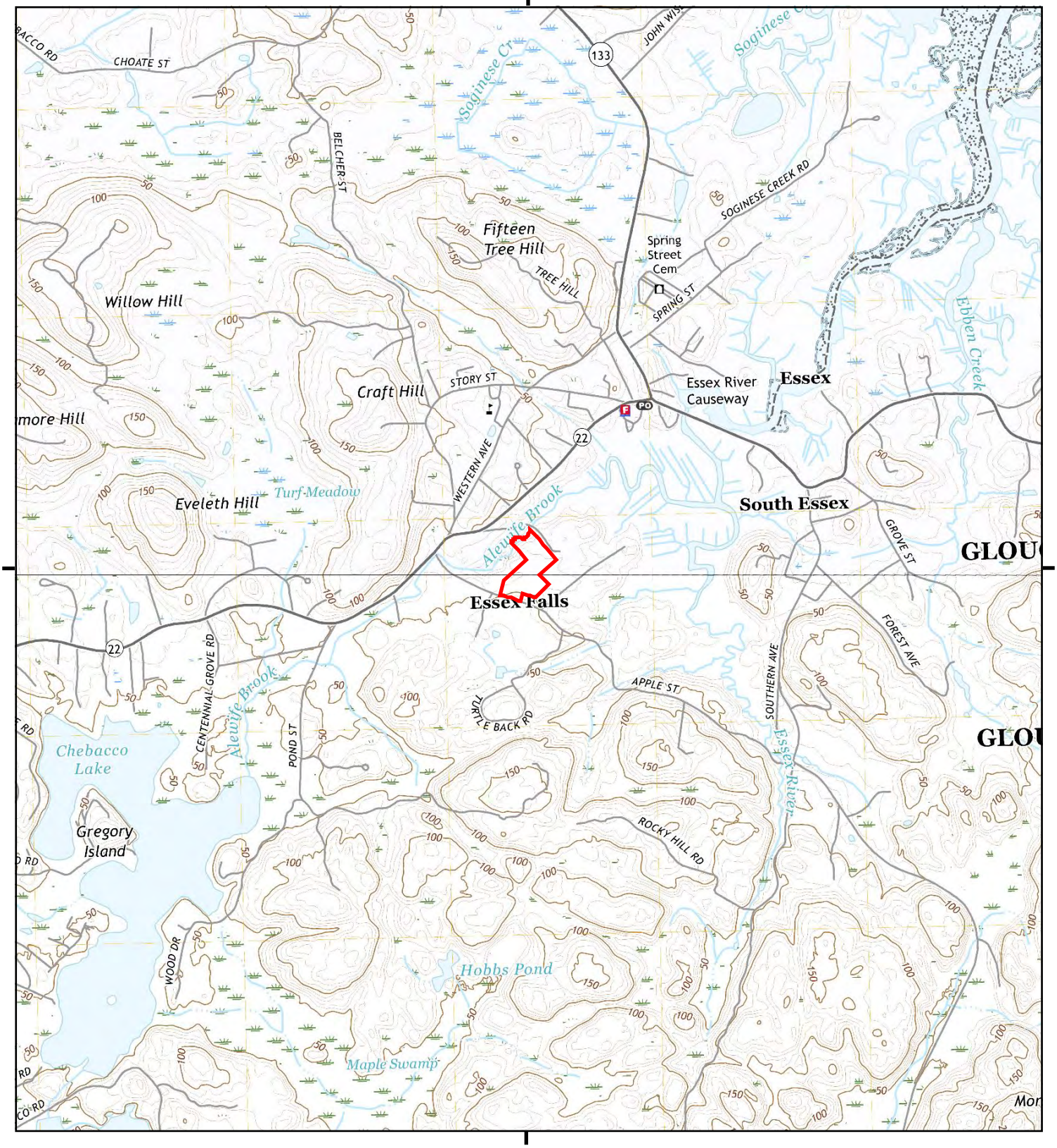
TP, Ipswich, 2021, 7.5-minute
S, Marblehead North, 2021, 7.5-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N

Historical Topo Map

2018



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

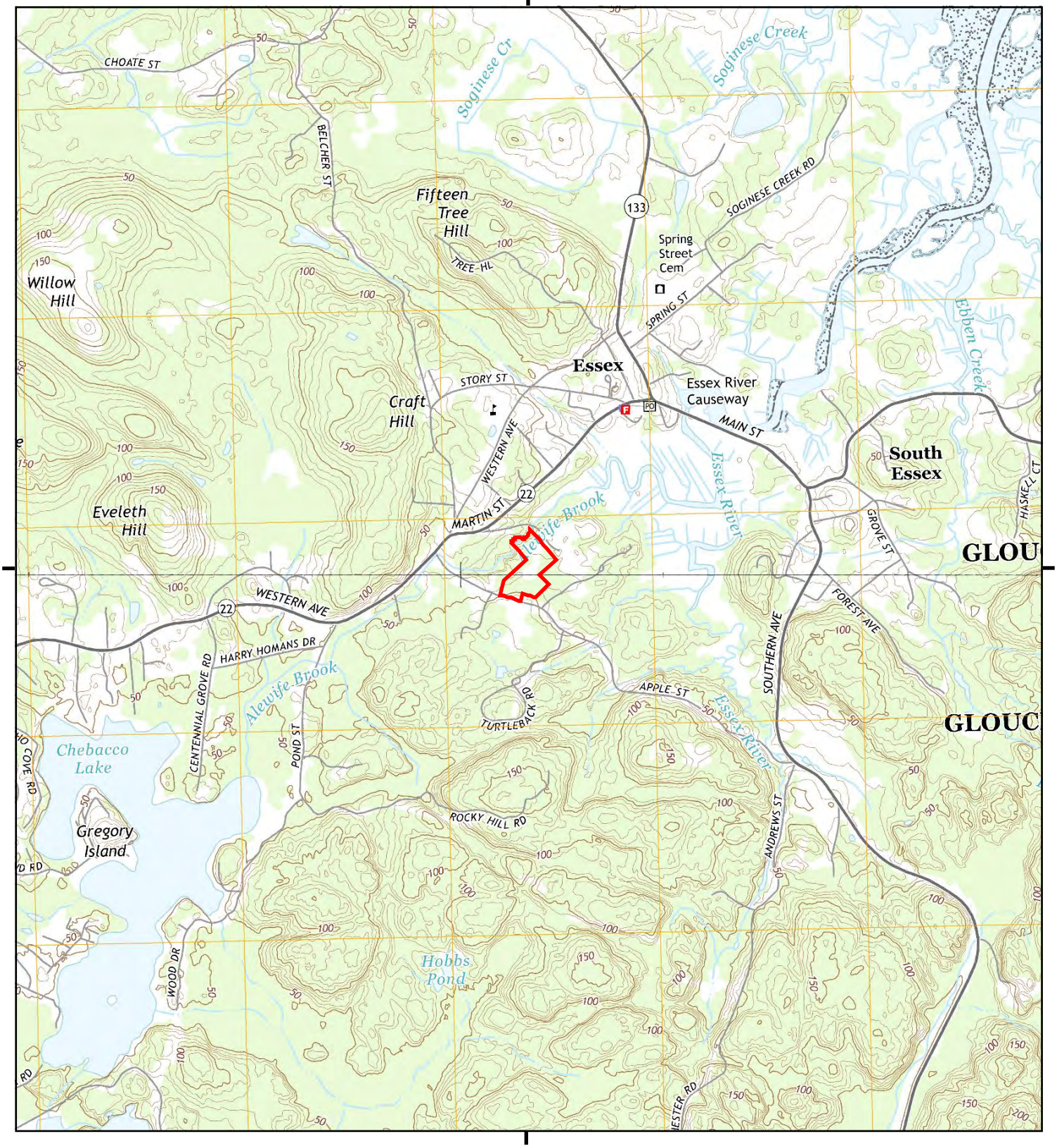
TP, Ipswich, 2018, 7.5-minute
S, Marblehead North, 2018, 7.5-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N

Historical Topo Map

2015



This report includes information from the following map sheet(s).

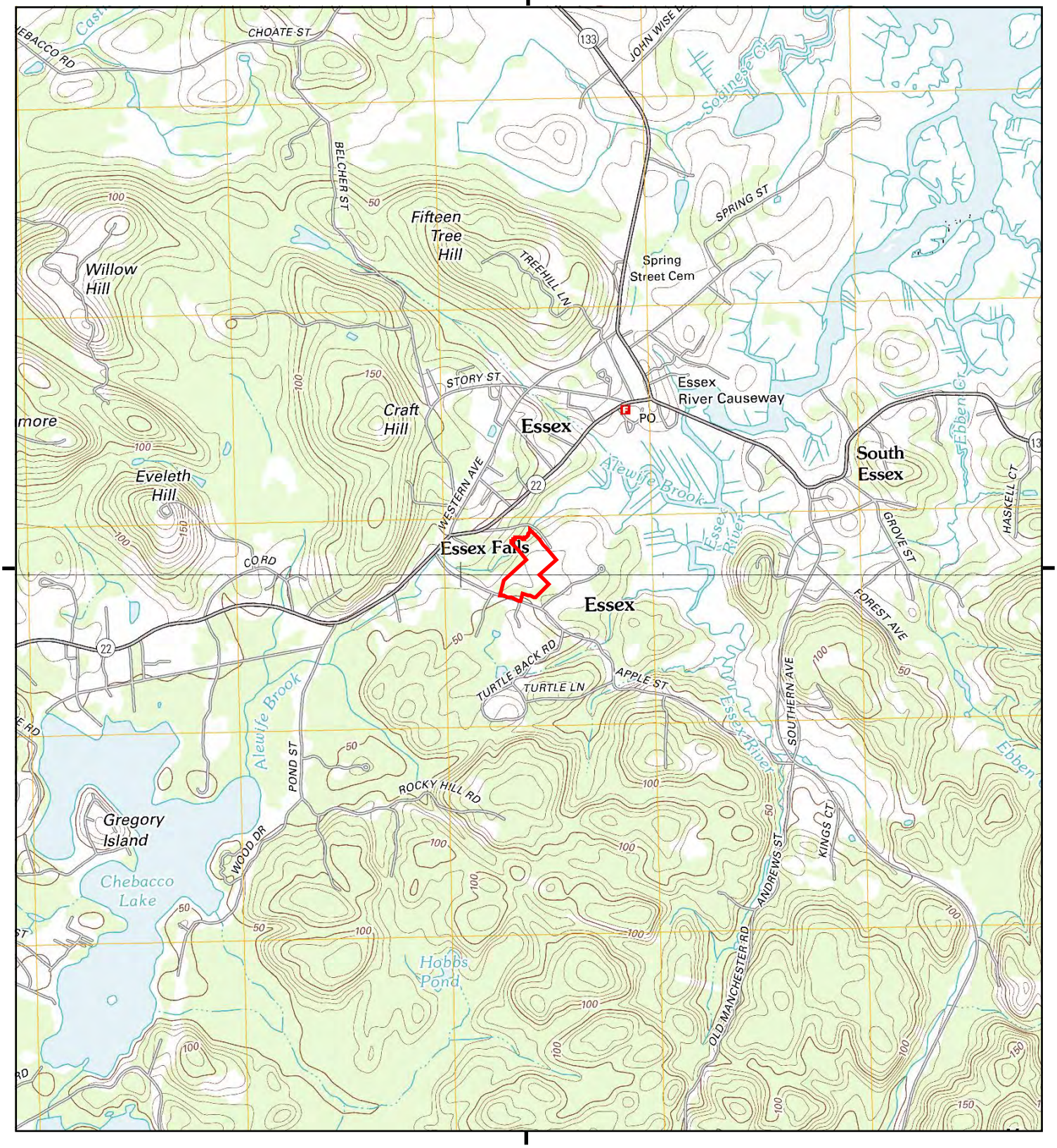
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Ipswich, 2015, 7.5-minute
S, Marblehead North, 2015, 7.5-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

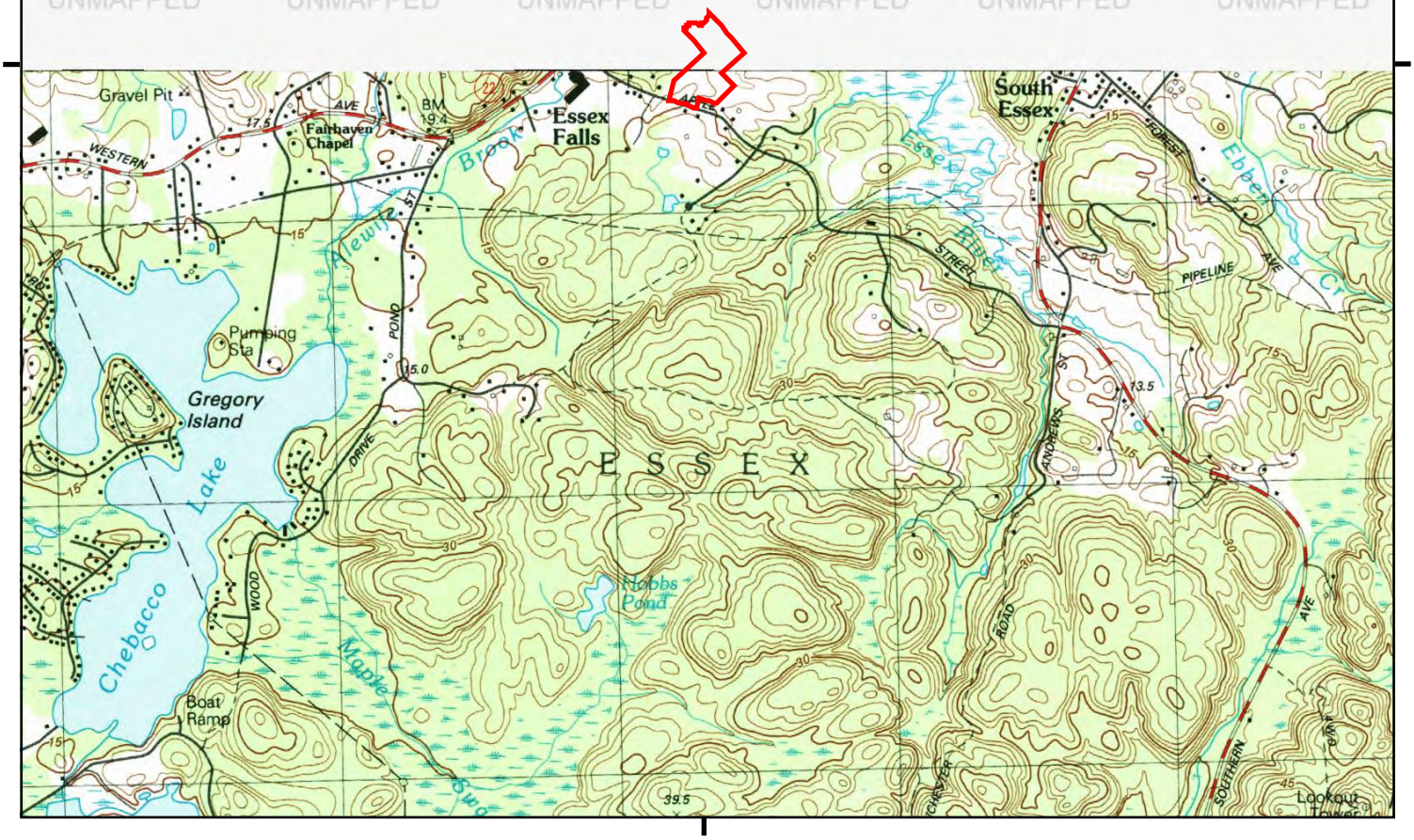
NW N NE
W E
SW S SE

TP, Ipswich, 2012, 7.5-minute
S, Marblehead North, 2012, 7.5-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N

UNMAPPED



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

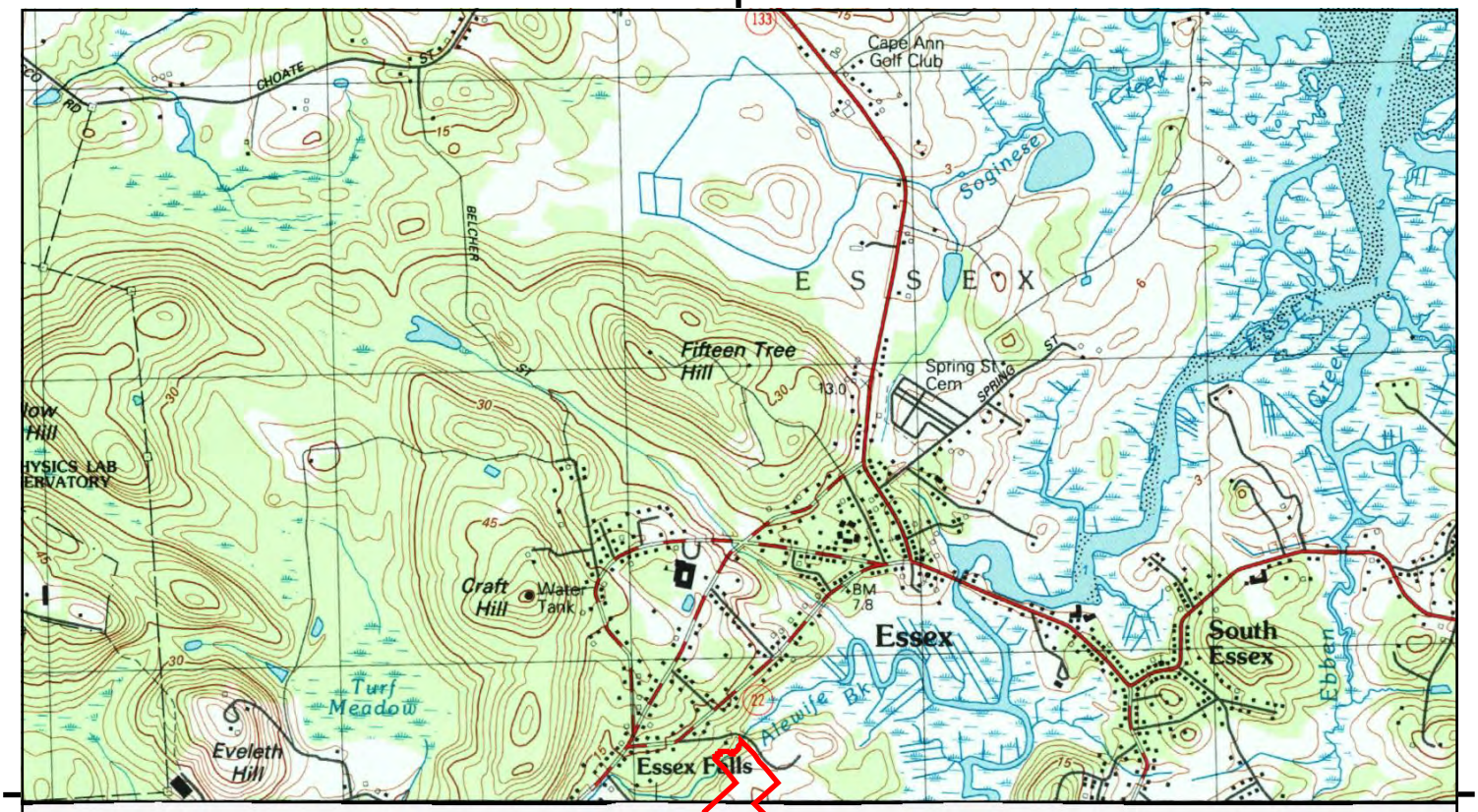
SW, Salem, 2005, 7.5-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N

Historical Topo Map

1997



UNMAPPED

This report includes information from the following map sheet(s).

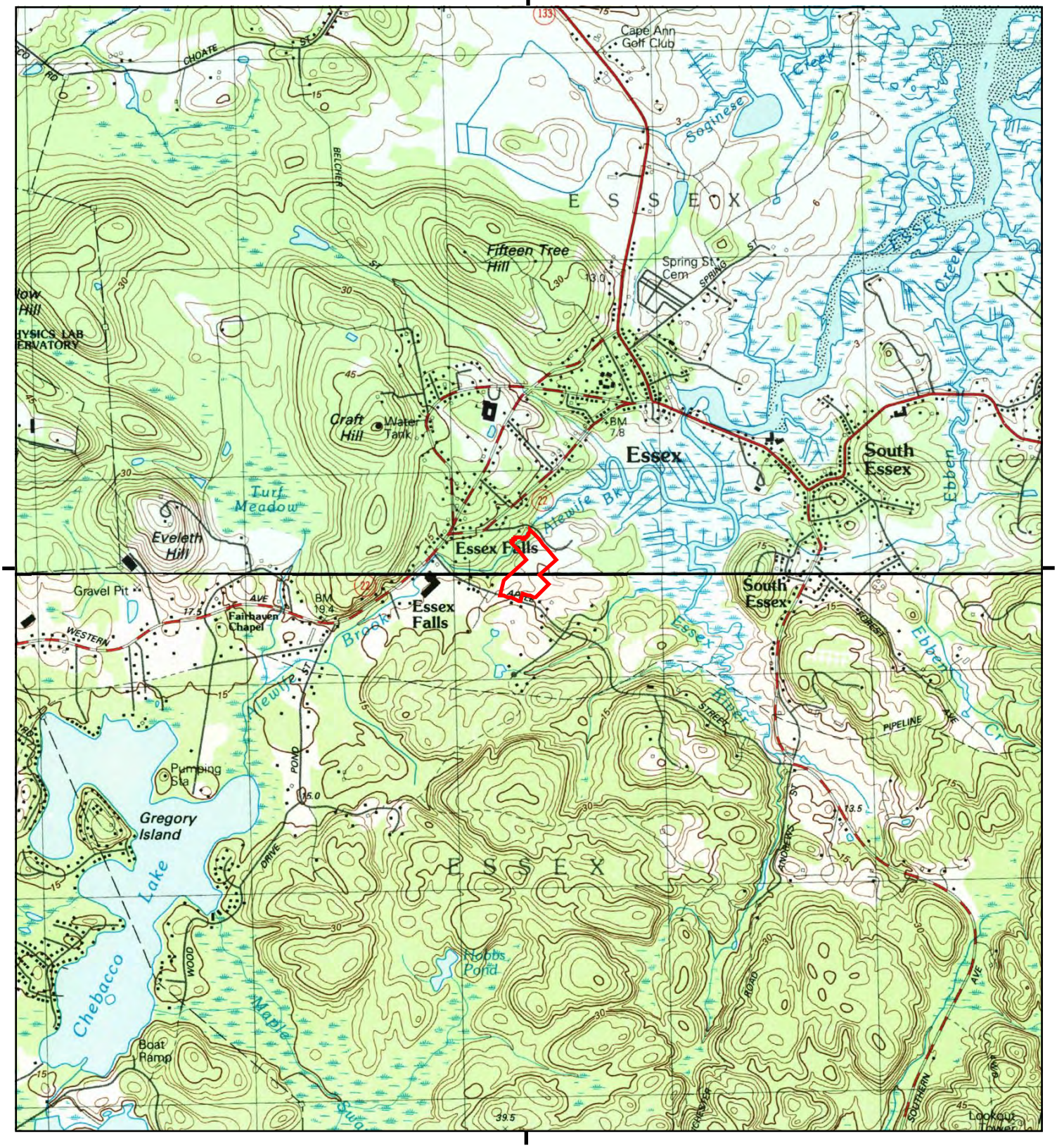
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Ipswich, 1997, 7.5-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

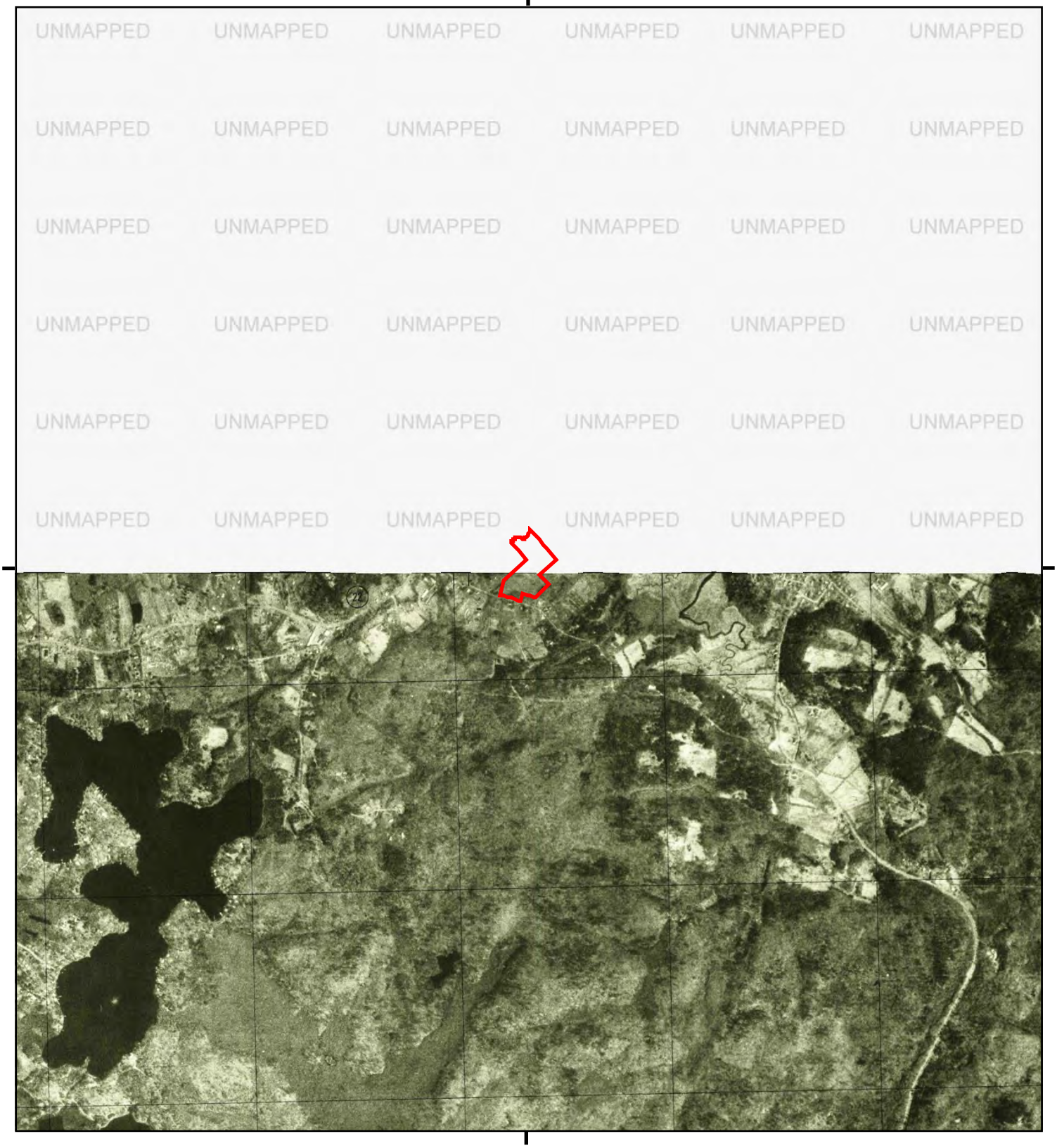
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Ipswich, 1985, 7.5-minute
SW, Salem, 1985, 7.5-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

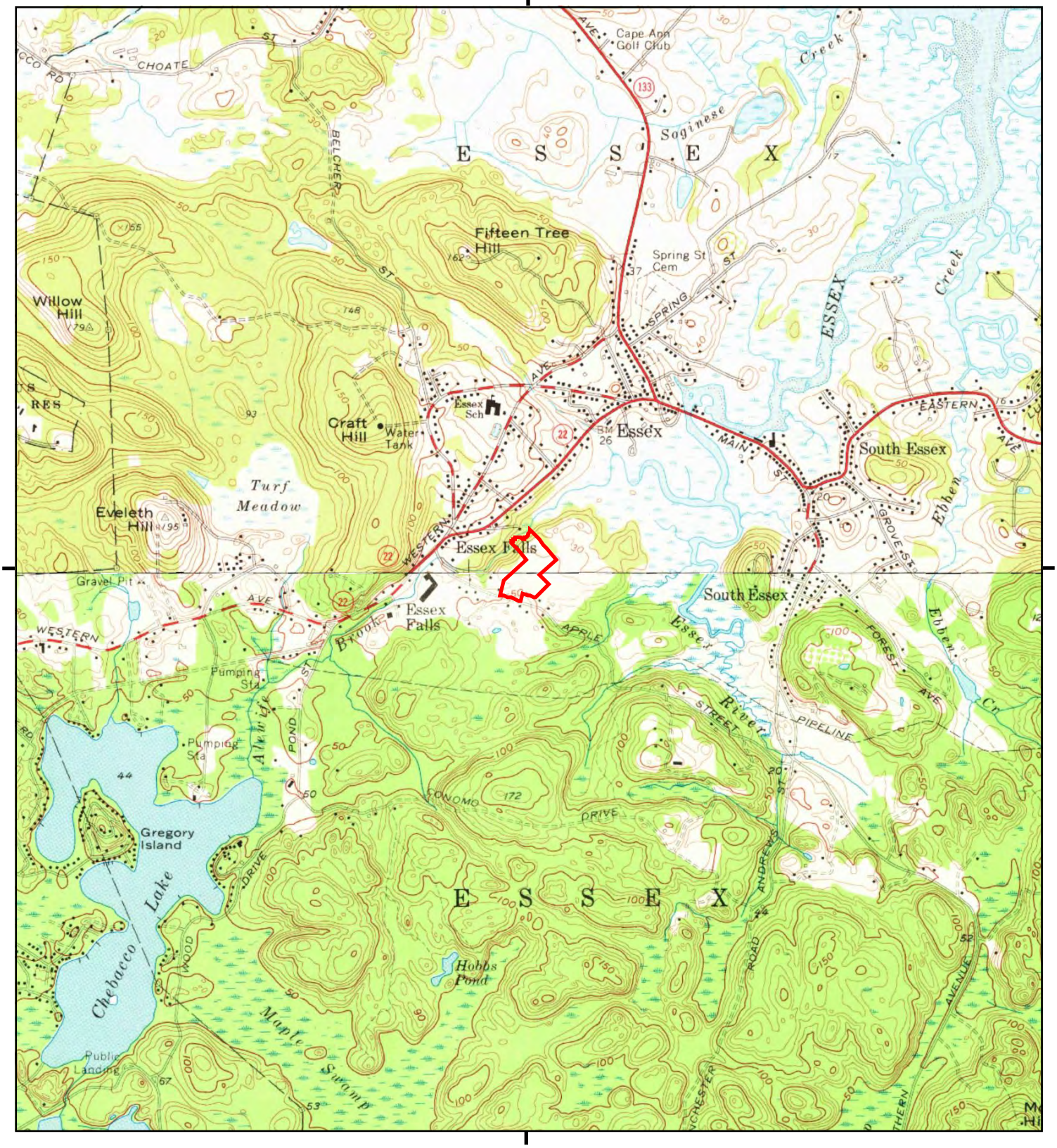
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

S, Marblehead North, 1977, 7.5-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

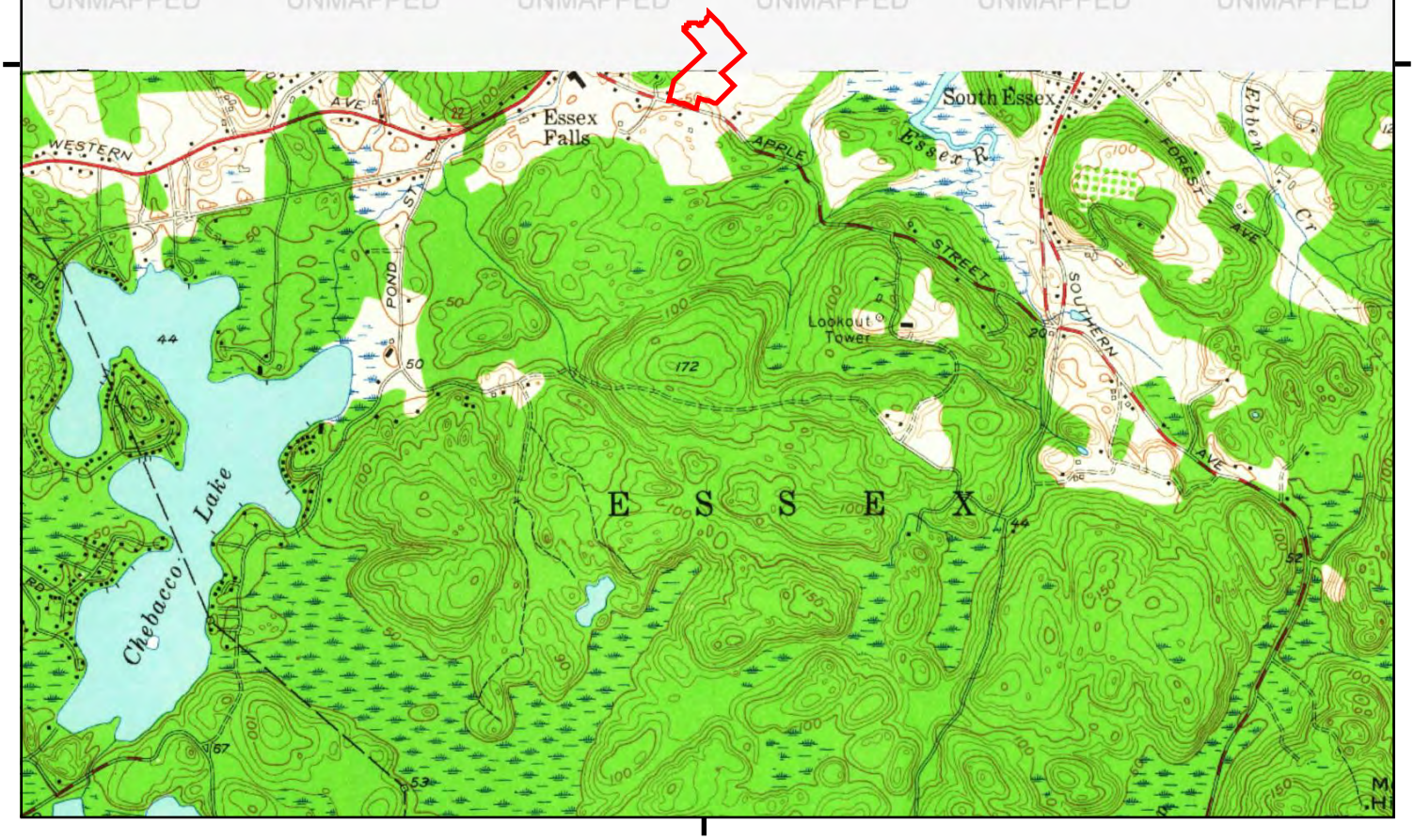
NW N NE
W E
SW S SE

TP, Ipswich, 1966, 7.5-minute
S, Marblehead North, 1970, 7.5-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N

UNMAPPED UNMAPPED UNMAPPED UNMAPPED UNMAPPED UNMAPPED
UNMAPPED UNMAPPED UNMAPPED UNMAPPED UNMAPPED UNMAPPED
UNMAPPED UNMAPPED UNMAPPED UNMAPPED UNMAPPED UNMAPPED
UNMAPPED UNMAPPED UNMAPPED UNMAPPED UNMAPPED UNMAPPED
UNMAPPED UNMAPPED UNMAPPED UNMAPPED UNMAPPED UNMAPPED
UNMAPPED UNMAPPED UNMAPPED UNMAPPED UNMAPPED UNMAPPED



This report includes information from the following map sheet(s).

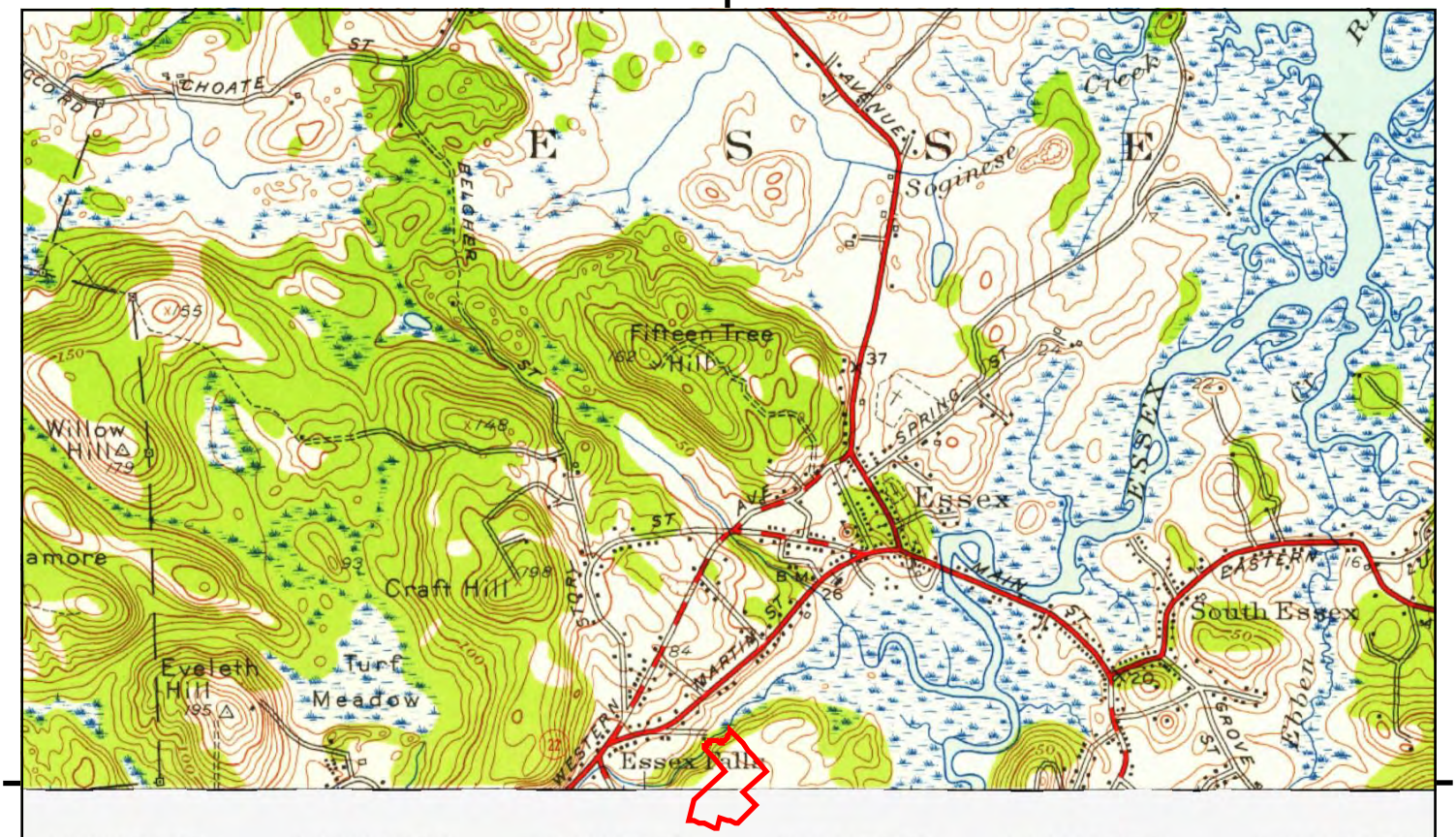
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

S, Marblehead North, 1956, 7.5-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



UNMAPPED

This report includes information from the following map sheet(s).

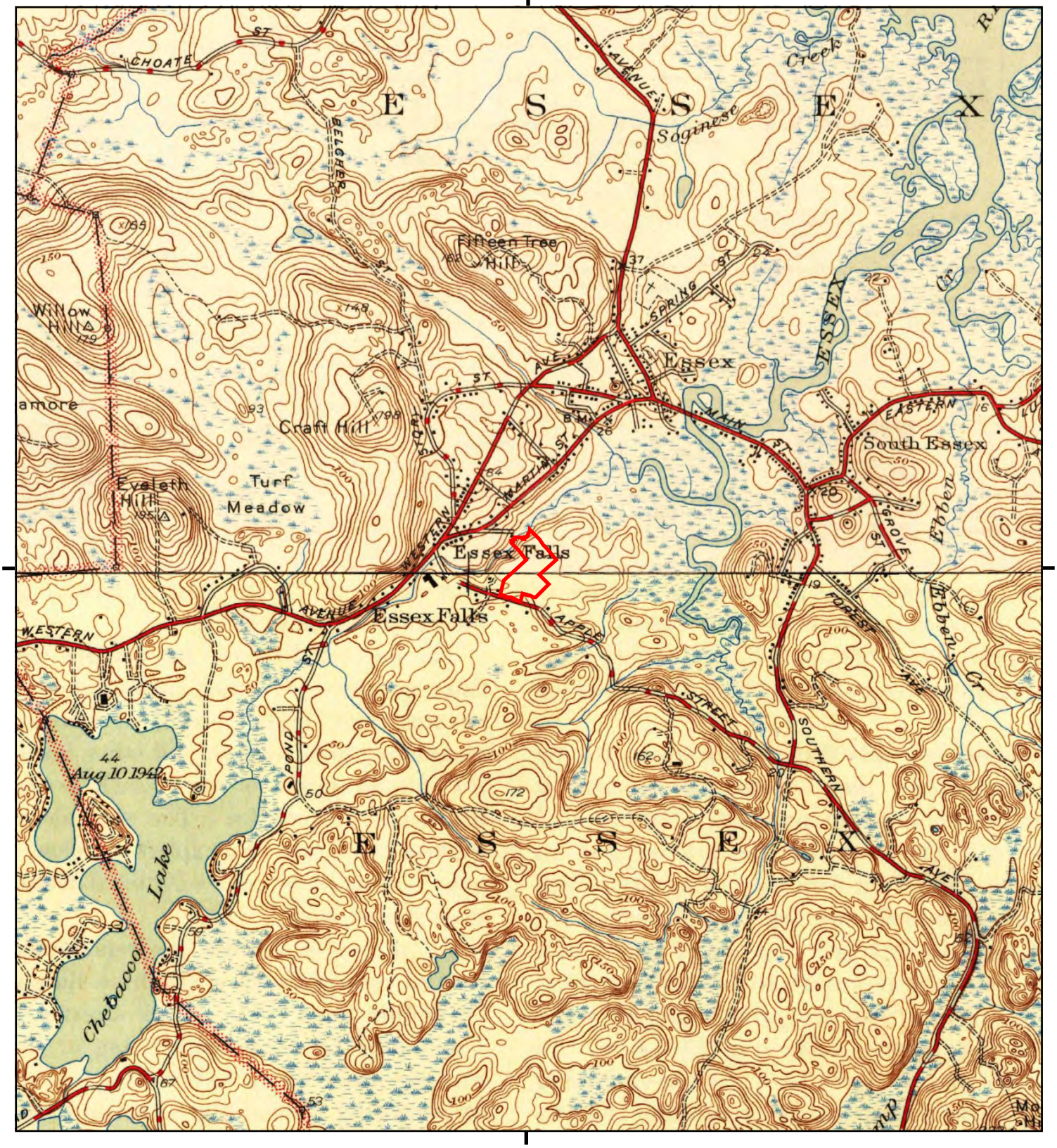
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Ipswich, 1950, 7.5-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

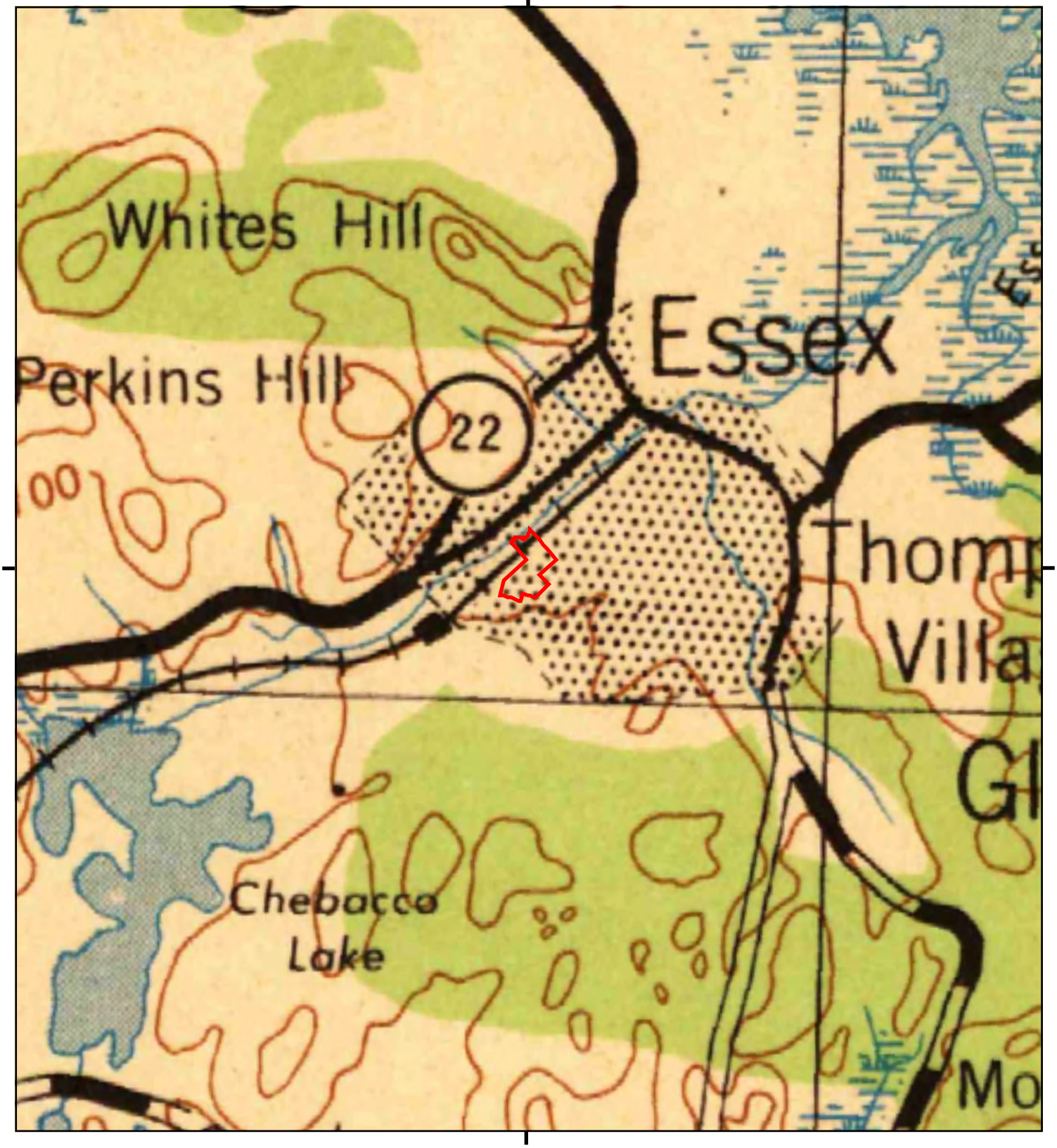
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Ipswich, 1945, 7.5-minute
S, Marblehead North, 1945, 7.5-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

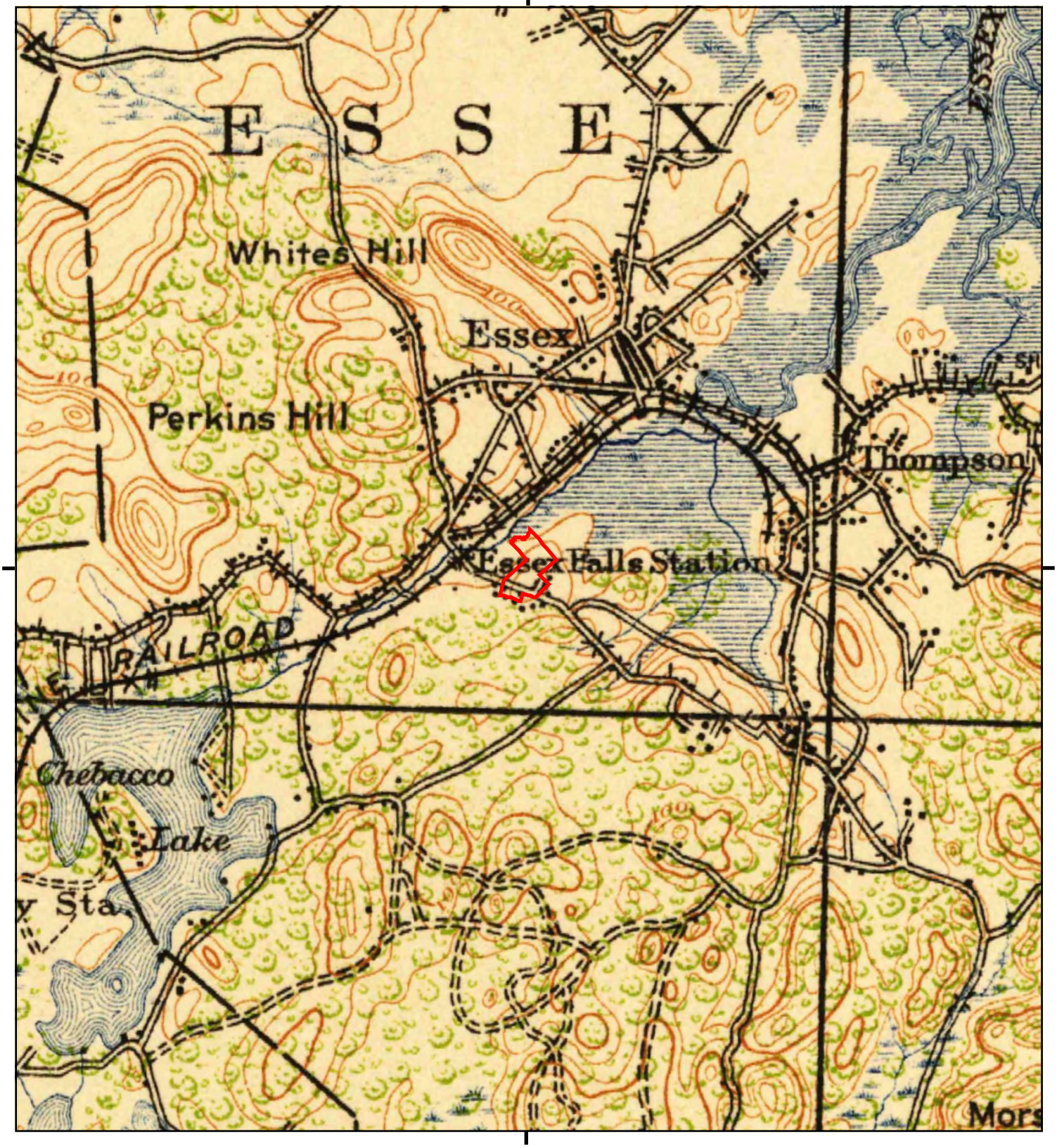
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Cape Ann, 1943, 30-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Salem, 1919, 15-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N

Historical Topo Map

1915



This report includes information from the following map sheet(s).

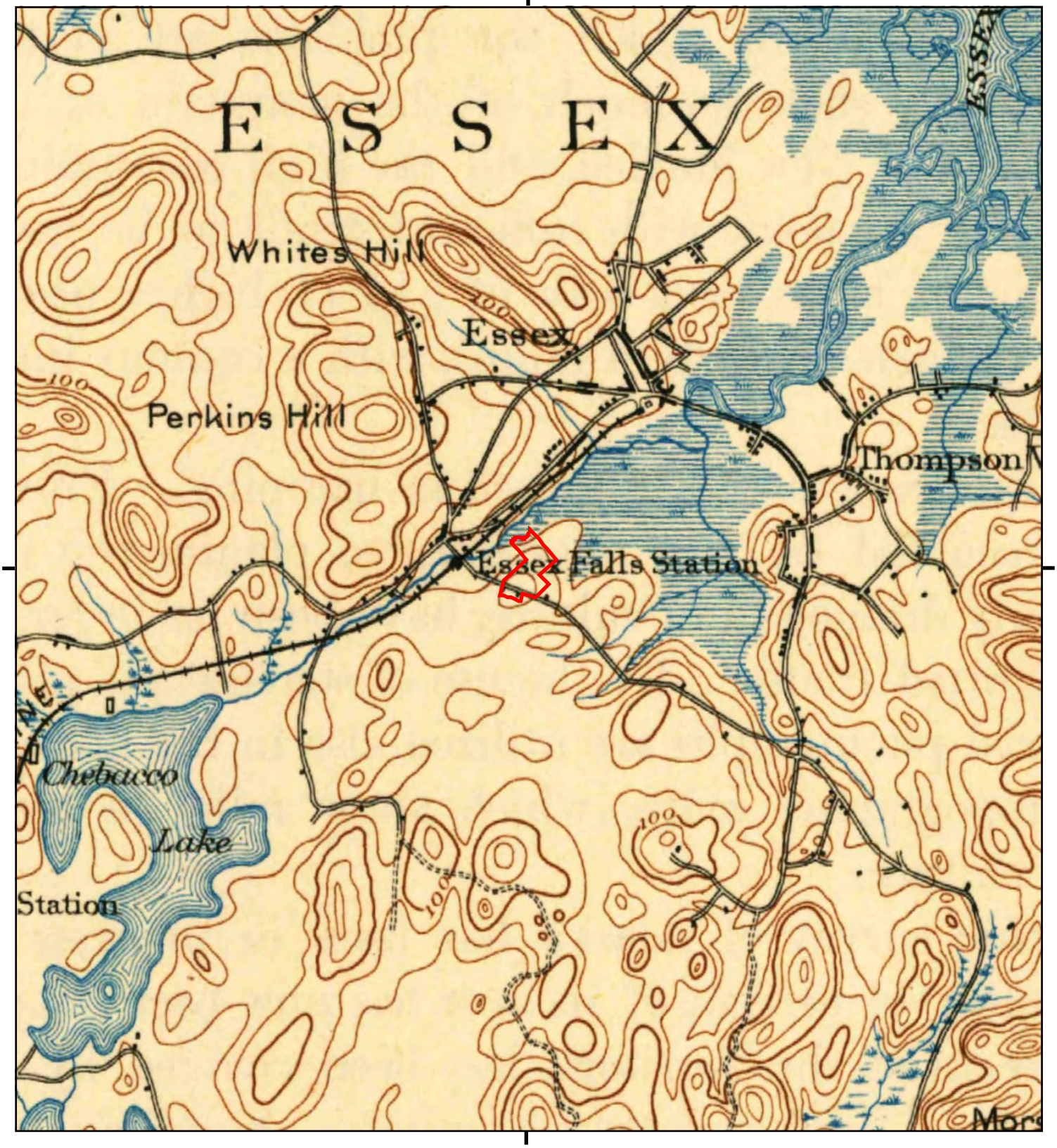
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, SALEM, 1915, 15-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

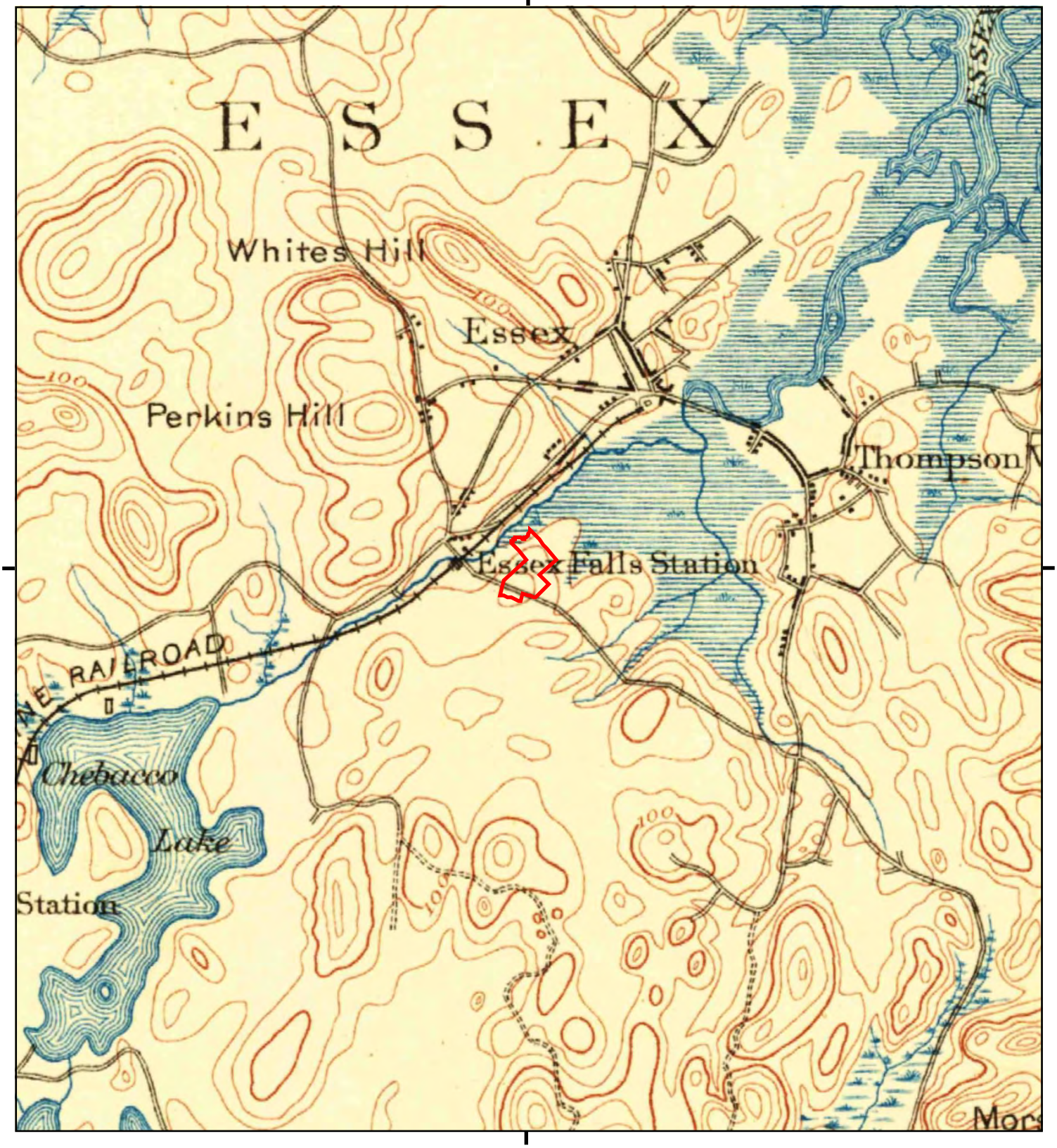
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Salem, 1893, 15-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Salem, 1888, 15-minute

SITE NAME: 30 Apple Street
ADDRESS: 30 Apple Street
Essex, MA 01929
CLIENT: Mabbett & Assoc.

N

30 Apple Street

30 Apple Street

Essex, MA 01929

Inquiry Number: 8109451.8

September 16, 2025

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

09/16/25

Site Name:

30 Apple Street
30 Apple Street
Essex, MA 01929
EDR Inquiry # 8109451.8

Client Name:

Mabbett & Assoc.
105 Central Street, Suite 4100
Stoneham, MA 02180
Contact: Cassidy Way

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2023	1"=500'	Flight Year: 2023	USDA/NAIP
2018	1"=500'	Flight Year: 2018	USDA/NAIP
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
1995	1"=500'	Acquisition Date: March 29, 1995	USGS/DOQQ
1986	1"=500'	Flight Date: April 01, 1986	USDA
1978	1"=500'	Flight Date: April 23, 1978	USGS
1972	1"=500'	Flight Date: May 13, 1972	USGS
1969	1"=500'	Flight Date: April 09, 1969	USGS
1965	1"=500'	Flight Date: April 04, 1965	USGS
1952	1"=500'	Flight Date: August 26, 1952	USDA
1938	1"=500'	Flight Date: November 05, 1938	USGS

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT.

Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2025 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.


INQUIRY #: 8109451.8
YEAR: 2023
= 500'
N
EDR


INQUIRY #: 8109451.8
YEAR: 2018
= 500'
N
EDR


INQUIRY #: 8109451.8
YEAR: 2014
= 500'
N
EDR


INQUIRY #: 8109451.8
YEAR: 2010
= 500'
N
EDR


INQUIRY #: 8109451.8
YEAR: 1995
= 500'
N
EDR


INQUIRY #: 8109451.8
YEAR: 1986
= 500'
N
EDR


INQUIRY #: 8109451.8
YEAR: 1978
= 500'
N
EDR


INQUIRY #: 8109451.8
YEAR: 1972
= 500'
N
EDR


INQUIRY #: 8109451.8
YEAR: 1969
= 500'
N
EDR


INQUIRY #: 8109451.8
YEAR: 1965
= 500'
N
EDR


INQUIRY #: 8109451.8
YEAR: 1952
= 500'
N
EDR


INQUIRY #: 8109451.8
YEAR: 1938
= 500'
N
EDR

30 Apple Street
30 Apple Street
Essex, MA 01929

Inquiry Number: 8109451.5
September 18, 2025

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. **NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT.** Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2023 by Environmental Data Resources, LLC. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, LLC, or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	*Target Street*	*Cross Street*	*Source*
2022	☑	☑	EDR Digital Archive
2017	☑	☐	Cole Information
2014	☑	☑	Cole Information
2010	☑	☑	Cole Information
2005	☑	☑	Cole Information
2000	☑	☑	Cole Information
1995	☑	☑	Cole Information
1992	☑	☐	Cole Information
1988	☑	☑	Cole Criss-Cross Directory
1984	☐	☐	Cole Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

30 Apple Street
Essex, MA 01929

Year	*CD Image*	*Source*	
APPLE ST			
2022	pg A2	EDR Digital Archive	
2017	pg A5	Cole Information	
2014	pg A6	Cole Information	
2010	pg A8	Cole Information	
2005	pg A10	Cole Information	
2000	pg A12	Cole Information	
1995	pg A14	Cole Information	
1992	pg A16	Cole Information	
1988	pg A17	Cole Criss-Cross Directory	
1984	-	Cole Criss-Cross Directory	Street not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
LANDING RD			
2022	pg. A4	EDR Digital Archive	
2017	-	Cole Information	Street not listed in Source
2014	pg. A7	Cole Information	
2010	pg. A9	Cole Information	
2005	pg. A11	Cole Information	
2000	pg. A13	Cole Information	
1995	pg. A15	Cole Information	
1992	-	Cole Information	Street not listed in Source
1988	pg. A18	Cole Criss-Cross Directory	
1984	-	Cole Criss-Cross Directory	Street not listed in Source

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

APPLE ST 2022

1	JEREMY HEALY
	TERENCE HEALY
8	PATRICIA CARTER
	RICHARD CARTER
10	KEITH CARTER
	SHEILA CARTER
11	DARIO MORELLI
	DAVID MAURAND
	JAMES MUISE
	KATE RITTER
	KATHI KOPER
	NICOLE BOUCHER
	PC9LIVES
	RICHARD HOWLETT
	RICHARD LARSON
	SUSAN MUISE
	VALERIE GUSLER
15	NATHANIEL JERMAIN
17	TARIN COMER
21	AMY BRUCE
	CHRISTINA BRUCE
	DANIEL BRUCE
	GLADYS BRUCE
	JANICE BRUCE
	JESSIE BRUCE
	JOHN BRUCE
	ROBERT BRUCE
	WALLACE BRUCE
	ZACHARY BRUCE
24	ALDEN FREED
25	LYNDON STORY
28	PRISCILLA MALBOEUF
	SARAH MALBOEUF
31	ALLEN FRYE
	ELISABETH FRYE
36	LEONARD MERULLO
	PAMELA MERULLO
	RICHARD MERULLO
40	JAYNE HILDONEN
	KENNETH HILDONEN
43	EDWIN BJORK
	LORAINE BJORK
45	CASSIDY CHROUST
	KATHERINE CHROUST
47	ELLEN DIFIORE
	LUKE DIFIORE
50	LUCAS COTTERMAN
56	ALISON TRIMBY
	PAUL TRIMBY
67	JOSHUA TAYLOR

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

APPLE ST 2022 (Cont'd)

67	NATASHA TAYLOR
82	JASON NEUFFER
84	JOANNE CRERAND
90	AMELIA LEE
	MICHELLE LEE
	ZACH LEE
93	ARTHUR HODGES
	ELOISE HODGES
95	JULIE CORCORAN
	LILLIAN CORCORAN
	MARGARET CORCORAN
97	FARES MOUCHANTAF
	MICHELLE MOUCHANTAF
102	CHARLOTTE GIBSON
	CHRISTOPHER GIBSON
	GEORGE GIBSON
113	SIMONE EARLY
125	DANIELLE SWANSON
	LENARD ZIDE
127	DANA ROUSMANIERE
	WILLIAM ROUSMANIERE
128	EUGENE CORNFIELD
	GILLIAN CORNFIELD
129	ALEXA BALBO
	JOSEPH BALBO
131	BO SURDAM
	KATE SURDAM
	PETER SURDAM

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

LANDING RD 2022

3	JON RAJUNAS
	LANCE RAJUNAS
	MICHELLE MARCINELLI
	RUTH RAJUNAS
5	ADRIENNE DOUCETTE
	BEN DOUCETTE
	CHRISTOPHER DOUCETTE
	ELISE DOUCETTE
	PETER DOUCETTE
7	ASHLEY AMERO
	CHRISTINE AMERO
	MICHAEL AMERO
9	LOUIS MANIATES
	SUSAN MANIATES

Target Street	Cross Street	Source
✓	-	Cole Information

APPLE ST 2017

113	EARLY, SIMONE A
125	JJCE, RT
127	ROUSMANIERE, WILL P
131	SURDAM, PETER B

Target Street	Cross Street	Source
✓	-	Cole Information

APPLE ST 2014

1	HEALEY, TERRENCE T
8	CARTER, RICHARD C
	MARTIN, CARTER
	NICHOLAS, THOMAS A
11	HOWLETT, RICH
	KNOWLES, KENNETH C
	LARSON, NANCY
	LIVAS, FRANK
	MAURAND, DAVID W
	MORELLI, DARIO L
	MUISE, JAMES D
	RITTER, KATE A
	TEIXEIRA, CHARLES
15	CAPOTOSTO, CHRISTOPHER C
17	MESSERSMITH, ANDREW L
18	WHITE, BRADFORD J
21	BRUCE, WALLACE W
24	RODIER, MICHAEL G
25	MOODY, NAT C
	OCCUPANT UNKNOWN,
	SEPPALA, LYNDA S
	STORY, LYNDON R
28	BAGENSTOSE, RACHAEL
	BERNHARD, FREDERIC R
31	FRYE, ELISABETH C
35	MCCLELLAND, FRANK K
36	MERULLO, RICHARD M
40	HILDONEN, COREY M
42	OCCUPANT UNKNOWN,
43	BJORK, LORAINE R
45	OCCUPANT UNKNOWN,
47	WHITTEMORE, JEAN J
50	GREENBAUM, MARCIA L
56	DUBOIS, PATRICIA N
67	TAYLOR, JOSHUA V
84	HAY, CHARLES C
90	WEINER, MATTHEW J
93	HODGES, ARTHUR C
95	CORCORAN, JOHN E
97	MEWKILL, MARIANTHE S
99	OLIVER-MUNN, SARAH
102	GIBSON, CHRISTOPHER R
113	EARLY, SIMONE A
125	JJCE, RT
127	OCCUPANT UNKNOWN,
128	FURBER, WILLIAM L
129	FARRINGTON, PAUL J
131	CHARTER FS CORP
	SURDAM, BO

Target Street	Cross Street	Source
-	✓	Cole Information

LANDING RD 2014

3	ROSE, GERALD L
5	DOUCETTE, PETER S
7	AMERO, MICHAEL W
9	DUTCHER, ALICE

Target Street	Cross Street	Source
✓	-	Cole Information

APPLE ST 2010

1	FRITZINGER, TIMOTHY C
8	MARTIN, CARTER
	NICHOLAS, THOMAS A
11	KOPER, SHAUN M
	MORELLI, DARIO L
	MUISE, JAMES D
	PIZZO, FRANK I
	SHANKS, TIMOTHY
15	JERMAIN, DAVID A
17	MESSERSMITH, ANDREW L
21	BRUCE, WALLACE W
24	BRAGDON, GEORGE W
25	STORY, EDWIN P
28	LARSON, CHRISTOPHER D
	TYACK, BILL
36	MERULLO, RICHARD M
42	BROWNING, DONALD E
43	BJORK, LORAINE R
47	STEPHENS, JENNIFER J
50	GREENBAUM, JR
56	DUBOIS, PATRICIA N
67	TAYLOR, JOSHUA V
84	HAY, CHARLES C
90	WEINER, MATTHEW J
93	HODGES, PETER
95	CORCORAN, JOHN E
99	FIALHO, N
102	GIBSON, CHARLOTTE
113	FAWCETT, FREDERICK J
126	BEHNKE, JAMES W
127	BUCK, FRED W
129	FARRINGTON, PAUL J
131	SVAHN, PETER C

Target Street	Cross Street	Source
-	✓	Cole Information

LANDING RD 2010

3	RAJUNAS, JON E
5	DOUCETTE, PETER S
7	AMERO, MICHAEL W
9	DUTCHER, ALICE

Target Street	Cross Street	Source
✓	-	Cole Information

APPLE ST 2005

1	FRITZINGER, TIMOTHY C
8	CARTER, RICHARD C
	MASON, FRANCIS J
	NICHOLAS, THOMAS M
	YOUNG, ALEXANDER
11	BELAKONIS, S
	CLEM, CHRISTINA
	HOWLETT, RICH
	KNOWLES, K
	MARTIKKE, CHRISTOPHER J
	PIKE, J L
	THOMPSON, MICHAEL S
	WHITING, LAURA J
15	JERMAIN, DAVID A
17	MESSERSMITH, ANDREW L
21	BERNIER, ALBERT
	BRUCE, JANICE C
	BRUCE, WALLACE W
24	RODIER, MICHAEL X
25	STORY, LYNDON R
28	CROWLEY, MARY
	JONES, DAVID B
	KLEIN, TINA M
35	LAKE, PHILIP G
36	MERULLO, RICHARD M
40	HILDONEN, KENNETH H
42	BROWNING, DONALD E
43	BJORK, LORAINE R
45	SWEET, ALFRED J
47	STEPHENS, JENNIFER J
50	GREENBAUM, MARCIA L
56	DUBOIS, PATRICIA N
67	TAYLOR, JOSHUA
84	HAY, CHARLES M
90	MCNIFF, KAREN
95	CORCORAN, JOHN E
97	KEATING, EDWARD V
99	SPENCE, C
102	HOUSER, ROBERT F
113	FAWCETT, FREDERICK J
125	SWANSON, R P
126	BEHNKE, JAMES W
129	FARRINGTON, PAUL J

Target Street	Cross Street	Source
-	✓	Cole Information

LANDING RD 2005

3	ROSE, GERALD C
7	AMERO, MICHAEL W
9	ALICE, DUTCHER

Target Street	Cross Street	Source
✓	-	Cole Information

APPLE ST 2000

1	MINTURN, RICHARD S
10	CARTER, KEITH
11	ANTIL, VINCENT
	DEVLIN, SEAN
	FRANKLIN, D A
	PIKE, J L
	RIDDLE, DANNY
15	JERMAIN, DAVID
17	MESSERSMITH, ANDREW
18	SHIELDS, WILLIAM
21	BRUCE, ROBERT A
24	RODIER, MICHAEL X
25	SEPPALA, R
	STORY, EDWIN P
28	JONES, DAVID
36	MERULLO, RICHARD
40	HILDONEN, KENNETH H
43	BJORK, L C
45	SWEET, JAY
56	DUBOIS, P N
84	HAY, CHARLES
88	NICHOLAS, T M
90	NICHOLS, ELLEN F
95	KNIGHT, SHARON
	NATSIS, J
102	HOUSER, ROBERT F
125	MOOREGATE INCORPORATED
	SWANSON, D
126	BEHNKE, JAMES W
127	KALAFUT, TIMOTHY
131	TREMBOWICZ, RICHARD L

Target Street	Cross Street	Source
-	✓	Cole Information

LANDING RD 2000

3	RAJUNAS, JON
	ROSE, GERALD C
9	A WHITEHORSE LIMOUSINE

Target Street	Cross Street	Source
✓	-	Cole Information

APPLE ST 1995

8	NICHOLAS, T M & L J
10	CARTER, KEITH
11	CONANT, AMY
	DIAMOND, CRAIG & TERESA
	FRANKLIN, D A
	PIKE, J L
	REES, JOHN & MELODY
	TOWNE, EARLE
15	JERMAIN, DAVID & KIMBERLY
17	MESSERSMITH, ANDREW & EDITH
18	GRISWOLD, JOHN W
21	BRUCE, ROBT A
	BRUCE, WALLACE
24	BRAGDON, GEO W
25	SEPPALA, R
	STORY, EDWIN P
	STORY, LYNDON
28	JONES, DAVID & SHEILA
35	ST JOHN, ANNE-SEYMOUR
	TATTERSALL, MARTHA & ROBIN
36	MERULLO, RICHARD
40	HILDONEN, KENNETH H, JR
43	BJORK, CLARENCE W
95	JOHNSTON, LENORE
	STOCKTON, PHILIP, ATTY
102	HOUSER, ROBT F
126	BEHNKE, JAS W

Target Street	Cross Street	Source
-	✓	Cole Information

LANDING RD 1995

9 A WHITEHORSE LIMOUSINE

Target Street	Cross Street	Source
✓	-	Cole Information

APPLE ST 1992

11	BURKE, RICHARD
	CAISSE, VINCIE & PAUL
	CONLON, D
	FRANKLIN, D A
	MORIN, D A
	PLATT, KATHLENE
	PLOTNER, DANL & MICHELE
	SMITH, WARREN & RUTH
15	JERMAIN, DAVID & KIMBERLY
17	MESSERSMITH, ANDREW & EDITH
18	GRISWOLD, JOHN W
21	BRUCE, ROBT A
	BRUCE, WALLACE
24	BRAGDON, GEO W
25	SEPPALA, R
	STORY, EDWIN P
	STORY, LYNDON
35	APPLE STREET FARMS
	LAKE, MARGARET
	LAKE, SPENCER G
36	MERULLO, RICHARD
37	KOTEK, WM & PEGGY
	WENDELL, W
40	HILDONEN, KENNETH H, JR
43	BJORK, CLARENCE W
45	SWEET, JAY
56	NICHOLS, R & C
102	HOUSER, ROBT F
126	PEABODY, LOWELL & LORRAINE

Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

APPLE ST 1988

APPLE ST

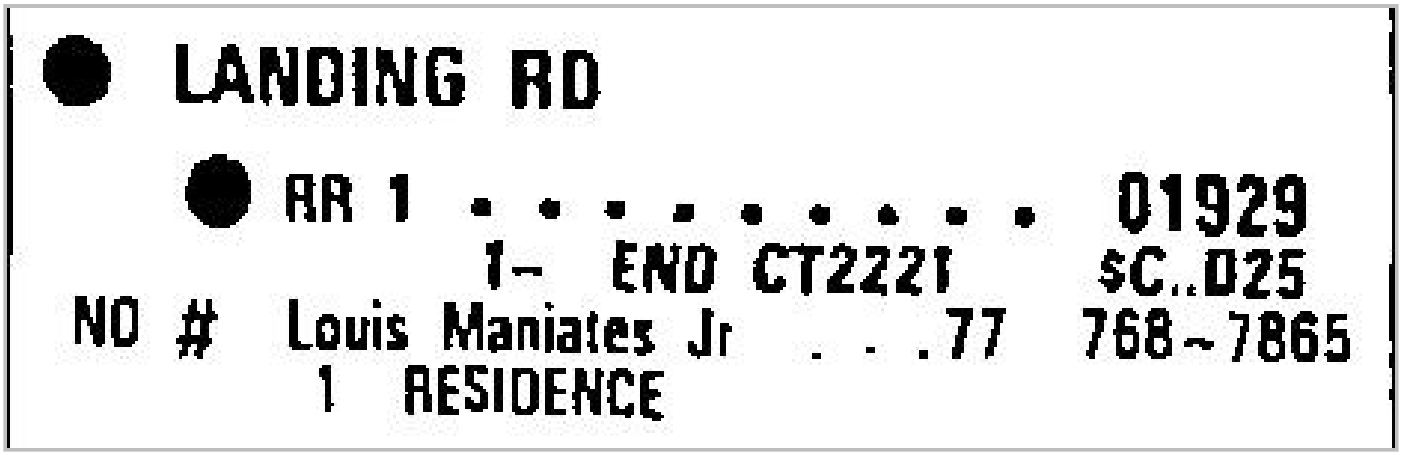
RR 1 01929
1- 199 CT2221 $C..025

10	Beatrice Gabry	77	768-7578
11	Donald Amero	¤	768-6025
	D A Cutherbertson . . .	85	768-7277
	D A Cuthbertson	85	768-7957
	R G Merry	79	768-7435
	Daniel Plotner	-	768-6309
	Warren K Smith	76	768-7543
15	David Jermain	¤	768-7906
17	Andrew Messersmith . .	80	768-7427
24	George W Bragdon . . .	80	768-7283
25	R Comfort	86	768-7982
	Edwin P Story	68	768-6937
35★	**Apple Street Farms . .**		**768-7504**
	Margaret Lake	85	768-7396
	Mrs Spencer G Lake . .	72	768-7495
37	Harm Storm	¤	768-7737
43	Clarence W Bjork . . .	70	768-7785
45	Jay Sweet	86	768-7747
56	David Flood	¤	768-6072
93	. . . . .	NP	
102	Matthew Burt	86	768-7953
126	Lowell Peabody	-	768-7808
NO #	Dale Bairstow	86	768-6337
NO #	Fredk N Bragdon	69	768-6413
NO #	Donald E Browning . . .	63	768-7712
NO #	Robert A Bruce	63	768-7724
NO #	Richard C Carter	63	768-7756
NO #	Fredk J Fawcett II . . .	73	768-7447
NO #	Allen F Frye	63	768-6428
NO #	M L Greenbaum	79	768-6337
NO #	D W Hawkins Jr	77	768-7466
NO #	Kenneth Hildonen . . .	67	768-6405
NO #	Samuel Hoar Jr	63	768-6465
NO #	Arthur C Hodges	63	768-6376
NO #	Jerome I Hopkins . . .	63	768-6956
NO #	Kenneth L Jones	63	768-6447
NO #	Stuart J MacKenzie . .	63	768-6538
NO #	H Gilman Nichols . . .	71	768-6987
NO #	Addison F Schade . . .	73	768-7320
NO #	J Stephens	71	768-6665
NO #	Nina Stockton	74	768-7010
NO #	Philip Stockton	74	768-7078
NO #	Jay Sweet	70	768-6989
NO #	J Whittemore	71	768-6665

43 RESIDENCE 1 BUSINESS

Target Street	Cross Street	Source
-	✓	Cole Criss-Cross Directory

LANDING RD 1988



30 Apple Street

30 Apple Street

Essex, MA 01929

Inquiry Number: 8109451.3

September 16, 2025

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

09/16/25

Site Name:

30 Apple Street
30 Apple Street
Essex, MA 01929
EDR Inquiry # 8109451.3

Client Name:

Mabbett & Assoc.
105 Central Street, Suite 4100
Stoneham, MA 02180
Contact: Cassidy Way

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Mabbett & Assoc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 9077-4F76-9D71

PO # NA

Project P2025201

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 9077-4F76-9D71

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

Mabbett & Assoc. (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT. Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2025 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

FEASIBILITY STUDY AGREEMENT

SECTION 3.1.8.15

District: Manchester-Essex Regional School District
School: Essex Elementary School
Project ID: 202306980020

MASSACHUSETTS SCHOOL BUILDING AUTHORITY
FEASIBILITY STUDY AGREEMENT

This Feasibility Study Agreement, dated the 4th day of February, 2025 (the "Agreement") is between the Massachusetts School Building Authority (the "**Authority**"), a public instrumentality of the Commonwealth of Massachusetts established by Chapter 70B of the Massachusetts General Laws and Chapters 208 & 210 of the Acts of 2004 of the Commonwealth, in each case as amended from time to time, and the Manchester-Essex Regional School District (the "**District**").

WHEREAS, the District submitted a Statement of Interest to the Authority for the Essex Elementary School (hereinafter "**School**"), and the District prioritized this Statement of Interest as its priority to receive any potential funding from the Authority;

WHEREAS, on December 13, 2023, the Board of Directors of the Authority voted to invite the District to the MSBA's Eligibility Period, and on March 4, 2024, the Board of Directors of the Authority voted to invite the District to commence the Eligibility Period, and the District has completed all applicable preliminary requirements to the satisfaction of the MSBA;

WHEREAS, on December 13, 2024, the Board of Directors of the Authority shall have voted to authorize the Parties to enter into this Agreement upon the terms and conditions stated herein.

WHEREAS, the Feasibility Study is one step in the multi-step process of the Authority's grant program for school building construction and renovation projects, and the invitation to collaborate on conducting and/or reviewing a Feasibility Study is not approval of a project or any funding by the Authority, except as expressly provided in this Agreement;

WHEREAS, the Authority's grant program for school building renovation and construction projects is a non-entitlement, discretionary program based on need, as determined by the Authority;

WHEREAS, the District has submitted a signed Initial Compliance Certification, as described in 963 CMR 2.02, 2.03 & 2.10(2), in the form prescribed by the Authority, and it has been accepted by the Authority;

WHEREAS, the District has formed a School Building Committee to monitor the Feasibility Study and advise the District during the study;

WHEREAS, the Authority may reimburse the District for a portion of eligible, approved costs incurred in connection with the Feasibility Study undertaken by the District for the School under certain terms and conditions, hereinafter provided, and subject to the provisions of M.G.L. c. 70B, 963 CMR 2.00 *et seq.* and all applicable policies and guidelines of the Authority.

NOW THEREFORE, in consideration of the promises and the agreements, provisions and covenants contained in this Agreement, and for other good and valuable

consideration, the receipt and sufficiency of which are hereby acknowledged, the Authority and the District (together, the "Parties") agree as follows:

SECTION 1
DEFINITIONS

1.1 Capitalized terms not specifically defined in this Definitions section shall have the meanings ascribed to them in either M.G.L. c. 70B or 963 CMR 2.00 *et seq*.

"Budget" shall mean a complete and full enumeration of all costs, including both hard costs and soft costs, so-called, that the District reasonably estimates, to the best of its knowledge and belief, will be incurred in connection with the planning, development, and the completion of the Feasibility Study, which Budget shall be approved by the Authority and attached hereto as **Exhibit A**, as it may be updated from time to time.

"Design Contract" shall mean the standard design contract developed and prescribed by the Authority, as it may be amended by the Authority from time to time that shall be executed by the District and the Designer for design services related to the Proposed Project.

"Designer" shall mean the individual, corporation, partnership, sole proprietorship, joint stock company, joint venture, or other entity engaged in the practice of architecture, landscape architecture, or engineering that meets the requirements of M.G.L. c. 7C, § 44 and has been procured and contracted by the District to conduct a Feasibility Study, in accordance with the provisions of Sections 2.1(a)(i) and 2.1(a)(ii) of this Agreement.

"Excusable Delay" shall mean a delay of the Feasibility Study that either (a) is solely because of a natural event, such as flood, storms, or lightning, that is not preventable by any human agency, or (b) is reasonably determined by the Authority to be excusable, provided that the failure of the District to have exclusive ownership, control and use of site will not extend the "Term of the Agreement" established in Section 2.2.

"Feasibility Study" shall mean a study as described in 963 CMR 2.10(8) and in any applicable policies and guidelines of the Authority and, in relation to a Major Reconstruction Project or Repair Project, as described in M.G.L. c. 70B, 963 CMR 2.00 *et seq.* and any applicable policies and guidelines of the Authority, shall also include an engineering study, in a format prescribed by or otherwise acceptable to the Authority, to investigate potential options and solutions, including cost estimates, for the deficiencies and issues identified in the Statement of Interest or as otherwise determined by the Authority.

"Owner's Project Manager" shall mean the individual corporation, partnership, sole proprietorship, joint stock company, joint venture, or other entity under contract with, designated, or assigned by the District and approved by the Authority, to fully and completely manage and coordinate administration of the Project to completion.

The Owner's Project Manager must meet the qualifications set forth in M.G.L. c. 149, § 44A ½, 963 CMR 2.00 *et seq.*, and all applicable policies and guidelines of the Authority.

"Scope" shall mean the scope of the Feasibility Study as described in 963 CMR 2.10(8) and any applicable policies and guidelines of the Authority or as otherwise determined in writing by the Authority and as more fully described in **Exhibit B** attached hereto, as it may be updated from time to time as mutually agreed upon by the District and the Authority.

"Schedule" shall mean the schedule for the Feasibility Study, which schedule shall be updated from time to time and approved by the Authority.

"School" shall mean the Essex Elementary School located in the District.

"Statement of Interest" shall mean the Statement of Interest, as defined in 963 CMR 2.09 and all applicable policies and guidelines of the Authority, submitted to the Authority by the District for the School.

SECTION 2
FEASIBILITY STUDY

Subject to the terms and conditions of this Agreement, and in reliance on the representations, warranties and covenants contained herein, the Parties hereby agree as follows:

2.1 Feasibility Study.

- (a.) The Parties hereby agree that the District shall undertake a Feasibility Study to investigate potential options and solutions, including cost estimates, to the School's deficiencies and issues as identified in the Statement of Interest or as otherwise determined by the Authority and in accordance with the Scope, Budget, and Schedule approved by the Authority, provided that the Authority has the unconditional unilateral right to alter that approved Scope, Budget, and/or Schedule for the Authority's convenience and the Authority will not be liable to the District for any loss and/or damage that arises, in whole or in part, out of any such alteration. The adequacy, sufficiency and/or acceptability of a Feasibility Study or a Prior Study, as defined in Section 2.1(c) of this Agreement, for the purposes of the Authority's grant program shall be determined by the Authority within its sole discretion. Any determination by the Authority that a Feasibility Study or Prior Study is adequate, sufficient or acceptable for the Authority's purposes shall not be construed as a certification or approval by the Authority of the studies, plans, drawings, designs, cost estimates, specifications or any other information or materials contained therein and no MSBA requirement that the District study a particular Option shall constitute an MSBA approval of that Option, in whole or in part. The District, its officials, employees and agents are and shall remain

DRAFT COPY

responsible for the Feasibility Study and/or Prior Study and the building designs, site plans, drawings, cost estimates, specifications and other materials and information relative thereto that the District submits to the Authority. The Authority's review of the Feasibility Study and/or Prior Study and any studies, plans, drawings, designs, cost estimates, specifications or any other information or materials contained therein or related thereto is solely for the purpose of determining whether they meet the provisions of this Agreement and the Authority's regulations, standards, policies, guidelines and other requirements and whether the District will be eligible for potential funding from the Authority for the Proposed Project. Approval of a Proposed Project shall only be determined by a vote of the Authority's Board in accordance with 963 CMR 2.00 et seq. and the applicable policies and guidelines of the Authority.

(i.) The District shall procure a Designer to conduct the Feasibility Study pursuant to the provisions of M.G.L. c. 7C, § 44 through 58, 963 CMR 2.10(8), 963 CMR 2.12, and any other applicable laws and regulations; provided, however, that if the estimated construction cost of the Proposed Project is determined to be more than five million dollars ($5,000,000), then the District shall select the Feasibility Study Designer using the Authority's Designer Selection Panel in accordance with 963 CMR 2.00 *et seq.* and all applicable policies and guidelines of the Authority. The District shall not use a Designer who was procured by the District prior to July 1, 2007, to conduct the Feasibility Study, unless the Designer is acceptable to the Authority. It is further provided that, if said Designer who was procured by the District prior to July 1, 2007, is unacceptable to the Authority, the District shall conduct a new procurement for a Feasibility Study Designer pursuant to the applicable provisions of M.G.L. c. 7C, § 44 through 58, 963 CMR 2.10(8), 963 CMR 2.12, and any rules, regulations, policies and guidelines of the Authority.

(ii.) The District shall use the Authority's Design Contract to contract with the Designer for the Feasibility Study. The District shall monitor the performance of the Designer and shall require the Designer to fully comply with all provisions of the Design Contract, including, but not limited to, all provisions affecting the interests of the Authority.

EXECUTION COPY

(iii.) If, at any time, the construction cost of the Proposed Project is estimated to be more than one million five hundred thousand dollars ($1,500,000), or if the construction cost of the Proposed Project is estimated to be equal to or less than one million five hundred thousand dollars ($1,500,000) and the Authority so requires, at any time, as a condition to qualify for funding by the Authority, the District shall procure and maintain under contract, or otherwise assign, an Owner's Project Manager, pursuant to M.G.L. c. 149, § 44A ½ , 963 CMR 2.00, *et seq.* and any applicable policies and guidelines of the Authority. The selection of an Owner's Project Manager shall be subject to the review and approval of the Authority as required by M.G.L. 70B, 963 CMR 2.00, *et seq.*, and any applicable policies and guidelines of the Authority. Any costs associated with an Owner's Project Manager who is not approved by the Authority shall not be eligible for reimbursement.

(iv.) Where applicable, the District shall use the Authority's model request for services and standard contract to procure and contract with any Owner's Project Manager for the Proposed Project, including the Feasibility Study stage of the Proposed Project. The District shall monitor the performance of the Owner's Project Manager and shall require the Owner's Project Manager to fully comply with all provisions of the contract between the District and the Owner's Project Manager including, but not limited to, all provisions affecting the interests of the Authority.

(b.) Subject to the satisfaction of or compliance with, as reasonably determined by the Authority, all of the terms and conditions of this Agreement, the applicable provisions of M.G.L. c. 70B, Chapters 208 and 210 of the Acts of 2004, and 963 CMR 2.00 *et seq.* and any other rule, regulation, policy or guideline of the Authority, and further subject to the Authority's approval of the Scope, Budget and Schedule and the District's approval, authorization and appropriation for the Feasibility Study using forms prescribed by or otherwise acceptable to the Authority, the Authority hereby agrees to pay to the District an amount that shall under no circumstances exceed the lesser of (i) 31.00% of the eligible, approved costs of the Feasibility Study, as determined by the Authority, or (ii) $465,000.00. The Parties hereby acknowledge and agree that $465,000.00 is the maximum amount of funding that the District may receive from the Authority for the Feasibility Study, and that the final amount of eligible

EXECUTED

Feasibility Study costs approved by the Authority may equal an amount less than $465,000.00, as determined by an audit or audits conducted by the Authority. Any costs and expenditures that are determined by the Authority to be either in excess of the $465,000.00 or ineligible for payment by the Authority shall be the sole responsibility of the District. The reimbursement rate set forth above, and as more fully described in the Reimbursement Rate Summary, attached hereto as **Exhibit "C"**, is the rate at which the District may be reimbursed for the eligible, approved costs of the Feasibility Study.

In the event that the Authority reasonably determines that the Feasibility Study is not in accordance or compliance with the Scope, Schedule, Budget, all of the terms and conditions of this Agreement, the provisions of M.G.L. c. 70B, Chapters 208 and 210 of the Acts of 2004, 963 CMR 2.00 *et seq*. and any other rule, regulation, policy or guideline of the Authority, or is delayed (other than an Excusable Delay) or is not duly authorized, approved and funded by the District in accordance with applicable law and as required by the Authority, then the Authority may temporarily and/or permanently withhold payments to the District for any eligible, approved costs of the Feasibility Study, provided that the Authority shall not unreasonably withhold any such payments and further provided that the Authority shall give written notice to the District of any such withholding. Notwithstanding the foregoing, failure by the Authority to provide such written notice timely shall not create or result in any entitlement to payment for the District. In the event that the Authority either temporarily or permanently withholds payment for the Feasibility Study, the District hereby agrees and acknowledges that the Authority shall have no liability for any such withholding of payment or any loss that may occur as a result of any such withholding of payment.

The District shall not be eligible to receive any funding for the Authority's share of the eligible, approved Feasibility Study costs, or any portion thereof, unless and until the Authority has approved the Scope, Budget, and Schedule. The Authority shall reimburse the District only for costs incurred by the District in connection with the Feasibility Study that are timely submitted to the Authority, eligible for reimbursement pursuant to Authority policies, procedures, and guidelines, and audited and approved by the Authority.

(c) Notwithstanding any provision of this Agreement, a District will not be eligible for reimbursement for costs that arise out of any study of the deficiencies and issues identified in the Statement of Interest to the extent that those costs were incurred by the District prior to the date of the Execution of this Agreement.

2.2 Term of Agreement.

No Project Scope and Budget Agreement for a Proposed Project, which arises out of the provisions of this Agreement will be approved by the Authority's Board until on or after July 1, 2026. Subject to that limitation, the Agreement will terminate upon (1) the approval of a Project Scope and Budget Agreement for a Proposed Project by the Authority's Board and the (2) execution of a Project Scope and Budget Agreement by the Authority and the District for that Proposed Project or (2) Nine Hundred and Thirteen (913) Days after the date upon which the Authority's Board votes to invite the District into Feasibility Study, whichever occurs sooner.

SECTION 3
COVENANTS

The District covenants and agrees that as long as this Agreement is in effect, the District shall and shall cause its employees, officers, agents, and representatives to perform and comply with all covenants of this Agreement.

3.1 The District hereby agrees that it shall make available for inspection by, and submit to, the Authority any and all information and documentation related to the Feasibility Study, including, but not limited to budget information, progress reports, and draft copies that may be requested by the Authority, promptly and in no event later than the deadline stated in any such request.

3.2 The District hereby agrees that it shall work with the Authority in developing the Scope, Budget and Schedule for the Feasibility Study and it acknowledges and agrees that the Authority's funding for the Feasibility Study is subject to the Authority's approval of the Scope, Budget and Schedule.

3.3 The District hereby acknowledges and agrees that the Authority shall not provide any amounts in excess of the amount determined under Section 2.1(b) of this Agreement.

3.4 The District hereby acknowledges and agrees that the Authority may, in its sole discretion, determine that certain costs incurred by the District in connection with the Feasibility Study are not eligible for reimbursement by the Authority, pursuant to any applicable provisions of M.G.L. c. 70B, 963 CMR 2.00 *et seq.*, including, but not limited to, sections 2.10 & 2.16(5), and any other policies and guidelines of the Authority.

3.5 The District shall comply with all provisions of this Agreement; the provisions of all other agreements between the Authority and the District that relate to the Feasibility Study; the provisions of M.G.L. c. 70B, 963 CMR 2.00 *et seq.*, and all policies and guidelines of the Authority; and all provisions of law applicable to the Feasibility Study, this Agreement, and any other agreements and documents related to the Feasibility Study, and shall take all action necessary to fulfill its obligations under this Agreement.

3.6 The District hereby acknowledges and agrees that the Authority shall not be required or obligated to make any payment for any eligible Feasibility Study costs while an Event of Default, as defined in section 8 of this Agreement, shall have occurred.

3.7 The District shall, and shall cause any Owner's Project Manager and Designer and their employees, subconsultants and agents to, keep adequate records of the Feasibility Study and make all Feasibility Study records and the Feasibility Study site(s) available to the Authority or representatives of the Authority for review during the course of the Feasibility Study.

3.8 The District hereby acknowledges and agrees that the duties of any Owner's Project Manager hired by and/or assigned to the Proposed Project by the District shall include, but not be limited to, fully and completely managing and coordinating on behalf of the District the administration of the Feasibility Study to completion. Any Owner's Project Manager hired by and/or assigned to the Proposed Project by the District shall be responsible for overseeing, tracking, and managing the Budget and Schedule. In the event that an Owner's Project Manager is not required for the Proposed Project, the District shall have the aforesaid duties and responsibilities in addition to any others imposed by M.G.L. c. 70B, 963 CMR, et seq., the policies and guidelines of the Authority, and any other applicable provisions of law.

3.9 The District hereby agrees that the Authority shall have free access to, and open communication with, any Owner's Project Manager hired by and/or assigned to the Proposed Project by the District and that the Authority shall have full and complete access to all information and documentation relating to the Proposed Project to the same extent that the District has such access. The District agrees that it shall require any such Owner's Project Manager to fully cooperate with the Authority in all matters related to the Proposed Project; to promptly communicate, transmit, and/or make available for inspection and copying any and all information and documentation requested by the Authority; to fully, accurately and promptly complete all forms and writings requested by the Authority; and to give complete, accurate, and prompt responses to any and all questions, inquiries and requests for information posed by the Authority. The District agrees that it shall not in any way, directly or indirectly, limit, obstruct, censor, hinder or otherwise interfere with the free flow of communication and information between the Owner's Project Manager and the Authority in all matters related to the Proposed Project and as provided herein; that it shall not suffer the same to occur by the act or omission of any other person or entity; and that it shall not retaliate against the Owner's Project Manager for communicating information to the Authority as provided herein. The District agrees to execute, deliver and/or communicate to the Owner's Project Manager any and all authorizations, approvals, waivers, agreements, directives, and actions that are necessary to fulfill its obligations under this paragraph. The District further agrees that the Authority shall bear no liability whatsoever arising out of the Authority's knowledge or receipt of information communicated to the Authority by the Owner's Project Manager and that the District shall remain responsible for the management and completion of the Proposed Project.

3.10 The District hereby acknowledges and agrees that the duties of the Designer shall include, but not be limited to, those described in this Agreement, including, but not limited to, the Scope attached hereto as Exhibit B; 963 CMR 2.10(8); any applicable rules, regulations, policies and guidelines of the Authority; and any standard scope of services and the Design Contract prescribed by the Authority.

3.11 The District hereby acknowledges and agrees that neither the District nor any of its employees, officials, agents, consultants or contractors shall submit any false or intentionally misleading information or documentation to the Authority in connection with this Feasibility Study Agreement or the Feasibility Study, and further acknowledges and agrees that the submission of any such information or documentation may cause the Authority to suspend, revoke or terminate any and all payments otherwise due to the District and/or recover any previous payments made to the District, and the District may be ineligible for any funding from the Authority. The District hereby further agrees that it shall have a continuing obligation to update and notify the Authority in writing when it knows or has any reason to know that any information or documentation submitted to the Authority contains false, misleading or incorrect information.

3.12 The District hereby acknowledges and agrees that the Authority shall bear no responsibility or liability of any sort for the results of any Feasibility Study, environmental assessment, geotechnical site testing, any necessary site remediation, clean-up, or other site remediation services.

3.13 The District hereby acknowledges and agrees that it shall provide a final Feasibility Study report to the Authority, which shall be in a format that is prescribed by or otherwise acceptable to the Authority.

3.14 The District hereby acknowledges and agrees that the Authority's grant program is a non-entitlement, discretionary program based on need, and the Feasibility Study may not result in a school construction, renovation or repair project that is eligible for funding by the Authority.

3.15 The District shall not combine, consolidate, or conjoin in any way the procurement, pre-qualification or selection of an Owner's Project Manager or Designer for the Proposed Project with the procurement, pre-qualification or selection of an Owner's Project Manager or Designer for any other construction, repair or renovation project without the express prior written approval of a duly authorized representative of the Authority. Any costs incurred by the District that relate to, or arise out of, the use of a combined, consolidated or conjoined procurement, pre-qualification or selection process as proscribed above, including, but not limited to, the preparation of bid documents, requests for services, and requests for qualifications, without the express prior written approval of a duly authorized representative of the Authority shall not be eligible for reimbursement.

SECTION 4
PAYMENTS AND AUDIT

4.1 Subject to the terms and conditions of the Agreement, the Authority shall reimburse the District for eligible, approved costs incurred in connection with the Feasibility Study in accordance with the following:

(a) Using the Authority's Pro-Pay system, the District shall submit requests for reimbursement on a monthly basis to the Authority in a format prescribed by the Authority. Each monthly request for reimbursement

shall be approved locally by a duly authorized representative of the District, shall be in a form acceptable to the Authority, shall include reasonable detail, including, but not limited to (1) the amount of funding requested, (2) the nature of the materials or property or services received, (3) the total value of the work performed and materials furnished by the Owner's Project Manager, if any, the Designer, and each consultant, subconsultant or vendor to date, and (4) the value of the work completed during the Feasibility Study. The District agrees that each request for reimbursement shall be accompanied by the invoices for each of the amounts requisitioned and any other supporting documentation and information substantiating the District's request for reimbursement, as the Authority may request, in a form satisfactory to the Authority.

(b) Each request for reimbursement shall include a written certification signed by a duly authorized representative of the District stating that: (1) such request for reimbursement is solely for Feasibility Study costs, (2) the obligations itemized in the request for reimbursement have not been the basis for a prior request for reimbursement submitted by the District that has been paid or rejected by the Authority, (3) the reimbursement requested is due for work actually and properly performed or materials or property actually supplied prior to the date of the requisition, (4) the reimbursement requested is for costs that already have been duly paid by the District, and (5) such reimbursement requested is within the Budget approved by the Authority.

(c) The Authority shall review all requests for reimbursement properly submitted pursuant to this Agreement as soon as reasonably possible. The Authority shall not consider requests for reimbursement that are not, as reasonably determined by the Authority, (1) timely and properly submitted, (2) in accordance with the most recent Budget approved by the Authority, and (3) for eligible Feasibility Study costs incurred by the District. The District understands and agrees that no reimbursement shall be made by the Authority unless the District has complied with all of the terms and conditions of this Agreement, the applicable provisions of M.G.L. c. 70B, chapters 208 and 210 of the Acts of 2004, 963 CMR 2.00 *et seq.*, and all policies and guidelines of the Authority.

(d) After receipt from the District of a timely and properly submitted request for reimbursement pursuant to this Agreement, the Authority shall make payment to the District of the Authority's share of approved, eligible Feasibility Study costs, subject to the terms and conditions of this Agreement. The District hereby agrees and acknowledges that the amount of approved, eligible Feasibility Study costs reimbursed by the Authority may be subject to change, pending audit, including but not limited to an audit pursuant to Section 4.2 of this Agreement and the final close-out audit pursuant to Section 4.3 of this Agreement.

EXECUTED COPY

4.2 The Authority may review and perform a preliminary audit on each request for reimbursement submitted pursuant to this Agreement to ensure that only eligible costs of the Feasibility Study are approved and paid by the Authority. Any such preliminary audits shall be conducted in accordance with 963 CMR 2.16 and other policies and guidelines of the Authority. In the event that the Authority determines that an item contained in a request for reimbursement submitted by the District pursuant to this Agreement is not eligible for reimbursement by the Authority, the Authority shall adjust a subsequent reimbursement to the District to account for the ineligible costs. The District hereby acknowledges and agrees that each audit conducted pursuant to this Section 4.2 is preliminary, and the Authority may further adjust and alter the results of a preliminary audit after it conducts subsequent audits or a final close-out audit of the Feasibility Study.

4.3 The District hereby acknowledges and agrees that a final, close-out audit of the Feasibility Study by the Authority shall include an audit of all requests for reimbursement submitted and all reimbursements made by the Authority. The final, close-out audit shall be conducted in accordance with 963 CMR 2.16 and any other applicable regulations, policies and guidelines of the Authority. The District shall make all documents and materials requested by the Authority or its representatives available in a timely manner. The District further acknowledges and agrees that the final, close-out audit of the Feasibility Study may not occur until such time as the Authority conducts its final, close-out audit of the project that may result from the Feasibility Study, should the District be approved for any such project. Any adjustments applicable as a result of the final, close-out audit may be made in the final amount of the Total Facilities Grant, as determined by the Authority.

SECTION 5
REPRESENTATIONS AND WARRANTIES

The District hereby warrants and represents that each of the following statements is true, correct and complete:

5.1 The District is validly organized and existing under and by virtue of the laws of the Commonwealth, has full power and authority to own its properties and carry on its business as now conducted, and has full power and authority to execute, deliver and perform its obligations under this Agreement and all other documents related to the Feasibility Study.

5.2 The District is duly authorized to execute and deliver this Agreement and has taken all necessary steps to authorize the execution and delivery of this Agreement, to undertake the Feasibility Study and to perform and consummate all transactions contemplated by this Agreement.

5.3 The undersigned has the full legal authority to execute this Agreement on behalf of the District and to bind the District to its provisions.

5.4 This Agreement does not and will not, to any material extent, conflict with, or result in violation of any applicable provisions of law, including, but not limited to, any statute, charter, by-law, ordinance, rule or regulation, or any judgment, order, rule or regulation of any court or other agency of government.

5.5 The District has all requisite legal power and authority to own and operate the School that is the subject of the Feasibility Study and to undertake and oversee the Feasibility Study or, in the case of a school facility that is leased by the District, the District has all of the requisite legal power and authority to control and operate the School that is the subject of the Feasibility Study and to undertake and oversee the Feasibility Study pursuant to a lease which assures that the District has exclusive jurisdiction and control of the School and the land upon which it is situated for the anticipated useful life of the Proposed Project.

5.6 No information furnished by or on behalf of the District to the Authority in this Agreement, the Budget, the Initial Compliance Certification, or any other document, certificate or written statement furnished to the Authority in connection with the Feasibility Study contains any untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements contained in this Agreement or therein not misleading in light of the circumstances in which the same were made.

5.7 The District has duly obtained all necessary votes, resolutions, authorizations, appropriations and local approvals, in accordance with formats prescribed by or otherwise acceptable to the Authority, and has taken all actions necessary or required by law to enable it to enter into this Agreement and to fund and perform its obligations hereunder, in accordance with the Authority's guidelines, regulations, policies and standards. This Agreement constitutes a valid and binding obligation of the District, enforceable in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, moratorium, reorganization or other laws heretofore or hereafter enacted and general equity principles.

5.8 No litigation before or by any court, public board or body is pending or threatened against the District or the Authority seeking to restrain or enjoin the execution and delivery of this Agreement or the Feasibility Study, or contesting or affecting the validity of this Agreement or the power of the District to pay its share of the Feasibility Study.

5.9 The District has implemented policies and procedures to prevent and eliminate fraud, waste and abuse of public funds in connection with the Feasibility Study and any future construction or renovation projects that may be forthcoming as a result of the Feasibility Study.

5.10 The District has submitted all audit materials requested by the Authority in connection with any project for which the District has received or anticipates receiving funding from the Authority.

5.11 All meetings of all public bodies in the District that relate in any way to the Proposed Project, including, but not limited to, the meetings of the District's school

building committee, have been conducted, and shall be conducted, in compliance with the provisions of G.L. c. 30A, §§ 18 – 25, 940 CMR 29.00 *et seq.*, the so-called Open Meeting Law, and all other applicable law.

SECTION 6
INSURANCE

6.1 The District shall obtain and maintain all insurance required by law and insurance of such types and limits and upon such terms and conditions as may be required by, or as may be acceptable to, the Authority.

6.2 The District shall require by contractual obligation, and shall also ensure by the exercise of due diligence, that any Designer hired by the District in connection with the Feasibility Study obtain and maintain, at a minimum, insurance of such types and limits and upon such terms and conditions as may be required by law and as may be prescribed by the Authority in the Design Contract between the Designer and the District.

6.3 Except where the Owner's Project Manager is an existing employee of the District, the District shall require by contractual obligation, and shall also ensure by the exercise of due diligence, that any Owner's Project Manager hired by the District obtain and maintain, at a minimum, insurance of such types and limits and upon such terms and conditions as may be required by law and as may be prescribed by the Authority in its standard contract for Owner's Project Manager services which is incorporated by reference herein.

SECTION 7
COMPLIANCE WITH CONTRACT DOCUMENTS, PROJECT PERMITS AND OTHER APPLICABLE LAW

7.1 The District shall take all reasonable actions designed to ensure that the Feasibility Study complies with all applicable contract documents, building codes, laws, rules and regulations and to ensure that all necessary project permits have been obtained. Notwithstanding any right of approval or review held or exercised by the Authority in connection with this Agreement or the Feasibility Study, the District shall be responsible for the successful performance and completion of the Feasibility Study in accordance with this Agreement, the Design Contract, design documents and project permits, if any, and for the economical and efficient operation and administration of the Feasibility Study.

SECTION 8
DEFAULTS AND REMEDIES

8.1 The occurrence of any of the following events shall constitute, and is herein defined to be, an Event of Default under this Agreement:

(a) If the District shall fail to perform and observe any covenant, agreement or condition on its part provided in this Agreement and such failure shall continue

for a period of thirty (30) days after written notice thereof shall be given to the District by the Authority; provided if such failure cannot be remedied within such thirty (30) day period, it shall not constitute an Event of Default hereunder if corrective action satisfactory to the Authority, as determined by the Authority in writing, is instituted by the District within such period and diligently pursued until the failure is remedied. Any forbearance or failure of the Authority in giving such written notice shall not amount to any waiver of the Authority's rights under this Agreement as to the same or subsequent breaches and shall not preclude the Authority from pursuing any of its rights or remedies provided under this Agreement or as otherwise provided by law.

(b) If any representation or warranty made by the District in this Agreement or in any other agreement entered into by the District with the Authority shall prove to have been incorrect or to be misleading in any material respect.

8.2 If any Event of Default hereunder shall occur and be continuing, the Authority may proceed to protect its rights under this Agreement, and may: (a) terminate this Agreement, (b) permanently withhold or temporarily suspend payment of any eligible, approved costs to the District, (c) recover any payments of eligible, approved costs previously made to the District, and/or (d) exercise any other right or remedy upon such default as may be granted to the Authority under this Agreement or under any other applicable provision of law.

8.3 No remedy conferred upon or reserved to the Authority is intended to be exclusive and every such remedy shall be cumulative and shall be in addition to every other remedy given under this Agreement or now or hereafter existing at law or in equity. No delay or omission to exercise any right, remedy or power accruing upon any Event of Default shall impair any such right, remedy or power or shall be construed to be a waiver thereof, but any such right, remedy or power may be exercised from time to time and as often as the Authority may deem expedient.

SECTION 9
OTHER TERMS

9.1 Governing Law. This Agreement shall be governed by, construed, and enforced in accordance with, the laws of the Commonwealth of Massachusetts.

9.2 Venue. Any civil action brought against the Authority by the District, or any person or entity claiming by, through or under it, that arises out of the provisions of this Agreement, shall only be brought in the Superior Court for Suffolk County, Massachusetts. The District, for itself and for any person or entity claiming by, through or under it, hereby waives any defenses that it may have as to the venue to which it has agreed herein, including, but not limited to, any claim that this venue is improper or that the forum is inconvenient. The District for itself and for any person or entity claiming by, through or under it, hereby waives all rights, if any, to a jury trial in any such civil action that may arise out of the provisions of this Agreement.

9.3 Indemnification of the Authority by the District. To the fullest extent permitted by law, the District shall indemnify and hold harmless the Authority and its officers, agents and employees from and against any and all claims, actions, damages, liabilities, injuries, costs, fees, expenses, or losses, including, without limitation, reasonable attorney's fees and costs of investigation and litigation, whatsoever which may be incurred by, or for which liability may be asserted against, the Authority or any of its officers, agents or employees arising out of any activities undertaken by, for, or on behalf of the District in the execution or implementation of this Agreement or with respect to the Feasibility Study, including, but not limited to, the performance of any contract or obligation directly or indirectly related to the Feasibility Study. Such obligation shall not be construed to negate or abridge any other obligation of indemnification running to the Authority which would otherwise exist.

9.4 Members, Employees Not Liable. No member or employee of the Authority shall be charged or held personally or contractually liable by or to the District under any term or provision of this Agreement or because of any breach thereof or because of its execution or attempted execution.

9.5 Assignability. The District shall not assign any interest, in whole or in part, in this Agreement and shall not transfer any interest in the same, whether by assignment or novation, without the prior written approval of the Authority.

9.6 Payment Not A Waiver.

The Authority's payment(s) to the District under this Agreement or its review, approval or acceptance of any actions by the District under this Agreement shall not operate as a waiver of any rights under this Agreement and the District shall remain liable to the Authority for all damages incurred by the Authority as a result of the District's failure to perform in accordance with the terms and conditions of this Agreement.

The rights and remedies of the Authority provided for under this Agreement are in addition to any other rights or remedies provided by law. The Authority may assert a right to recover damages by any appropriate means, including, but not limited to, set-off, suit, withholding, recoupment, or counterclaim either during or after performance of this Agreement.

9.7 Notices. Any notices required or permitted to be given by either of the Parties hereunder shall be given in writing and shall be delivered to the addressee (a) in-hand (b) by certified mail, postage prepaid, return receipt requested; (c) by facsimile; or (d) by a commercial overnight courier that guarantees next day delivery and provides a receipt, and such notices shall be addressed as follows:

If to the Authority:

Massachusetts School Building Authority
40 Broad Street, Suite 500
Boston, MA 02109
Attention: Director of Capital Planning
Facsimile: (617) 720-8460

If to the District:

Manchester-Essex Regional School District
Ms. Pamela Beaudoin
36 Lincoln Street
Manchester-by-the-Sea, MA 01944
Attention: Superintendent

or to such other address or addressee as the District and the Authority may from time to time specify in writing. Any notice shall be effective only upon receipt, which for any notice given by facsimile shall mean notice that has been received by the party to whom it is sent as evidenced by a confirmation slip that bears the time and date of receipt.

9.8 Severability. If any provisions of this Agreement shall for any reason be held to be invalid or unenforceable, the invalidity or unenforceability of such provision shall not affect any of the remaining provisions of this Agreement, and this Agreement shall be construed and enforced as if such invalid or unenforceable provision had not been contained herein.

9.9 Counterparts. This Agreement may be executed in one or more counterparts, any of which shall be regarded for all purposes as an original and all of which constitute but one and the same instrument. Each party agrees that it will execute any and all documents or other instruments, and take such other actions as may be necessary to give effect to the terms of this Agreement.

9.10 No Waiver. No waiver by either party of any term or conditions of this Agreement shall be deemed or construed as a waiver of any other terms or conditions, nor shall a waiver of any breach be deemed to constitute a waiver of any subsequent breach, whether of the same or of a different section, subsection, paragraph, clause, phrase, or other provision of this Agreement.

9.11 Integration. This Agreement merges and supersedes all prior negotiations, representations, and agreements between the Parties hereto relating to the Feasibility Study and constitutes the entire agreement between the Parties hereto with respect to the Feasibility Study and the Authority's funding of a portion of the eligible, approved costs of the Feasibility Study.

9.12 Amendments. This Feasibility Study Agreement may be amended only through a written amendment signed by duly authorized representatives of the District and the Authority.

IN WITNESS WHEREOF, the Parties have executed this Agreement on this 4th day of February, 2025

MASSACHUSETTS SCHOOL BUILDING AUTHORITY
By,

District: Manchester-Essex Regional School District
School: Essex Elementary School
Project ID: 202306980020

Mary L. Pichetti
Executive Director

MANCHESTER-ESSEX REGIONAL SCHOOL DISTRICT
By

Pamela Beaudoin
NAME (type or print)

Superintendent
TITLE (type or print)

EXECUTION COPY

EXHIBIT A

FEASIBILITY STUDY BUDGET

Manchester-Essex Regional School District
Essex Elementary School

The total Budget for the Feasibility Study conducted pursuant to this Agreement, which is attached hereto and incorporated by reference herein, shall be no more than $1,500,000 based upon the following estimates:

Owner's Project Manager:	$ 300,000
Designer:	$ 930,000
Environmental and Site Testing:	$ 225,000
Other:	$ 45,000

EXHIBIT B

SCOPE OF THE FEASIBILITY STUDY

Manchester-Essex Regional School District
Essex Elementary School

The Scope of the Feasibility Study conducted under this Agreement, which is attached hereto and incorporated by reference herein, shall consist of the development of a Feasibility Study/Schematic Design for the evaluation of a renovation of the existing school, a renovation of and addition to the existing school and/or new construction for the Essex Elementary School (the "Proposed Project") in the Manchester-Essex Regional School District (the "District"). Pursuant to the Massachusetts School Building Authority's (the "MSBA") regulations, 963 CMR 2.06, the space allowance for the Proposed Project shall meet all applicable MSBA regulations and guidelines.

The Feasibility Study shall contain all information required by 963 CMR 2.10(8) and any other applicable rules, regulations, policies, guidelines and directives of the MSBA including, but not limited to, a final design program, educational space summary, budget statement for preferred educational objectives, and a proposed total project budget. The Feasibility Study for this Proposed Project will examine the following enrollment options.

Town of Essex Grade K-3 Enrollment (plus Pre-K)	Town of Essex Grade K-5 Enrollment (plus Pre-K)	District-wide Grade K-5 Enrollment (plus Pre-K)
165 students	250 students	515 students

The District will prepare and submit to the MSBA the educational space summaries for all options in the table above, for review and acceptance. Upon acceptance of the educational space summaries, the District will commence with the evaluation of options. The Schematic Design that is developed pursuant to this Agreement shall be based upon the final design enrollment, which shall be subject to the written approval of the MSBA. The Schematic Design shall include, but not be limited to, the information required by the MSBA's Feasibility Study Guidelines, including, but not limited to, a site development plan, environmental assessment, geotechnical assessment, geotechnical analysis, code analysis, utility analysis, schematic building floor plans, schematic exterior building elevations, narrative building systems descriptions, NE-CHPS scorecard or LEED for Schools checklist, outline specifications, cost estimates, project schedule and proposed total project budget.

In conducting the Feasibility Study and developing the Schematic Design, the District shall, in a sufficient and timely manner as determined by the MSBA, initiate such notification procedures, undertake such review processes, and obtain such determinations and approvals as may be required by 963 CMR 2.03(2)(h) & (i), including, but not limited to, such procedures, reviews, determinations, and approvals as may be required by the Massachusetts Historical Commission (the "MHC") and/or the Massachusetts Environmental Policy Act. At its earliest opportunity, the District shall seek a written determination from the MHC as to whether the MHC intends to undertake a review of the Proposed Project.

The District shall be responsible for conducting such geotechnical evaluations, site investigations, soils explorations and environmental assessments as are reasonable and necessary to determine whether any significant environmental, geotechnical or other physical conditions exist that may have an impact upon eventual construction on the proposed site. The MSBA may require the District to fully fund certain environmental or geotechnical site testing beyond initial investigatory costs. The MSBA shall bear no responsibility or liability of any sort for the results of any geotechnical evaluations or site testing, soils explorations, environmental assessments, nor for any site remediation, clean-up, or other site remediation services.

The development of the Schematic Design shall be subject to continuing review by the MSBA in accordance with the provisions of this Agreement, the MSBA's Feasibility Study guidelines and any other applicable rule, regulation, policy, guideline or directive of the MSBA. The District shall be responsible for submitting to the MSBA all documentation that is required to complete the Feasibility Study and Schematic Design and to support the preparation of a Project Scope and Budget Agreement.

Exhibit C

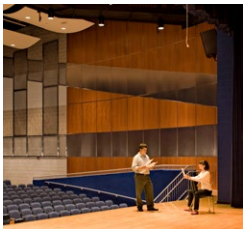
Calendar Year 2024

Manchester Essex Regional

Essex Elementary School - 202306980020

MSBA Reimbursement Rate Calculationn	
Base Points	31.00
Income Factor	-
Property Wealth Factor	-
Poverty Factor	-
Subtotal: Reimbursement Rate Before Incentives	31.00
Incentive Points	
Maintenance (0-2)	-
CM @ Risk (0-1) Only projects invited to Capital Pipeline prior to 1/2/17	-
Newly Formed Regional District (0-6)	-
Major Reconstruction or Reno/Reuse (0-5)	-
Overlay Zoning 40R & 40S (0-1)	-
Overlay Zoning 100 units or 50% of units for 1, 2 or 3 family structures (0-0.5)	-
Energy Efficiency - "Green Schools" (0 - 4)	-
Indoor Air Quality - "Green Schools" (0 - 4)	-
Model Schools (5) Only projects invited to Capital Pipeline prior to 1/2/16	-
Total Incentive Points	-
MSBA Reimbursement Rate	31.00



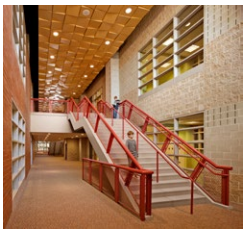


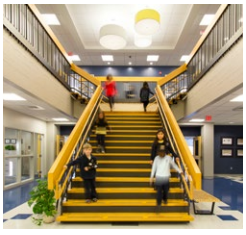
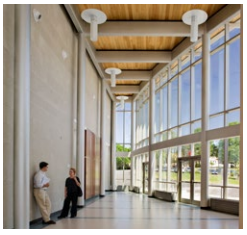






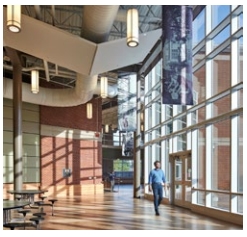






JCJARCHITECTURE

AN EMPLOYEE OWNED COMPANY

BOSTON
HARTFORD
NEW YORK

JCJ.COM

LAS VEGAS
PHOENIX
SAN DIEGO
TULSA