Facility Study and Master Plan

Rockville High School

70 Loveland Hill Rd, Vernon, CT 06066



FRIAR

SUMMER 2023

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Section 1: Introduction

Introduction

Background

Friar Architecture Inc. was engaged by Vernon Public Schools to prepare a facilities study for several district maintained buildings in Vernon Connecticut. The buildings included in the study are:

- Rockville High School
- Vernon Center Middle School
- Center Road School
- Lake Street School
- Maple Street School
- Northeast School
- Skinner Road School
- Vernon Public School Central Administration Building
- Next Step Building
- Maintenance Building, 166 Union Street

Purpose of this Study

The purpose of this study is to provide the client with an understanding of the current challenges and in the near future, a comprehensive view of the range of possible options with cost implications, and a means to reach consensus on the best possible solution to those challenges.

The intent of the facility study process is:

- To offer a transparent process to move the community toward consensus
- To present information clearly to decision makers
- To present the final recommendations as foundation for future actions

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Building Location Plan

A plan of the area is provided below, identifying the location of each building evaluated under this Existing Conditions Survey.





Map Data: Google Earth

Section 2 : Executive Summary

Building Information

This section contains the executive summary, which provides an overview of the building and summarizes the survey results. Graphs are included to represent current conditions of the building's components and conformity with IBC, NFPA and ADA requirements. Photographs of various elevations of the building are provided for reference. This section also provides a summary of the opinion of probable costs, presenting a graphic comparison of the work required to address the deficiencies uncovered during the survey versus the cost of replacing the structure. At the end of Section 2, a chart provides an overview of the required work addressed by the building survey and potential replacement costs.

Rockville High School

Stories	2
Area	272,748 sf
Address	70 Loveland Hill Rd, Vernon, CT 06066
Original Construction	1958
Addition(s) / Renovations	1963, 1974, 2007 Addition & Alterations / 2010 VOAG Renovation
Grades	9th to 12th
Condition	Fair to Good
Description	A two story masonry high school building with a secondary building for the VOAG program.

Building Overview - Photographs

The following is a selection of photographs showing the main exterior elevations of the building. These photographs are keyed by letter on the site plan below. The elevation marks show the location and direction from which the photographs were taken.





Building Overview - Photographs continued...

West Elevation - B

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Building Overview - Photographs continued...





North Elevation - D



Building Overview - Photographs continued...

South Elevation - E



South Elevation - F

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Architectural Survey

The exterior skin of Rockville High School is brick, which is in fair to good condition. The main entrance and Auditorium exterior skin is CMU which is in good to excellent condition.

Typical windows a mix of aluminum, hollow metal and wood frames with insulated glazing. The exterior doors are aluminum and hollow metal. The exterior sealants of the doors and windows are in good condition.

The building interior is in good condition.

The work recommended to address architectural conditions includes:

- Clean brick facades that are covered in mold and mildew.
- Infill holes in doors where hardware has been replaced.
- Refinish window frames, sills and doors where finish is peeling away and rust is forming.
- Replace deteriorating steel lintels at windows and doors.
- Replace weatherstripping at exterior doors.
- Replace damaged overhead doors and frames.
- Replace damaged and old exterior vents. Replace sealant at all exterior vents.
- Replace wood canopy at West Elevation.
- Remove vegetation overgrowth from building facade.
- Repair/Replace laminate surface along classroom windows
- Repair/Replace damaged or missing wall base
- Paint touch up needed on walls, door frames, and handrails
- Repair/Replace VCT where needed
- Consider install corner guard at exterior corners
- Assess ceilings for cause of water damage
- Repair/Replace damaged ceiling tiles

Structural Survey

The building is typically constructed of masonry and steel frame that is in good condition. The foundation consists of concrete.

The work recommended to address structural conditions includes:

- Areas of brick require repointing
- Repair areas of cracking brick

Mechanical Survey

The building's heating system is served by steam boilers which are in fair condition. The majority of classrooms are served by unit ventilators while others have forced air systems. Other areas of the building have roof top units (RTUs) which are in fair condition.

The work recommended to address mechanical systems conditions includes:

- Heating Plant: The existing building is served by mid-efficiency steam boilers with condensate system and duplex feed pumps. Boilers are 16 years old and though not near end of their life we recommend replacing with high efficiency condensing boilers to increase energy savings.
- Heating system piping was observed to be original to the building and recommended to be replaced due

to age of system and acidic condensate.

- Ventilation: 1st and 2nd floor exterior classrooms in Area 1 and 2 are primarily ventilated by unit ventilators. Units are past their useful life and do not operate properly. Recommend an energy efficient, code compliant ventilation system that meets present day ASHRAE and building code requirements including energy recovery to maximize ventilation and energy efficiency.
- Exhaust: Existing exhaust fans were observed to be worn and in poor condition. Exhaust fans shall be replaced in kind.
- Cooling: Classrooms in some wings are not air conditioned, recommend retrofitting with VRF or chilled water fan coil unit.
- Controls: Recommend replacement of all pneumatic controls with updated digital controls integrated to centralized building management system.
- Auditorium dressing room, RTU-1, is nearing the end of its useful life and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Auditorium Lobby, RTU-2, is nearing its end of useful life and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Auditorium, RTU-4, is nearing its useful life and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Stage, RTU-5, is nearing its end of useful life and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air. Recommend replacement of failed exterior insulation associated with unit.
- Admin Office Area, RTU-7, is nearing its end of useful life and should be replaced. Recommend replacement with multi zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- B house second floor guidance area are served by RTU-9 is nearing its useful life and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- A house first floor adult education area is served by RTU-10, unit is is nearing its useful life and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- RTU's 11-15 serve Area 5 Labs, practice rooms, food classrooms and science classrooms. Units are all nearing their end of useful life. Recommend replacement with of each unit in kind with multi zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Media Center roof top units, RTU-16 and 17 are nearing the end of their useful life. Recommend replacement with (2) single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Small gymnasium air handling units are past their useful life and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Large gymnasium air handling units are in fair condition and provide heating and ventilation only. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Small Cafeteria unit ventilators are past their useful life, not functioning, and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Large Cafeteria air handling unit is past its useful life, not functioning, and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.

Electrical Survey

The building has two electrical services. Both services are in good condition.

The work recommended to address electrical system conditions includes:

- No improvements or repairs to power and distribution systems are required at this time. Service and distribution equipment in the original Classroom / Administration building is reaching the end of its lifespan, but should provide service for another 10-15 years before replacement is necessary. All service entrance and distribution equipment in the Auditorium Addition is in excellent condition and should see service for another 20-30 years.
- The generator and emergency distribution systems were installed as part of the Auditorium Addition. All equipment is in excellent condition. If maintained properly, it should provide reliable service for 20-30 years.
- There is no evidence of a lightning protection system for the building. Recommend installing a lightning protection system in the immediate future, to safeguard people and property from fire risk and related hazards associated with lightning exposure.

Plumbing Survey

The water service originates in the boiler room. Toilet fixture in the building are both floor mounted and wall hung. The sinks are a combination of manual and sensor type faucets. The school has three different water heaters located throughout the school. The plumbing system overall appears to be in fair condition.

The work recommended to address plumbing systems conditions includes:

- Domestic water service and piping is nearing the end of its useful life and we recommend it be replaced in its entirety.
- Domestic Water heater is nearing the end of its useful life and we recommend it be replaced with a highefficiency gas-fired water heater.
- Sanitary system (above and below grade) is nearing the end of its useful life and we recommend it be replaced in its entirety.
- Natural Gas service and system is nearing the end of its useful life and we recommend it be replaced in its entirety.
- Sanitary system (above and below grade) is nearing the end of its useful life and we recommend it be replaced in its entirety.
- Storm water system (above and below grade) is nearing the end of its useful life and we recommend it be replaced in its entirety.

Fire Protection Survey

The fire protection system is comprised of a wet system. There are both exposed pendant and concealed pendant type fixtures throughout the building. The system overall appears to be in fair to good condition.

The work recommended to address the fire protection system conditions includes:

- Short term:
 - Remove tape covering upright sprinkler heads (Gym Storage, Band Room, Tech lab)
 - Replace sprinkler head covers missing from concealed pendant type sprinkler heads
- Fire service and associated piping is nearing the end of its useful life and we recommend it be replaced in its entirety.
- Fire pump and fire service is nearing the end of its useful life and we recommend it be replaced in its entirety.

Lighting Survey

The lighting service is comprised of fluorescent fixtures retrofitted with LED lamps. There are battery operated emergency lights and remove emergency light heats throughout paths of egress. A combination of HID wall packs and LED flood lights provide lighting on the exterior of the building.

The work recommended to address lighting system conditions includes:

- Lighting systems in the original Classroom / Administration building are old technology fluorescents
 retrofitted with LED lamps and drivers with wall toggle switches and occupancy sensor controls. As capital
 funding becomes available, recommend replacing existing lighting and control systems throughout this
 building with new technology LED fixtures, along with new low voltage controls, for improved efficiency
 and to comply with current energy code requirements.
- With the exception of the theatrical lights in the auditorium, lighting systems in the Auditorium Addition are newer technology LED's with low voltage controls. All lighting systems throughout the addition are in good to excellent condition and should provide service for 15-20 years

Fire Alarm Survey

The fire alarm service is comprised of two addressable fire alarm control panels, networked together with remote annunciator for voice evacuation.

The work recommended to address fire alarm system conditions includes:

- No improvements or repairs are required at this time. Average life expectancy for fire alarm systems is 15 years. System equipment should be updated or replaced in the next 3-5 years to ensure system reliability.
- The fire pump controller and ATS were installed as part of the Auditorium Addition. This equipment is in excellent condition. If maintained properly it should provide reliable service for 20-30 years.

Telecommunications Survey

The telecommunications system is comprised of a main data systems rack located in a data closet off of the main corridor. Data communications consists of fiber backbone and a combination of wire outlets and wireless access point located throughout the facility.

No improvements or repairs are required at this time. Upgrades to these systems (i.e. backbone cabling, workstation outlets, etc.) should be anticipated to accommodate new program requirements as they occur.

Security System Survey

The security system is comprised of an access control system made up of card readers location at the main entry points and some at interior doors. Surveillance cameras are located at various points around the interior and exterior of the building. The building is equipped with an Aiphone video entry/monitoring system.

The work recommended to address security system conditions includes:

- Recommend a review of all access controlled doors and end-user operations be performed in the next 1-2 years, or as program needs dictate.
- Recommend a full system assessment be performed to verify all devices are connected and tested for proper operation in the next 1-2 years, or as program needs dictate.

- Recommend additional high definition cameras be added inside the school and any remaining analog cameras replaced with new HD units in the next 1-2 years, or as improvements in technology dictate.
- Recommend installation and implementation of an intrusion detection or silent alarm system within the next year.

Low Voltage Survey

The building uses program bells for class scheduling which is controlled via a programmable timer. There is a master clock system which operates via a wireless transmitter.

No improvements or repairs are required at this time. Improvement and / or replacement of these systems is recommended in the next 7-10 years, or as program needs dictate.

International Building Code Survey

Rockville High School was evaluated for compliance with the 2021 Connecticut State Building Code, including the 2018 IBC with Connecticut Supplements and Amendments, for Use Group Education. This report does not address alterations to the existing building, because the scope of an alteration project has not been defined. In this case, a change of use would be very unlikely.

The work recommended to address IBC code violations includes:

• Modify hardware for select existing casework that has inaccessible operators.

NFPA Code Survey

A review of Rockville High School's compliance with the NFPA Life Safety Code 2015 was made. The Life Safety Code is a retroactive code for existing buildings and review of applicable systems is required. This building will require updates.

The work recommended to address NFPA code violations includes:

• At VOAG building, modify elements of access route to conform with code. Specifically, the access ramp for the main entrance.

ADA Compliance Survey

Rockville High School was also evaluated based on the Americans with Disabilities Act (ADA), Title II, for public building accessibility. ADA is an act of Congress mandating certain standards for accessibility that are enforceable through the civil courts. Rockville High School fails to meet some of these requirements, evident in the "ADA Compliance Survey".

The building was evaluated based on a review of existing documentation, field verification of existing space usage and discussions with building staff to confirm existing space allocation and usage.

The work recommended to address ADA compliance issues includes providing:

• Modify existing light switches and existing casework to ensure there is an 18" x 18" clear space centered on the light switch.

- Modify or replace any existing door hardware that does not meet accessibility requirements. Mainly related to knob type door handles.
- At any toilet room or entry that is not accessible, provide signage indicating the direction of the closest accessible option.
- Modify existing signage so that the bottom of the top most line of text is below 60" min.
- Provide wing walls for all drinking fountains that are not recessed and that protrude further than 4" into the circulation path.
- Provide furniture in art and technical education classrooms that conforms to both height and pull under requirements.
- Modify mirror mounting heights in all accessible toilet rooms to the minimum 40" requirement.
- Provide signage in corridors for all spaces, specifically there are sets of locker rooms at the gym that do not have their use indicated with accessible signage.
- Modify doors locations at existing classrooms and restrooms to provide adequate push/pull offsets.
- Provide curb ramp at exit marked as accessible at the rear parking lot, or remove reference to this being an accessible exit.
- Replace existing bituminous ramp at VOAG Classrooms entrance. Modify width and handrails to comply with accessibility requirements.
- Provide clearly indicated accessible lockers throughout the school.

Site Survey

The site at Rockville High School was evaluated. Traffic flow at this facility is good, and walkways are in fair to good condition. Available parking accommodates 500 vehicles, with 30 handicap accessible spaces available. The playing fields consist of several soccer and baseball fields as well as tennis courts, a football field and track. The VOAG portion of the site has various pens and sheds for animals.

The work recommended to address site conditions includes:

- Repaint fire lane striping for clear designation.
- Provide signage for deliveries and services area(s).
- Provide striping for designated parking areas near service area(s)
- Replace worn tactile warning pads
- Wood sheds will need to be resided in the future.
- Replace exterior tennis court with all new flooring and equipment.
- Replaced walkways near Gymnasium
- See ADA report for areas of accessibility related concerns

Survey Results

Each of the elements that were reviewed under this assessment was ranked on a scale of 1-4, with a 4 rating equating to the highest priority. Components that received a ranking of 3 should be considered to be moderate priorities, while rankings of 2 and 1 are considered to be low priorities. The following chart graphically presents the survey results (reference Section 4 for a detailed description for each category).



The graph below represents the building's overall conformity with IBC, NFPA and ADA requirements. Compliance was rated on a scale of 1-4, with a 4 rating equating to full compliance. A rating of 2 or under indicates that the building requires moderate to substantial code compliance updates in order to protect the safety of the building's occupants.



Code Compliance Evaluation

Summary of Recommendations

Opinion of Probable Costs	The estimate of probable costs included in Section 8 of this report is designed as a planning tool for Vernon Public Schools. Estimates do not account for a possible change of use.
Required Work	The estimates reflect bringing the building, in its present configuration, into compliance with current applicable codes and addressing the needs of the various building components (architectural, structural, mechanical / electrical / plumbing / fire protection and site). The projected renovations for these components would upgrade the building to a condition. Projected costs are based on 2023 dollars and include no soft costs or contingencies. Based on analysis, over the next 10 years, the required work at this building will cost approximately \$ At xxx square feet, renovations at this building equate to approximately \$ per square foot. This cost-per-square-foot figure falls / does not fall within industry standards for renovations / upgrades of this nature.
Replacement Cost	A similarly constructed building would cost \$ per square foot. Using this figure, the replacement cost for this building is approximately \$, which follows state standards for structures of this type. The \$ per square foot replacement cost was obtained from R.S. Means Construction Cost Data and current local market conditions for buildings of this type. The estimate includes hard construction costs, demolition costs, construction contingencies, design costs, and other "soft costs".
State Reimbursement	The municipality's reimbursement from the State of Connecticut Department of Education for eligible items is xxxx. This would adjust the community's portion of the renovation costs from \$xxxx to \$xxxx, before taking enrollment and other potential ineligible items into account.

The chart below indicates the estimated value of the required work addressed by the building survey alongside the potential replacement cost. The replacement cost is provided as a guideline for comparative purposes and is based on replacing the building as is, i.e. size and use. Information considered includes the type of structure, year built and existing area for the building.

The required work addressed in this survey equates to approximately ... percent of the cost of an entire building replacement project.

Section 3 : Architectural & Structural Survey

Architectural Existing Conditions

This section provides a listing of existing conditions of the various architectural and structural components of the building, followed by summary descriptions. A space utilization plan is provided to identify the current locations / number of spaces available and adjacencies. Photographs of existing conditions are included for clarification purposes, identifying areas that require attention. The floor plans indicate the building layout and are keyed to photograph locations. Recommendations for improvements to the various components are discussed to provide Vernon Public Schools with an overview of the required work.

Rockville High School

Plan Drawings	2007 Addition & Alterations / 2010 VOAG Renovation
Photos	2023 Survey
Date Built	1957
Architect	JCJ Architecture (Addition/Alterations)
Date(s) Additions / Renovations	1963, 1974, 2007 Addition & Alterations / 2010 VOAG Renovation
Construction	Ш-В
Type of Occupancy	Education
Number of Stories	2
Gross Square Feet*	272,748 sf

* Gross Square Footage defined as: The sum of all areas on all floors of a building included within the outside faces of its exterior walls, including all vertical penetration areas, for circulation and shaft areas that connect one floor to another.

30 Architectural & Structural Survey

Condition Codes	
Excellent	16-20 years useful life
Good	Good at present (11-15 years)
Fair	Minor / cosmetic repairs needed to maintain condition (6-10 years)
Poor	Immediate repairs needed to prevent deterioration (0-5 years)

Architectural Conditions - Enclosure

Architectural Conc	ditions - Enclosure	
Exterior Skin	Material	Condition
Primary Surface	Brick	Fair to Good
Secondary Surface	СМИ	Good - Excellent
Insulation	Unknown	Assumed Good
Features	N/A	N/A
Windows		
Lintel	Steel	Fair to Good
Jamb	Masonry	Good
Sill	Masonry , Steel	Good
Frame	Aluminum Hollow metal Wood	Good Fair Fair
Glazing	Insulated	Good
Sealant	Yes	Good
Operable	Yes	Good
Exiting	No	N/A
Doors		
Lintel	Steel	Good
Jamb	Masonry, Steel	Good
Sill	Concrete	Fair
Frame	Hollow Metal , Aluminum	Good
Door	Hollow Metal , Aluminum , Vinyl Rolling door	Good
Glazing	Wired glazing , Tempered	Good
Flashing	Yes	Fair to Good
Sealant	Yes	Good
Hardware	Stainless steel, mismatched (lever, pull , knob)	Good

Architectural	Conditions -	Enclosure	(continued)
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Exit Stairs	Material	Condition
Tread	Concrete	Good
Riser	Concrete	Good
Landing	Concrete	Good
Handrail	Unpainted metal	Good

Rockville High School has a brick exterior that is in fair to good condition. There are areas that require repointing and many areas have a build up of mold and mildew which require cleaning. The main entrance and Auditorium entrance have CMU as the primary exterior skin. Some minor cracking was visible but overall the CMU is in good to excellent condition.

The windows are in good condition overall. The sills at the original portion of the building are in fair condition due to some visible deterioration. Screens are missing at some window locations and some of the existing screens are damaged.

The majority of exterior vents need to be replaced if they are required to remain. The sealant around these vents also needs to be replaced and the damaged brick should also be replaced.

A few canopies over exterior doors appear to have been replaced over time but one on the main facade is in need of immediate replacement. See photographs.

The VOAG building is separated from the rest of the building and appears to be in good condition. The windows and doors appear to have wood frames in some locations which are in fair condition. The exterior ramp is made of asphalt with a concrete barrier and metal railings. There are no handrails at this ramp.

The Courtyard was not accessible at the time of the survey but appeared to be in good condition overall. It has both asphalt and concrete for walkways. Concrete stairs with unpainted metal handrails. There are various benches, trees and planting beds.

Architectural Conditions - Interior

Corridors	Material	Condition
Walls	CMU / Gypsum / Brick/ Plaster	Fair to Good
Doors & Frames	Wood, hollow metal frame / Hollow metal, hollow metal frame	Good
Door Hardware	N/A	N/A
Flooring	12x12 VCT (Vinyl Composite Tile) / Epoxy (Near Athletics Only)	Good
Ceilings	2x4 ACT / 2x2 ACT	Good
Interior Stairs		
Walls	CMU / Brick	Good
Treads	Concrete with metal nosing	Good
Risers	Metal	Good
Landing(s)	VCT / Concrete	Good
Handrails	Metal	Good
Ceilings	2x2 ACT	Good
Offices		
Walls	Gypsum / CMU	Good
Doors & Frames	Wood, hollow metal frame	Good
Door Hardware	Stainless Steel	Good
Flooring	Carpet / VCT	Fair to Good
Ceilings	2x2 ACT	Good to Excellent
Toilet Rooms		
Walls	CMU / Wall Tile	Good
Doors & Frames	Wood, hollow metal frame / Hollow metal, hollow metal frame	Good
Door Hardware	Stainless Steel	Good
Flooring	Ероху / VCT	Good
Ceilings	2x4 ACT / Gypsum	Good
Classrooms		
Walls	CMU / Gypsum / Plaster	Good
Doors & Frames	Wood, hollow metal frame/ Hollow metal, hollow metal frame	Good
Door Hardware	Stainless Steel	Good
Flooring	VCT / Carpet Tile	Fair
Ceilings	2x4 ACT / Absorbent deck	Good

Art Classroom(s)		
Walls	СМИ	Good
Doors & Frames	Wood, hollow metal frame	Good
Door Hardware	Stainless Steel, type varies	Good
Flooring	VCT	Fair to Good
Ceilings	Acoustical Deck	Good
Music		
Classroom(s)		
Walls	СМИ	Good
Doors & Frames	Wood, hollow metal frame	Good
Door Hardware	Stainless Steel, type varies	Good to Excellent
Flooring	VCT / Carpet Tile	Good
Ceilings	Acoustical Deck / 2x4 ACT	Good
Cafeteria		
Walls	CMU / Acoustical Panels	Good
Doors & Frames	Wood, hollow metal frame	Good
Door Hardware	Stainless Steel, Push and Levers	Good to Excellent
Flooring	12x12 VCT	Good
Ceilings	Acoustical Deck	Good
Kitchen		
Walls	СМИ	Good
Doors & Frames	Wood, hollow metal frame	Good
Door Hardware	Stainless Steel	Good
Flooring	Quarry Tile	Good
Ceilings	2x4 ACT	Good
Gymnasium		
Walls	CMU / Wall Pads	Good
Doors & Frames	Wood, hollow metal frame	Good to Excellent
Door Hardware	Stainless Steel	Good to Excellent
Flooring	Wood	Good
Ceilings	Exposed Deck	Fair to Good

Locker Rooms		
Walls	СМИ	Good
Doors & Frames	Wood, hollow metal frame	Good
Door Hardware	Stainless Steel	Good to Excellent
Flooring	Sealed Concrete / Tile	Good
Ceilings	Gypsum	Fair to Good
Media Center /		
Library		
Walls	Gypsum / CMU	Good
Doors & Frames	Wood, hollow metal frame	Good
Door Hardware	Stainless Steel	Good to Excellent
Flooring	Carpet	Good
Ceilings	2x4 ACT	Good to Excellent
Makerspace		
Walls	Gypsum / CMU	Good to Excellent
Doors & Frames	Wood, hollow metal frame / Tempered glazing, aluminum frame	Good
Door Hardware	Stainless	Good to Excellent
Flooring	Carpet / VCT	Good
Ceilings	2x4 ACT	Good

Architectural Conditions - Interior (continued...)

The interior of the building is in good condition.

There was ongoing construction so we were not able to access a portion of the building.

Classrooms have warping/delaminating surfaces and sills above the built-in bookcases along the windows. This should be accessed and replaced as needed. Casework in several classrooms are delaminating and need repair which is seen in the art rooms and many general classrooms. There was a couple areas where cabinet doors or drawers were missing.

Most of the flooring throughout is VCT which is in fair to good condition. There is damaged VCT in one area that it is creating a trip hazard. Other areas that have damaged VCT are stained with cracking and bubbling. There are a couple of classrooms that have carpet that was in good condition.

Most CMU and gypsum walls are in good condition but there are a few areas where there are scuffs and gouges. It would be beneficial to put corner guards on exterior corners to prevent further damage. The corridor and classroom walls appeared to be gypsum and plaster with clerestory glazing on the top.

The wall base throughout is in fair to good condition but there were several areas the wall base was missing completely or damaged. Most wall base was rubber, however, there are areas with wood, tile and CMU.

Ceilings in both gymnasiums are in good condition with the exception of a couple areas that are damaged and stained. These areas should be assessed for cause of water damage. The divider wall in the smaller gym is peeling and is damaged in areas. The bleachers were in good condition with some cracking.

Hand railings need touch up paint throughout.

The VOAG building is in good condition considering its use. There are areas where the epoxy floor was stained and damaged and other areas where the concrete floor could use sealant. Repair is needed to gypsum walls in a few areas.

Architectural Conditions - Conveying Systems

Component	Elevator 1	
Hydraulic	Hydraulic	
Passenger / Freight	Passenger	
Weight	1500 lbs	
Floors - #	2	
Inspection Expiration Date	07/25/2024	

There is only one elevator at this school connecting the main floor to the upper floor. The main entrance is ongrade as well as many other entrances providing accessible floor areas from the building.

36 Architectural & Structural Survey

Structural Existing Conditions

The following is a data summary of the structural conditions that were observed and noted during the survey. This information was gathered by a field survey, reviewing the existing drawings and discussions with various building personnel.

The following codes are used throughout this report to identify the condition of various elements.

Condition Codes	
Excellent	16-20 years useful life
Good	Good at present (11-15 years)
Fair	Minor / cosmetic repairs needed to maintain condition (6-10 years)
Poor	Immediate repairs needed to prevent deterioration (0-5 years)

Structural Conditions - Exterior Condition

	Material	Condition
Enclosure	Masonry	Fair to Good
Foundation	Concrete	Assumed Good
Footings	Concrete	Assumed Good
Deck	Metal	Assumed Good
Exterior Frame	Steel	Good
Other	N/A	N/A

Structural Conditions - Interior Condition

	Material	Condition
Framing	Steel	Good
Walls	Steel	Good
Ground Floor Slab	Concrete	Good
Flooring System (other levels)	Concrete	Good
Stairs	Concrete / Metal	Good
Other	N/A	N/A

The structural components of Rockville High School were evaluated.

In general, the building appears to be in good condition structurally. Although observations could not be made of many structural elements without demolition, no dangerous conditions were observed.
Architectural & Structural Survey Photographs



1. Location:

West Elevation - Main Entrance

Description:

Efflorescence and mildew growth present at base of CMU wall.



2. Location:

West Elevation

Description:

Efflorescence present at brick above main entrance.

Architectural & Structural Survey Photographs



3. Location:

West Elevation

Description:

Typical condition at existing vents remove old sealant/grout and replace with new to avoid water infiltration.



4. Location:

West Elevation

Description:

Wood canopy needs to be replaced.

Architectural & Structural Survey Photographs



5. Location:

West Elevation

Description:

View of deterioration of wood canopy.



6. Location:

North Elevation

Description:

Hollow metal door - finish fading and rust present

7. Location:

VOAG Building

Description:

Mold and mildew build up on brick exterior.

Architectural & Structural Survey Photographs



8. Location:

VOAG Building

Description:

Existing windows appear to be made of wood and have been repainted several times.



9. Location:

VOAG Building

Description:

Vegetation overgrowth on exterior of building

Architectural & Structural Survey Photographs



10. Location:

VOAG Building

Description:

Door system appears to be a combination of wood and metal. Both are showing signs of decay. Flashing also needs to be replaced.



11. Location:

East Elevation

Description:

Patched area of brick needs to is beginning to crumble. Brick needs repointing due what appears to be consistent water flow in the area. Water should be directed away from the brick to prevent further deterioration.

Architectural & Structural Survey Photographs



12. Location:

East Elevation

Description:

Area of missing sealant at window



13. Location:

East Elevation

Description:

Repointing is needed at brick.

14. Location:

East Elevation

Description:

Vent and associated sealant is in poor condition and should be replaced.





Architectural & Structural Survey Photographs



15. Location:

West Elevation

17. Location:

North Elevation

Description:

Visible mold and mildew growth.

Architectural & Structural Survey Photographs



18. Location:

Description:

Steel lintel is rusting

19. Location:

Corner at North Elevation

Description:

Large area of mold and mildew growth on the brick. Vegetation is beginning to grow between the pavement and brick facade.



20. Location:

East Elevation

Description:

Finish of garage door is peeling away.

Architectural & Structural Survey Photographs



21. Location:

Corner of Building

Description:

Large crack at corner of brick facade



22. Location:

Corridor Adjacent to Auditorium

Description:

Brick needs repointing.

23. Location:

Auditorium Main Entrance

Description:

Nails are visible in window frames which may lead to rusting.



Architectural & Structural Survey Photographs



24. Location:

Entrance Near Gymnasiums

Description:

Another example of vent needing to be replaced or removed if not in use.



25. Location:

Entrance Near Gymnasiums

Description:

Brick deteriorating around vent.

26. Location:

Adjacent to Entry for Adult Ed

Description:

Mold and mildew build up on brick facade



Architectural & Structural Survey Photographs



27. Location:

Adjacent to Entry for Adult Ed

Description:

Window sill and frame finish is peeling away and rust is beginning to form.



28. Location:

Adjacent to Entry for Adult Ed

Description:

Steel lintel appears to have been covered over at some point but now that cover is peeing away.

29. Location:

Entry for Adult Ed

Description:

Mixtures of different hardware. Holes need to be filled in where old hardware was removed.



Architectural & Structural Survey Photographs



30. Location:

Original Building - East Elevation

Description:

Mold and mildew build up on brick facade



31. Location:

Original Building - East Elevation

Description:

Deteriorating brick sill at window. Mold and mildew build up on brick facade.

Architectural & Structural Survey Photographs



32. Location:

Original Building - East Elevation

Description:

Deteriorating brick sill at window

33. Location:

Original Building - South Elevation

Description:

Window sill and frame finish is peeling away and rust is beginning to form.



Architectural & Structural Survey Photographs



34. Location:

Original Building - West Elevation

Description:

Window lintel finish is peeling away and rust is beginning to form.



35. Location:

West Elevation

Description:

Damaged weather stripping at hollow metal door



36. Location:

West Elevation

Description:

Damaged brick at window jamb

Architectural & Structural Survey Photographs



37. Location:

West Elevation

Description:

Door vestibule lintel finish is peeling away and rust is beginning to form.

38. Location: West Elevation

Description:

Weatherstripping needs to be replaced at exterior door.



Architectural & Structural Survey Photographs



39. Location:

Kitchen Storage

Description:

VCT is stained and needs to be refinished or replaced.



40. Location:

Auditorium Stair

Description:

Railing has chipped paint and needs repainting.

41. Location:

Auditorium

Description:

Concrete is chipping and needs refinishing.



Architectural & Structural Survey Photographs



42. Location:

Locker Rooms

Description:

Stained ceiling tile indicating water damage.



43. Location:

Main Gymnasium

Description:

Ceiling shows water damage and peeling of surface finish.

44. Location:

Main Gymnasium

Description:

Wall base is peeling off the walls and missing chunks in several areas.



Architectural & Structural Survey Photographs



45. Location:

Smaller Gymnasium

Description:

Damaged to HVAC needs repair.

46. Location: Main Level Corridor

Description:

Paint touch-up needed to wood sill.

47. Location:

Main Level Classroom

Description:

Cracking in CMU. Sealant needed where block meets door frame.



Architectural & Structural Survey Photographs



48. Location:

Main Level Corridor

Description:

VCT is cracked and not level with the surrounding VCT creating a trip hazard.



49. Location:

Locker Room

Description:

CMU and flooring are damaged and need refinishing.

50. Location:

Main level Corridor

Description:

CMU block is crumbling apart and damaged.



Architectural & Structural Survey Photographs



Rockville High School | June 2023

Architectural & Structural Survey Photographs



53. Location:

Main Level Corridor

Description:

The VCT is bubbling and damaged.



54. Location:

Main Level Toilet Room

Description:

Water damage seen on ceiling tile and another ceiling tile is missing.

55. Location:

Main Level Stair

Description:

Several ceiling tiles are damaged and need to be fixed.



Architectural & Structural Survey Photographs



56. Location:

Main Level Stair

Description:

Handrails have chipped and faded paint and need to be refinished.



57. Location:

Main Level Stair

Description:

Stair risers and nosing's are chipped and damaged in some areas.

58. Location:

Main Level Classroom

Description:

Delamination of casework.



Architectural & Structural Survey Photographs



59. Location:

Main Level Classroom

Description:

VCT is damaged and chipped.

60. Location: Main Level Classroom

Description:

Window sill delaminating.



61. Location:

Main Level Classroom

Description:

CMU is scuffed and needs to be repainted.

Architectural & Structural Survey Photographs



62. Location:

Main Level Classroom

Description:

Laminate surface lifting and delaminating by radiators.



63. Location:

Main Office

Description:

Metal frame is worn and needs to be refinished.

64. Location:

Main Level Office Suite

Description:

VCT is stained and showing rust.

Architectural & Structural Survey Photographs



65. Location:

Main Level Corridor

Description:

Wall base is missing and exposed bottom of wall system.

66. Location: Second Level Classroom

Description:

Door frame needs to be repainted.

67. Location:

Second Level Corridor

Description:

VCT is cracking and chipping at transition.



Architectural & Structural Survey Photographs



68. Location:

VOAG Building

Description:

Hole in gypsum needs to be patched.



69. Location:

VOAG Building

Description:

Stained and damaged epoxy floor.

Architectural & Structural Photograph Key Plan

The following plan shows the actual building plan as verified during field surveys. Photographs from the previous pages are keyed into the building plans with numbered arrows at the approximate photograph site and direction from which the photographs were taken.

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Architectural & Structural Recommendations

The architectural and structural components of Rockville High School are in xxx condition.

The following represents areas of necessary architectural improvements and / or required work.

- Clean brick facades that are covered in mold and mildew.
- Infill holes in doors where hardware has been replaced.
- Refinish window frames, sills and doors where finish is peeling away and rust is forming.
- Replace deteriorating steel lintels at windows and doors.
- Replace weatherstripping at exterior doors.
- Replace damaged overhead doors and frames.
- Replace damaged and old exterior vents. Replace sealant at all exterior vents.
- Replace wood canopy at West Elevation.
- Remove vegetation overgrowth from building facade.
- Repair/Replace laminate surface along classroom windows
- Repair/Replace damaged or missing wall base
- Paint touch up needed on walls, door frames, and handrails
- Repair/Replace VCT where needed
- Consider install corner guard at exterior corners
- Assess ceilings for cause of water damage
- Repair/Replace damaged ceiling tiles

The following represents areas of necessary structural improvements and / or required work.

- Areas of brick require repointing
- Repair areas of cracking brick

Existing Conditions Evaluation:

The elements reviewed under this assessment were ranked on a scale of 1-4, with a 4 rating equating to excellent conditions. Components that received a ranking of 3 are considered to be in good condition, while rankings of 2 and 1 are considered to be in fair and poor condition, respectively. The following chart graphically presents the results and their expected life spans.



Note: Ratings range from 1 (poor condition) to 4 (excellent condition)

Section 4 : Mechanical, Electrical, Plumbing & Fire Protection Survey

M/E/P/FP Existing Conditions

The mechanical / electrical / plumbing / fire protection survey results are presented within this section. Included are a chart of existing components and their conditions, summary descriptions, photographs, plans, and recommendations.

Mechanical

The following is a data summary of the Mechanical system's existing conditions that were observed and noted during the survey. This information was gathered by a field survey, reviewing the existing drawings and discussions with various building personnel.

Condition Codes		
Excellent	16-20 years useful life	
Good	Good at present (11-15 years)	
Fair	Minor / cosmetic repairs needed to maintain condition (6-10 years)	
Poor	Immediate repairs needed to prevent deterioration (0-5 years)	

Mechanical Conditions

System	Condition	Comments
Boilers	Fair	Boilers were observed to be in fair working condition.
Heating System	Poor	Heating system was observed to be worn down. Piping is original to building.
Heating System Pumps	Poor	Pumps were observed to be at the end of their useful life
A/C Roof-Top Units	Fair	Roof top units were observed to be in fair condition.
Air Distribution / Ductwork	Good	Ductwork was observed to be insulated
Condensate Piping (A/C)	Poor	Condensate piping was observed to be old
Exhaust Fans	Fair	Exhaust fans were observed to be worn
Controls	Poor	Pneumatic controls were observed to be in poor condition.

Heating system is served by cast iron mid-efficiency steam boilers with condensate system and duplex boiler feed pumps. The system is in fair condition and appears to be from 2008 (15 years old). Cast iron boiler system have an approximately 25 year life expectancy and while not near end of life we would recommend replacing with high efficiency condensing boilers for increased energy savings.

Classrooms are served by unit ventilators throughout the school's first and second floor areas. Rooms 219, 220, and 231 are naturally ventilated through windows. Filters on all unit ventilators were MERV-7.

Existing unit ventilators are top supply bottom face return and have supply air fan, heating coil, and outside air/ return damper. Temperature controls in classrooms are pneumatic with wall thermostat providing signal to unit ventilator outside air damper and heating coil.

Some classroom areas have been updated to forced air systems with mixed outside air with supply air for



Mechanical (continued...)

ventilation. Classrooms are sidewall supply and return.

Vocational area classrooms are a mix of natural ventilation, and unit ventilators. Shop classroom has exhaust air and gravity ventilators for outside air.

A house first floor classrooms (area 1) adult education area, are served by RTU-10 located on roof. Unit provides outside air along with heating and cooling supply air. System has a ducted supply and return with ceiling supply diffusers. Unit has MERV-7 filters.

B house second floor classrooms (area 1) guidance area, are served by RTU-9 located on roof. Unit provides outside air along with heating and cooling supply air. System has a ducted supply and return with ceiling supply diffusers. Unit has MERV-7 filters.

Large gym is served by (4) ceiling hung heating and ventilation units. Units provide ventilation air through ducted louver to outside and mix with return air as a percentage of overall supply. Units include MERV-7 filters. Units are controlled through digital controls connected to building management systems.

Exhaust air is provided by (2) roof mounted exhaust fans controlled by variable frequency drives in adjacent storage room. (2) Gravity ventilators provide for additional outside air intake.

Small gym is served by (2) ceiling hung heating and ventilation units. Units provide ventilation air through ducted louver to outside and mix with return air as a percentage of overall supply. Units include MERV-7 filters. Units are controlled through digital controls connected to building management systems

Exhaust air is provided by (1) roof mounted exhaust fan, (2) gravity ventilators provide for additional outside air intake.

Small cafeteria has (2) unit ventilators that provide outside air along with operable windows.

Large cafeteria is served by RTU located on roof above. Unit provides outside air along with heating and cooling supply air. System has an exposed ducted supply and return with ceiling supply diffusers. Unit has MERV-7 filters.

Main auditorium is served by RTU-4 located on low roof. Unit provides outside air along with heating and cooling supply air. System has a ducted supply and return with ceiling supply diffusers. Unit has MERV-7 filters.

Stage is served by RTU-5 located on low roof. Unit provides outside air along with heating and cooling supply air. System has a ducted supply and return with ceiling supply diffusers. Unit has MERV-7 filters

Auditorium lobby is served by RTU-2 located on low roof. Unit provides outside air along with heating and cooling supply air. System has a ducted supply and return with ceiling supply diffusers. Unit has MERV-7 filters

Auditorium dressing room is served by RTU-1 located on low roof. Unit provides outside air along with heating and cooling supply air. System has a ducted supply and return with ceiling supply diffusers. Unit has MERV-7 filters.

Media Center is served by RTU-16 & 17 located on roof. Units provide outside air along with heating and cooling supply air. Systems have a ducted supply and return with ceiling supply diffusers and return registers. Units have MERV-7 filters

Administration area is served by RTU-7 located on roof. Unit provide outside air along with heating and cooling

Mechanical (continued...)

supply air. System has a ducted supply and return with ceiling supply diffusers and return registers. Unit has MERV-7 filters

Nurse's office has radiator with operable windows. No filtration is provided and exhaust is pulled from bathroom fan. A window air conditioner provides cooling as needed.

Controls are mix of pneumatic and direct digital controls that have been retrofitted throughout the building. Classrooms are primarily pneumatic and large spaces (Gym, Cafeteria, Auditorium) have mostly been updated to DDC system supplied by Connecticut Temperature Controls (CTC).

Notes from school facilities for the Gymnasium Units (Large Gym)

Small Units:

- Left hand unit: needs new bearings
- Left center unit: needs new steam trap
- Right center unit: needs new bearings
- Right hand unit: outside air damper will not move

Large Units (newer):

- Left side unit: no issues
- Right side unit: no filters, coil plugged
- Exhaust fan #3: not running at this time

Electrical

The following is a data summary of the electrical system's existing conditions that were observed and noted during the survey. This information was gathered by a field survey, reviewing the existing drawings and discussions with various building personnel.

Condition Codes		
Excellent	16-20 years useful life	
Good	Good at present (11-15 years)	
Fair	Minor / cosmetic repairs needed to maintain condition (6-10 years)	
Poor	Immediate repairs needed to prevent deterioration (0-5 years)	

Electrical Distribution Conditions

System	Condition	Comments
Main Service	Good to Excellent	Two Services, Both Well Maintained
Power Distribution	Good	Well Maintained
Life Safety Power	N/A	There is No Life Safety Power to the Building.
Emergency Power	Excellent	Generator, Transfer Switch and Distribution Equipment is Well Maintained
Transformers	Good	Well maintained
Grounding	Good	Service Equipment Grounding, Where Observed, Appeared Undamaged
Lightning Protection	N/A	There is No Lightning Protection System for the building.

The building has two electrical services, described as follows:

Building Service #1:

Power to this service originates at a utility pole located on Loveland Hill Road. The utility company primary runs underground to a utility company owned 480Y/277V, 3-phase, 4-wire pad mounted transformer located outside building Area 1. Secondary feeders run underground from the pad mount and enter the building in the Main Electrical Room, on the west side of building Area 2.

Service #1 is original to the building and consists of a 480Y/277V, 3-phase, 4-wire main switch, CT and distribution section, manufactured by General Electric and rated for 1600 amperes. The metering cubicle is arranged cold sequence with the meter mounted on a wall outside the main electrical room, next to the telecommunications demarc. The main switch section feeds a 1600A, 480Y/277V, 3-phase, 4-wire distribution section, which contains branch circuit breakers that feed panels and equipment at 480V located throughout building Areas 1 – 7 and Area 9. 480V primary/208Y/120V secondary distribution transformers feed 208/120V branch circuit panelboards. All service entrance and distribution equipment that is part of this system is well maintained and in good condition.

Building Service #2:

Power to this service comes from a utility company owned 480Y/277V, 3-phase, 4-wire pad mounted transformer located at the south end of the facility, across from the parking area outside building Area 8. Secondary feeders run

Electrical (continued...)

underground from the pad mount and enter the building in the Electrical Room 1814, on the south side of building Area 8, across from the Auditorium.

Service #2 was installed as part of additions and renovations that were done in 2007-2008 and consists of a 480Y/277V, 3-phase, 4-wire main switch, CT and distribution section, manufactured by Eaton Cutler-Hammer and rated for 2500 amperes. The metering cubicle is arranged cold sequence with the meter mounted on the exterior south side of building Area 8. The main switch feeds a 2000A, 480Y/277V, 3-phase, 4-wire distribution section, which contains branch circuit breakers that feed panels and equipment at 480V located in building Area 8 and parts of Area 7. 480V primary/208Y/120V secondary distribution transformers feed 208/120V branch circuit panelboards and equipment, including a 300kVA unit that serves the Auditorium dimming system and emergency lighting inverter. All service entrance and distribution equipment that is part of this system is less than 20 years old and in excellent condition.

Branch circuit panelboards vary in age between those original to the building to those installed as part of later renovations. 480/277V panels serve mechanical equipment and lighting loads. 208/120V panels serve receptacles, small motors and various other loads. Branch circuit wiring is in EMT/armored cable, where observed. All wiring systems appear in good to excellent condition.

Optional Stand-by power to the building is provided by a 250kW @ .8 P.F., 480/277V, 3-phase, 4-wire diesel-fired generator with skid mounted fuel tank, manufactured by Generac, which resides outside building Area 8. The generator is fed from a 400A automatic transfer switch for Optional Stand-by power, connected to 400A, 480/277V distribution panel "BRPH", which serves mechanical equipment heating and cooling loads for building Area 8. There is no separate source of Life Safety power for the building. There is no evidence of a lightning protection system for the building.

Plumbing

The following is a data summary of the plumbing system's existing conditions that were observed and noted during the survey. This information was gathered by a field survey, reviewing the existing drawings and discussions with various building personnel.

Condition Codes		
Excellent	16-20 years useful life	
Good	Good at present (11-15 years)	
Fair	Minor / cosmetic repairs needed to maintain condition (6-10 years)	
Poor	Immediate repairs needed to prevent deterioration (0-5 years)	

Plumbing Conditions

System	Condition	Comments
Water Service	Fair	4" Cold Water Service, Corrosion Starting To Form
Fixtures	Fair	Wall Hung and Floor Mounted Toilets With Manual Flush Valves, Wall Mounted Urinals With Manual Flush Valves, Wall Hung Lavatories With Manual and Sensor Faucets. Jacketing Popping Off/Missing From Fixture Piping, Corrosion Seen On Hot and Cold Water Piping to Fixtures
Domestic Cold Water Pipe	Fair	Copper Piping, Corrosion Beginning on Piping
Domestic Hot Water Pipe	Fair	Indirect Water Heater, Two electric Water Heaters, Corrosion Beginning on Piping
Sanitary & Vent Piping	Fair	Rust and Corrosion Beginning to Form
Storm Piping	Fair	Piping and Insulation Appear to be in fair Condition, Roof Drains are in fair Condition, and below grade piping is believed to be original to the building.
Natural Gas Piping	Fair	2" Natural Gas Service, Rust Forming on Piping
Irrigation	N/A	N/A

The water service to the building originates in the boiler room of the building and the service entrance appears to be in fair condition with corrosion beginning to form on the piping.

The Water Closets in this school are both floor mounted and wall hung. Both of these types of water closets are made of a vitreous china and have manual flush valves. The urinals wall hung type and are also made of the vitreous china and also have manual flush valves. There are two different types of lavatories being used in this building. There are wall hung vitreous china type lavatories that have manual twist knob faucets as well as two and three bay pre-fabricated type lavatories that have sensor type faucets. Each classroom has a counter-top drop-in type sink made of stainless steel with manual faucets.

This school has three different water heaters located in different areas of the school. There is a large indirect gas fired water heater and two smaller storage tank type water heaters that are located in a storage closet by the adult education wing of the school as well as one by the back of the media center.

Mechanical, Electrical, Plumbing & Fire Protection Survey⁸³

Plumbing (continued...)

The piping in this building appears to be in fair condition as corrosion can be seen starting to cover the piping in the boiler room, around the water heaters and where the piping will lead and connect to the plumbing fixtures.

All of the sanitary and storm insulation and piping appeared to be in good condition and appeared to be showing no signs of any major damage or corrosion

There are no irrigation systems or piping within the building.

Fire Protection

The following is a data summary of the fire protection system's existing conditions that were observed and noted during the survey. This information was gathered by a field survey, reviewing the existing drawings and discussions with various building personnel.

Condition Codes	
Excellent	16-20 years useful life
Good	Good at present (11-15 years)
Fair	Minor / cosmetic repairs needed to maintain condition (6-10 years)
Poor	Immediate repairs needed to prevent deterioration (0-5 years)

Fire Protection Conditions

System	Condition	Comments
Fire Service	Fair	Service Size 6"
Backflow Preventer	Fair	Service and Testing Appear to be Up to Date
Standpipe System	Good	Standpipes in Main Hallway, Auditorium Stage
Sprinkler System	Fair	Wet System, Corrosion Seen on Risers
Fire Department Connection	Fair	Free Standing Siamese Connection
Heads	Fair	Upright, Pendant, Concealed Pendants
Piping	Good	Black Steel Piping
Fire Pump	Fair	Service and Testing Appear to be Up to Date
Booster Pumps	N/A	N/A

This building has a 6" water line to serve the fire protection system.

The backflow preventer in the system and all of the fire protection risers appear to be older and in fair condition with service and testing happening on an annual basis. There are testing records on the fire protection risers that show the system was tested every year since 2015.

There are multiple different standpipes in the building, each of them being located in different corridors of the building as well as the auditorium stage. Each of the standpipes appears to be in good condition and showing no signs of any kind of damage to the piping or the hose valves.

Throughout the building there was only a wet fire protection system seen. It appeared that on select fire protection alarm check valves and risers there is rust beginning to form on the piping and valves.

All of the black steel piping that could be seen appeared to be in good condition with no signs of damage or corrosion.

In this building there are exposed pendant and concealed pendant type sprinkler heads in the corridors. In the classrooms there are also concealed type pendant sprinklers as well as exposed pendants. Additionally, in a few of the rooms there were exposed upright type sprinkler heads. It was noted that in some rooms there were upright

Fire Protection (continued...)

sprinklers that had been covered with tape while the piping was being painted and the tape was never removed. In Also, it was seen that some of the classrooms that had concealed pendant type sprinklers had the covers of the sprinkler heads either missing or the covers were just starting to pop off.

The fire department connection for the school is located in the front of the building and is a free-standing, postmounted Siamese fire department connection. Both the connection point and the post where the connection point sits appeared to be in fair condition with the piping starting to show signs of corrosion.

The fire protection system in this school does have a 500gpm diesel fire pump with a diesel storage tank. The fire pump appears to be older and in fair condition with it being manufactured in 11/07.

Lighting

The following is a data summary of the lighting system's existing conditions that were observed and noted during the survey. This information was gathered by a field survey, reviewing the existing drawings and discussions with various building personnel.

Condition Codes		
Excellent	16-20 years useful life	
Good	Good at present (11-15 years)	
Fair	Minor / cosmetic repairs needed to maintain condition (6-10 years)	
Poor	Immediate repairs needed to prevent deterioration (0-5 years)	

Lighting Conditions

System	Condition	Comments
General Lighting	Fair	Fluorescent Fixtures Retrofitted with LED Lamps. Lighting Levels Adequate.
Emergency Lighting	Fair	Battery Powered Emergency Light Fixtures in Utility Areas and Along Paths of Egress.
Exit Signs	Good	Battery Powered LED Fixtures at All Exits and Along Paths of Egress.
Exterior Lighting	Good	LED and HID Building Mounted Fixtures and Pole Arm Mounted Luminaires Light Walkways and Parking Areas.
Lighting Control	Fair	Occupancy Sensors with Manual Override.
Theatrical Lighting	Excellent	Equipment is Well Maintained and in Excellent Working Condition.

Interior lighting fixtures in building Areas 1 – 7 and Area 9 consist mostly of 2'x4' recessed lay-in troffers with prismatic lenses in corridors and vestibules and 2'x4' recessed troffers with parabolic diffusers in office areas. Fixtures in classrooms are 1'x4' surface mounted with wraparound style lenses. Fixtures in the Gymnasium are pendant mounted LED high-bays with wire-guards. Interior lighting fixtures in building Area 8 consist of recessed downlight cans in corridors and industrial strip lights with wire guards in all utility areas. House lights in the Auditorium are recessed downlight cans. All interior fixtures have been retrofitted with LED lamps and drivers and are in fair to good condition. Light levels throughout the facility appeared adequate.

Battery operated emergency lights and remote emergency light heads are used to light egress paths in corridors, stairwells and above exit doors. Emergency fixtures were not tested for operation, but appear correctly installed and maintained.

Exit signs are LED with battery backup. Exit signage in all areas appears in compliance with current codes. All signage appears to be in good condition and operating properly.

A combination of HID wall packs and LED floods light the building exterior. Pole arm mounted style luminaries light roadways and parking areas.

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Lighting (continued...)

A theatrical lighting and control system was installed for the Auditorium as part of the additions and renovations done in 2007-2008. All of this equipment is less than 20 years old, is well maintained and in excellent operating condition.

Lights in corridors and public spaces are controlled with toggle switches and ceiling mounted occupancy sensors. Lights in classrooms are controlled with toggle switches and wall mounted occupancy/vacancy sensors. Offices utilize wall occupancy sensors with manual override. Exterior lights are controlled via time clock and photocell. No daylighting was observed.

Fire Alarm

The following is a data summary of the fire alarm system's existing conditions that were observed and noted during the survey. This information was gathered by a field survey, reviewing the existing drawings and discussions with various building personnel.

Condition Codes	
Excellent	16-20 years useful life
Good	Good at present (11-15 years)
Fair	Minor / cosmetic repairs needed to maintain condition (6-10 years)
Poor	Immediate repairs needed to prevent deterioration (0-5 years)

Fire Alarm System Conditions

System	Condition	Comments
Fire Alarm Control Panel	Good	Panels and Equipment Appear Well Maintained
Initiating Devices	Good	Devices are Installed Properly
Indicating Devices	Good	Devices Appear Sufficient
Area of Rescue	Fair	System Appears Undamaged with No Reported Issues.
Voice Evacuation	Good	System Appears Well Maintained
Elevator Recall	Good	System Appears to be Functioning, With No Reported Issues.

The building fire alarm system consists of two Simplex 4100 Series addressable fire alarm control panels, networked together with remote annunciators for voice evacuation. Fire Alarm Control Panel #1 serves devices on all floors in building Areas 1 – 7 and Area 9 and is located in the Custodial Area in building Area 9. Fire Alarm Control Panel #2 serves devices in all areas of building Area 8 and is located in the Fire Pump Room in building Area 8. Remote annunciator panels are located in the Gymnasium in building Area 7 and the Auditorium in building Area 8. The annunciator panels contain a microphone handset to allow annunciation over the building's speaker horn/ strobe devices. Fire alarm speaker/strobe coverage throughout the building appears sufficient. Locations of manual pull stations are in compliance. All fire alarm devices appear to be mounted at the correct ADA height. Monitor and control modules for duct smoke detectors were not observed.

The building is equipped with a sprinkler system with supplemental smoke detection devices in corridors, storage areas and electrical rooms, heat detectors in mechanical spaces, tamper and flow alarm switches at the service entrance and standpipes. All systems appear operational and in compliance.

A 60HP fire pump with ATS and controller is located in a room at the southeast corner of building Area 8, in Fire Pump Room 1815. The normal side of the fire pump ATS is connected to the utility transformer secondary through a 600A fused disconnect switch. Emergency power comes from the generator via a 200A circuit breaker. The Area of Rescue call system control panel is located in the main entrance vestibule with call for assistance stations in stair landings located throughout the facility.

Smoke detectors for elevator recall are located on the ceiling at each elevator landing.

Telecommunications

The following is a data summary of the telecommunications system's existing conditions that were observed and noted during the survey. This information was gathered by a field survey, reviewing the existing drawings and discussions with various building personnel.

Condition Codes		
Excellent	16-20 years useful life	
Good	Good at present (11-15 years)	
Fair	Minor / cosmetic repairs needed to maintain condition (6-10 years)	
Poor	Immediate repairs needed to prevent deterioration (0-5 years)	

Telecommunications System Conditions

System	Condition	Comments
Backbone Cabling	Good	Well Maintained with No Visible Damage.
Rack System	Good	Well Maintained with No Visible Damage.
Telecommunication Ground	Good	No Visible Damage – Observed at Telephone Equipment Backboard Only.
Telephone Service Entrance	Excellent	Recently Installed. Well Maintained with No Visible Damage.
Data Horizontal Cabling	Good	Well Maintained with No Visible Damage.
MDFs / IDFs	Good	Well Maintained and Functioning with No Apparent Issues.
Pathways	Good	Well Maintained with No Visible Damage.
Coaxial Cable	N/A	None Observed.

Telecommunications services originate at a utility pole located on Loveland Hill Road. Cabling runs underground and enters the building in the Main Telecommunications Demarc on the west side of building Area 2, where the telephone systems equipment backboard and equipment rack are located. From this location, service cabling runs to the data systems racks in the MDF. All equipment is well maintained and in excellent condition.

The main data systems racks are located in data closet off the main corridor, on the east side of building Area 2. Data communications consists of a fiber backbone and a combination of wired outlets and wireless access points located throughout the facility. Typical classrooms contain a hardwired data drop approximate to the Teacher's desk and convenience drops that vary in quantity depending on room type. Wireless Access Point (WAP) devices are distributed throughout the facility – one per classroom or office suite and throughout corridors and common areas. All equipment and cabling appeared well maintained and in good condition.

General telephone utilization for the building is VoIP. This system operates through speaker handsets in classrooms and offices, and is tied into the building paging/public address system via ceiling and wall mounted speakers located throughout the facility. All systems appeared operational with no reported issues.

The building appears to contain elements of TV infrastructure at the data systems rack. This could not be confirmed as Video IPTV streaming provisions for the building.



Security System

The following is a data summary of the security system's existing conditions that were observed and noted during the survey. This information was gathered by a field survey, reviewing the existing drawings and discussions with various building personnel.

Condition Codes		
Excellent	16-20 years useful life	
Good	Good at present (11-15 years)	
Fair	Minor / cosmetic repairs needed to maintain condition (6-10 years)	
Poor	Immediate repairs needed to prevent deterioration (0-5years)	

Security System Conditions

System	Condition	Comments
Intrusion Alarm System	N/A	N/A
Video Monitoring	Good	Well Maintained and Functioning with No Apparent Issues.
Access Control	Good	Functioning Well with No Apparent Issues.
Intercom System for Entrance	Fair	Functioning with No Apparent Issues.

The building uses an access control system made up of card readers located at the main points of entry and at some interior doors. Headend equipment is by Altronix. Surveillance cameras are located at various points around the interior and exterior of the building. The video system is networked with a dedicated HD display located in the Administration and Facilities offices. All systems appear in good condition and functioning properly.

The Building is equipped with an Aiphone video entry/monitoring system, which allows communication between the main points of entry and the Administration Office. The system is functioning properly and is in fair condition.

There was no evidence of an intrusion detection alarm system for the building.

Low Voltage Systems

The following is a data summary of the low voltage system's existing conditions that were observed and noted during the survey. This information was gathered by a field survey, reviewing the existing drawings and discussions with various building personnel.

Condition Codes		
Excellent	16-20 years useful life	
Good	Good at present (11-15 years)	
Fair	Minor / cosmetic repairs needed to maintain condition (6-10 years)	
Poor	Immediate repairs needed to prevent deterioration (0-5 years)	

Low Voltage System Conditions

System	Condition	Comments
Clock System	Good	Well Maintained with No Issues Reported.
Public Address System	Fair	Working Condition with No Issues Reported.
Stand-Alone Sound System(s)	Good	Well Maintained
Assisted Listening	Good	Well Maintained

The building uses program bells for class scheduling, controlled via a programmable timer located in the Administration Office. This system also functions for public address announcements. The master clock system operates via a wireless transmitter connected to a GPS receiver mounted on the exterior of the building. Classroom clocks are battery powered and receive signals from the transmitter to make adjustments and maintain accurate time. All systems appear to be in good condition and fully operational.

A sound system equipment rack wired with the local assisted listening system is located in the Media Center. This System serves the Gymnasium, Cafeteria, Media Center and Wrestling/Dance Room. The Auditorium is equipped with a complete stereo sound system with amplifier/mixer, speakers, microphones, etc. and infrared emitters for assisted listening wireless headsets. These systems were installed as part of renovations done in 2007-2008 and are in good condition.

M/E/P/FP Survey Photographs



Description: Domestic water service

1. Location:

Boiler Room





3. Location:

Fire Pump Room

Description:

Backflow preventer, fire pump, risers



4. Location: Group Toilet Room Description:

Toilet Room fixtures

M/E/P/FP Survey Photographs



5. Location:

Boiler Room

Description:

Indirect Gas Fired Water Heater



6. Location: Roof

> Description: Roof Top Unit (RTU)

M/E/P/FP Survey Photographs



7. Location: Storage Room Description:

Leaking chilled water pump

8. Location:

Classroom Closet

Description:

Air Handling Unit (AHU) providing heat, cooling and ventilation



M/E/P/FP Survey Photographs



9. Location:

Gymnasium

Description:

Ceiling Hung Heating and Ventilation Units



10. Location: Mechanical Room

> Description: Hydronic Pumps



11. Location: Mechanical Room **Description:** Gas fired boilers



12. Location: Main Electrical Room

Description:

Service #1 switchboard main and CT

M/E/P/FP Survey Photographs



13. Location: Main Level Description: Service #2 switchboard



14. Location: Exterior

Description:

Generator and Sub-base Fuel Tank



15. Location: Main Level Description: Typical Corridor Lighting



16. Location: Main Level

> Description: Typical Classroom Lighting



17. Location:
Exterior
Description:
Mounted LED light fixture

18. Location: Maintenance Office

Description:

Fire alarm control panel



19. Location:

Main Level Auditorium Addition

Description:

Fire pump controller

20. Location: Main Level

> Description: Data systems rack

M/E/P/FP Survey Photographs





M/E/P/FP Recommendations

Recommendations for the existing building systems are listed below by trade.

The following represents areas of necessary **mechanical** improvements and / or required work.

- Heating Plant: The existing building is served by mid-efficiency steam boilers with condensate system and duplex feed pumps. Boilers are 16 years old and though not near end of their life we recommend replacing with high efficiency condensing boilers to increase energy savings.
- Heating system piping was observed to be original to the building and recommended to be replaced due to age of system and acidic condensate.
- Ventilation: 1st and 2nd floor exterior classrooms in Area 1 and 2 are primarily ventilated by unit ventilators. Units are past their useful life and do not operate properly. Recommend an energy efficient, code compliant ventilation system that meets present day ASHRAE and building code requirements including energy recovery to maximize ventilation and energy efficiency.
- Exhaust: Existing exhaust fans were observed to be worn and in poor condition. Exhaust fans shall be replaced in kind.
- Cooling: Classrooms in some wings are not air conditioned, recommend retrofitting with VRF or chilled water fan coil unit.
- Controls: Recommend replacement of all pneumatic controls with updated digital controls integrated to centralized building management system.
- Auditorium dressing room, RTU-1, is nearing the end of its useful life and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Auditorium Lobby, RTU-2, is nearing its end of useful life and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Auditorium, RTU-4, is nearing its useful life and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Stage, RTU-5, is nearing its end of useful life and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air. Recommend replacement of failed exterior insulation associated with unit.
- Admin Office Area, RTU-7, is nearing its end of useful life and should be replaced. Recommend replacement with multi zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- B house second floor guidance area are served by RTU-9 is nearing its useful life and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- A house first floor adult education area is served by RTU-10, unit is is nearing its useful life and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- RTU's 11-15 serve Area 5 Labs, practice rooms, food classrooms and science classrooms. Units are all nearing their end of useful life. Recommend replacement with of each unit in kind with multi zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Media Center roof top units, RTU-16 and 17 are nearing the end of their useful life. Recommend replacement with (2) single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Small gymnasium air handling units are past their useful life and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Large gymnasium air handling units are in fair condition and provide heating and ventilation only. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.

- Small Cafeteria unit ventilators are past their useful life, not functioning, and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.
- Large Cafeteria air handling unit is past its useful life, not functioning, and should be replaced. Recommend replacement with single zone variable air volume heating, cooling and ventilation roof top unit with outside air.

The following represents areas of necessary electrical improvements and / or required work.

- No improvements or repairs to power and distribution systems are required at this time. Service and distribution equipment in the original Classroom / Administration building is reaching the end of its lifespan, but should provide service for another 10-15 years before replacement is necessary. All service entrance and distribution equipment in the Auditorium Addition is in excellent condition and should see service for another 20-30 years.
- The generator and emergency distribution systems were installed as part of the Auditorium Addition. All equipment is in excellent condition. If maintained properly, it should provide reliable service for 20-30 years.
- There is no evidence of a lightning protection system for the building. Recommend installing a lightning protection system in the immediate future, to safeguard people and property from fire risk and related hazards associated with lightning exposure.

The following represents areas of necessary **plumbing** improvements and / or required work.

- Domestic water service and piping is nearing the end of its useful life and we recommend it be replaced in its entirety.
- Domestic Water heater is nearing the end of its useful life and we recommend it be replaced with a highefficiency gas-fired water heater.
- Sanitary system (above and below grade) is nearing the end of its useful life and we recommend it be replaced in its entirety.
- Natural Gas service and system is nearing the end of its useful life and we recommend it be replaced in its entirety.
- Sanitary system (above and below grade) is nearing the end of its useful life and we recommend it be replaced in its entirety.
- Storm water system (above and below grade) is nearing the end of its useful life and we recommend it be replaced in its entirety.

The following represents areas of necessary fire protection improvements and / or required work.

- Short term:
 - Remove tape covering upright sprinkler heads (Gym Storage, Band Room, Tech lab)
 - Replace sprinkler head covers missing from concealed pendant type sprinkler heads
- Fire service and associated piping is nearing the end of its useful life and we recommend it be replaced in its entirety.
- Fire pump and fire service is nearing the end of its useful life and we recommend it be replaced in its entirety.

The following represents areas of necessary **lighting** improvements and / or required work.

• Lighting systems in the original Classroom / Administration building are old technology fluorescents retrofitted with LED lamps and drivers with wall toggle switches and occupancy sensor controls. As capital funding becomes available, recommend replacing existing lighting and control systems throughout this



building with new technology LED fixtures, along with new low voltage controls, for improved efficiency and to comply with current energy code requirements.

• With the exception of the theatrical lights in the auditorium, lighting systems in the Auditorium Addition are newer technology LED's with low voltage controls. All lighting systems throughout the addition are in good to excellent condition and should provide service for 15-20 years.

The following represents areas of necessary **fire alarm** improvements and / or required work.

- No improvements or repairs are required at this time. Average life expectancy for fire alarm systems is 15 years. System equipment should be updated or replaced in the next 3-5 years to ensure system reliability.
- The fire pump controller and ATS were installed as part of the Auditorium Addition. This equipment is in excellent condition. If maintained properly it should provide reliable service for 20-30 years.

The following represents areas of necessary **telecommunication system** improvements and / or required work.

• No improvements or repairs are required at this time. Upgrades to these systems (i.e. backbone cabling, workstation outlets, etc.) should be anticipated to accommodate new program requirements as they occur.

The following represents areas of necessary **security system** improvements and / or required work.

- Recommend a review of all access controlled doors and end-user operations be performed in the next 1-2 years, or as program needs dictate.
- Recommend a full system assessment be performed to verify all devices are connected and tested for proper operation in the next 1-2 years, or as program needs dictate.
- Recommend additional high definition cameras be added inside the school and any remaining analog cameras replaced with new HD units in the next 1-2 years, or as improvements in technology dictate.
- Recommend installation and implementation of an intrusion detection or silent alarm system within the next year.

The following represents areas of necessary **low voltage** improvements and / or required work.

• No improvements or repairs are required at this time. Improvement and / or replacement of these systems is recommended in the next 7-10 years, or as program needs dictate.

Existing Conditions Evaluation:

The elements reviewed under this assessment were ranked on a scale of 1-4, with a 4 rating equating to excellent conditions. Components that received a ranking of 3 are considered to be in good condition, while rankings of 2 and 1 are considered to be in fair and poor condition, respectively. The following chart graphically presents the results and their expected life spans.


Section 5 : Code Survey

IBC Code Survey

This section outlines the results of the code evaluation survey, listing the building's compliance with the IBC code regulations.

Rockville High School has been evaluated for compliance with the 2021 Connecticut State Building Code, including the 2018 IBC with Connecticut Supplements and Amendments, for Use Group Education. Since the scope of a potential alteration project is not yet defined, this report does not address code compliance with regard to future alterations. A change of use would require code compliance upgrades. Other required code upgrades are contingent upon the nature and extent of a specific alteration and are determined on a case-by-case basis.

Corrective work is required for compliance with IBC, under it's existing use and conditions. The majority of the IBC defines new construction requirements and is not a retroactive code.

IBC Summary Sheet					
Existing Use	Education				
Year Constructed	1957				
Type of Construction	IIB				
% Open Perimeter	69% Original Building, 47% VOAG Addition, 23% Auditorium Addition				
Fire Suppression	Complete NFPA 13 System				
Compartmentalization	< 30,000 sf				
Fire Resistance Rating of Vertical Opening Enclosures	1 Hour				
Automatic Alarms	Installed				
Automatic Alarms Type	Smoke Detectors				
Smoke Control	N/A				
Smoke Control Type	N/A				
Mixed Use	Separated Use (Education, Assembly)				
Dead End	< 20'-0"				
Maximum Exit Access Travel Distance	< 200'-0"				
Number of Stories	2				
Floor Area(s) - Original	First - 184,159 sf Second - 55,769 sf				
Floor Area(s) - VOAG	First - 10,781 sf				
Floor Area(s) - Auditorium	First - 22,039 sf				
Reduction of Area Limitations	None				
Corridor Wall Rating	None				
Door Closers	Yes				
Adequate Exit Routes	Yes				
Elevator Controls	Yes				
Emergency Lights	Yes				

IBC Code Survey (continued...)

Plan Conditions Verified for:	Yes / No
Fire Safety	Yes
Means of Egress	Yes
General Safety	Yes
Handicapped Accessibility	Yes

NFPA Code Survey

This section outlines the results of the code evaluation survey, listing the building's compliance with the NFPA code regulations. Rockville High School was evaluated for compliance with NFPA 101 Life Safety Code, 2021. Chapter 13, Existing Assembly Occupancies and Chapter 15, Existing Educational Occupancies, of the NFPA Code apply to this building.

NFPA Code Compliance

A listing of required elements per NFPA 101 code follows:

Classification of Occupancy	Description
Date of Original Construction	1957
Date of Addition(s)	1963, 1974, 2007 Addition & Alterations / 2010 VOAG Renovation
Primary Occupancy	Education
Secondary Occupancy	A-1, A-2, A-3, A-4, F-1 (Incidental)
Mixed Use	No

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Fire Regulations	Description	Conforms (Y/N)
Stair Separation	1 Hour	Yes
Corridor Separation	None Required	Yes
High Hazard Occupancy	N/A	N/A
Doors		
Width	32" Minimum Clear Width	Yes
Swing Direction	In Direction of Egress unless serving < 50 Persons	Yes
Locks / Latches	Operable from direction of Egress	Yes
Exit Hardware	Panic Hardware at Exit Doors	Yes
Closers	Exits/Fire Doors	Yes
Stairs		
Classification	Existing	Yes
Width	67.5"	Yes
Riser	7"	Yes
Tread	11"	Yes
Guards	>30" Tall, Protected Openings	Yes, No at VOAG
Handrails	Extends 1'-0" Beyond Top and Bottom of Run	Yes, No at VOAG
Enclosure	1 Hour	Yes
Horizontal Exits	None Required	N/A
Ramps	1:12 Per AnSI A117.1	Yes, No at VOAG
Fire Escapes	N/A	N/A

NFPA Code Survey (continued...)

Means of Egress		
Occupant Load	First Floor - 6,266 Second Floor - 1,304	Yes
Factor	20 Classrooms, 7/15 Assembly	Yes
Area per Floor	First Floor - 216,979 sf Second Floor - 55,769 sf	Yes
Occupants per Floor	Unknown	N/A
Exit Unit Widths	-	Yes
Number of Exits	30+	Yes
Exit Location	-	Yes
Exits through Spaces	Art Classrooms, Technical Education Classrooms	Yes
Dead Ends/Common Travel	Dead End < 50' Common Path of Travel < 100'	Yes
Travel Exit	< 200'	Yes
Discharge	Directly to Grade in > 50% of cases	Yes
Illumination of Exits	-	Yes
Emergency Lighting	-	Yes
Exit Marking	-	Yes
Fire Protection Features	Description	Conforms (Y/N)
Construction & Compartmentalization		
Construction - Minimum	11(000)	Yes
Requirements		N/A
Compartmentalization	< 30,000 sf	Yes
Compartmentalization Flooring Openings Enclosed	< 30,000 sf 1 Hour	Yes Yes
Compartmentalization Flooring Openings Enclosed Floor Openings Unenclosed	< 30,000 sf 1 Hour N/A	Yes Yes N/A
Compartmentalization Flooring Openings Enclosed Floor Openings Unenclosed Concealed Spaces	< 30,000 sf 1 Hour N/A N/A	Yes Yes N/A N/A
Compartmentalization Flooring Openings Enclosed Floor Openings Unenclosed Concealed Spaces Smoke Protection	< 30,000 sf 1 Hour N/A N/A	Yes Yes N/A N/A
Compartmentalization Flooring Openings Enclosed Floor Openings Unenclosed Concealed Spaces Smoke Protection Smoke Barriers	< 30,000 sf 1 Hour N/A N/A Classroom & Corridor Separation (30 Min.)	Yes Yes N/A N/A Yes
Compartmentalization Flooring Openings Enclosed Floor Openings Unenclosed Concealed Spaces Smoke Protection Smoke Barriers Smoke Doors	< 30,000 sf 1 Hour N/A N/A Classroom & Corridor Separation (30 Min.) At Classrooms	Yes Yes N/A N/A Yes Yes
Compartmentalization Flooring Openings Enclosed Floor Openings Unenclosed Concealed Spaces Smoke Protection Smoke Barriers Smoke Doors Smoke Dampers	< 30,000 sf 1 Hour N/A N/A Classroom & Corridor Separation (30 Min.) At Classrooms Not Observed	Yes Yes N/A N/A Yes Yes N/A
Compartmentalization Flooring Openings Enclosed Floor Openings Unenclosed Concealed Spaces Smoke Protection Smoke Barriers Smoke Doors Smoke Dampers Penetrations Sealed	< 30,000 sf 1 Hour N/A N/A Classroom & Corridor Separation (30 Min.) At Classrooms Not Observed Not Observed	Yes Yes N/A N/A Yes Yes N/A N/A
Compartmentalization Flooring Openings Enclosed Floor Openings Unenclosed Concealed Spaces Smoke Protection Smoke Barriers Smoke Doors Smoke Dampers Penetrations Sealed Special Protection	< 30,000 sf 1 Hour N/A N/A Classroom & Corridor Separation (30 Min.) At Classrooms Not Observed Not Observed N/A	Yes Yes N/A N/A Yes Yes N/A N/A
Compartmentalization Flooring Openings Enclosed Floor Openings Unenclosed Concealed Spaces Smoke Protection Smoke Barriers Smoke Doors Smoke Dampers Penetrations Sealed Special Protection Fire Rated Enclosure	< 30,000 sf 1 Hour N/A N/A Classroom & Corridor Separation (30 Min.) At Classrooms Not Observed Not Observed N/A	Yes Yes N/A N/A Yes Yes N/A N/A
Compartmentalization Flooring Openings Enclosed Floor Openings Unenclosed Concealed Spaces Smoke Protection Smoke Barriers Smoke Doors Smoke Doors Smoke Dampers Penetrations Sealed Special Protection Fire Rated Enclosure Elevator Machine Room	< 30,000 sf 1 Hour N/A N/A Classroom & Corridor Separation (30 Min.) At Classrooms Not Observed Not Observed N/A 1 Hour	Yes Yes N/A N/A Yes Yes N/A N/A Yes Yes

NFPA Code Survey (continued...)

Corridors	None Required	Yes
Sprinklers - Entire Building	Yes	Yes
Selected Hazards	N/A	N/A
Other		
Interior Finish	-	Yes
Corridors & Stairwells	-	Yes
Non-Conforming Locations	N/A	N/A
Sprinkler Protection	Description	Conforms (Y/N)
Sprinkler Service	Wet and Dry sprinkler system multiple risers	Yes
Area Serviced	Whole Building	Yes
Pressure	105 PSI Static 55 PSI Residual	Yes
Alarm Valve Size	4″	Yes
Service Size	6" fire service and 500gpm diesel fire pump	Yes
Fire Department Connection	Free-Standing Siamese Connection	Yes
Sprinkler Spacing	Standard	Yes

Discharge from Exits	Conforms (Y/N)
50% required directly to exterior	Yes
Other through areas on level of discharge with protection	Yes
Building Service & Fire Protection Equipment	Conforms (Y/N)
Utilities	Yes
Smoke Control	N/A
Elevators, Dumbwaiters & Vertical Conveyors	Yes
Rubbish Chutes, Incinerators & Laundry Chutes	N/A
Detection, Alarm & Communication Systems	Fire Alarm
Automatic Sprinklers	Yes

Code Survey Recommendations

The code components of Rockville High School are considered mostly compliant with IBC and NFPA code requirements. Additional items, that pertain to life safety and ADA accessibility, are addressed under other sections of this report. Some issues are covered by more than one code. Estimates for required work are provided in the Opinion of Probable Costs section of this report.

The following represents areas of necessary improvements and / or required work to meet IBC regulations.

• Modify hardware for select existing casework that has inaccessible operators.

The following represents areas of necessary improvements and / or required work to meet NFPA regulations.

• At VOAG building, modify elements of access route to conform with code. Specifically, the access ramp for the main entrance.

Existing Conditions Evaluation:

The graph below represents the building's overall conformity with IBC and NFPA requirements. Compliance was rated on a scale of 1-4, with a 4 rating equating to full compliance. A rating of 2 or under indicates that the building requires moderate to substantial code compliance updates in order to protect the safety of the building's occupants.



Section 6 : ADA Compliance Survey

ADA Compliance Survey Introduction

This section contains an ADA compliance report, consisting of a list of conditions which fail to meet code requirements, and brief descriptions.

The ADA compliance survey for Rockville High School was completed after data gathering and fieldwork. The Americans with Disabilities Act is a far-reaching civil rights law comprised of four parts. Title I affects employment practices. Title II addresses government-owned buildings and facilities. Title III is similar to Title II except that it addresses privately owned properties. Title IV addresses federally-regulated telecommunication.

This report solely addresses ADA Title II, and the report may serve as a basis for Vernon Public Schools Barrier Reduction Plan. However, this report does not propose specific design solutions for each ADA violation.

A survey checklist was also prepared during the on-site data collection process. Each survey element contains detailed items that reference specific ADA - Title II requirements from the Federal Register. The survey checklist consists of the following elements:

Item	Section			
01	Site Access Route			
02	Accessible Parking			
03	Curb Ramps			
04	Entrances			
05	Accessible Route - Interior			
06	Ramps			
07	Stairs - Exterior			
08	Stairs - Interior			
09	Elevators			
10	Platform Lifts			
11	Doors			
12	Drinking Fountains			
13	Bathroom / Toilets			
14	Telephones			
15	Signage			
16	Storage			
17	Alarms			
18	Seating & Tables			
19	Libraries / Assembly Areas / Cafeteria			

ADA Survey Failures

To complete this report the survey team walked through the building to evaluate and record the ADA elements. During this process, the team assessed whether the building "Passed" or "Failed" accessibility requirements. An item may have occurred several times within the building; however, if the item failed in one location only, the element was recorded as a "Fail". For example, "Handrails" are an item in the ADA checklist under the element "Stairs". A building may have two or three stairs. Handrails on one stair may fail to meet ADA Guidelines, where the others may meet such guidelines. In this instance, the item "Handrails" would be deemed to have failed to meet ADA Guidelines.

Another critical purpose of the survey is to determine if items that fail are "Readily Achievable." Although the Americans with Disabilities Act places both an architectural and legal definition to the term, this report focuses only on the architectural issues. The category "Readily Achievable" applies to existing building alterations / renovations and does not apply to new construction. The term "Readily Achievable" may also be defined as technically feasible. For example, a specific item may not be "Readily Achievable" due to existing structural or site conditions.

Finally, the survey team reviewed each ADA - Title II "Failed" item and assessed the extent of failures.

The following report documents the ADA requirements that Rockville High School failed to meet. Plan and photograph references, notes and whether or not the item is readily achievable are noted.

Date Prepared: 8/22/2023

ADA Compliance Survey

Rockville High School

				[
Cost to Fix					
Notes		Exit near autobody lab	VOAG Ramp	Several Drinking fountains are located above 27" AFF and protrude greater than 4" into circulation spaces.	There are several wall mounted accessories that have operable components above 48" AFF.
Plan Ref #					
Photo Ref #		23	24		8,10
Pass/ Fail	u	ш	E	Ľ	ш
Readily Achievable	٨	>	Å	×	~
Compliance Requirement	307.1: Protruding objects on circulation paths shall comply with 307. EXCEPTIONS: 1. Within areas of sport activity, protruding objects on circulation paths shall not be required to comply with 307.2. Within play areas, protruding objects on circulation paths shall not be required to comply with 307 provided that ground level accessible routes provide vertical clearance in compliance with 1008.2. 307.2 Protrusion Limits: Objects with leading edges more than 27 inches and not more than 80 inches above the finish floor or ground shall protrude 4 inches maximum horizontally into the permitted to protrude 4% inches maximum.	Floor surfaces shall be stable, firm, and slip resistant and shall comply with 302. Changes in level in floor surfaces shall comply with Section 303.	The clear width of a ramp run shall be 36 inches (915mm) minimum. Handrails and handrail supports that are provided on the ramp run shall not project into the required clear width of the ramp run. 405.6 Rise: The rise for any ramp run shall be 30 inches (760mm) maximum.	Objects with leading edges more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the finish floor shall protrude 4 inches (100 mm) maximum horizontally into the circulation path. EXCEPTION: Handrails shall be permitted to protrude 4½ inches (115 mm) maximum.	Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the finish floor.
ltem	Protruding Objects	Floor Surfaces	Clear Width	Protruding Objects: Protrusion Limits	Forward Reach: Unobstructed
Element	Site Arrival Route	Site Access Route	Ramps	Access Route Interior	Access Route Interior
Code Reference	307	302.1	405.5	307.2	308.2.1
Priority	o	0			
Entry #	H	ი	25	39	41

ADA Compliance Survey 121

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Prepared by: Friar Architecture, Inc.

Rockville High School

ADA Compliance Survey

Date Prepared: 8/22/2023

Cost to Fix							
Notes	There are several wall mounted accessories that have operable components above 48" AFF.	There are several pieces of casework that are inoperable without tight grasping, and twisting of the wrist.	Large ramp connection separate wings of school has a doorway at the top of the ramp, landing does not meet width required.				Ramp Leading to VOAG Classrooms does not comply with handrail requirements.
Plan Ref #							
' Photo Ref #	8,13	N	24	24	24	24	24
Pass/	L. L.	ц ц	ш	ш	Ľ	ш	ш
Readily Achievable	~		×		٨	>	>
Compliance Requirement	Where a high forward reach is over an obstruction, the clear floor space complying with Section 305 shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 inches (1220 mm) maximum above the floor where the reach depth is 20 inches (510 mm) maximum. Where the reach depth exceeds 20 inches (510 mm), the high forward reach shall be 44 inches (1120 mm) maximum above the floor and the reach depth shall be 25 inches (635 mm) maximum.	Operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum. EXCEPTION: Gas pump nozzles shall not be required to provide operable parts that have an activating force of 5 pounds (22.2 N) maximum.	Ramps shall have landings at the top and the bottom of each ramp run. Landings shall comply with 405.7.	Clear width of landings shall be at least as wide as the widest ramp run leading to the landing.	landings shall have a clear length of 60 inches (1525mm) minimum.	Where doorways are located adjacent to a ramp landing, maneuvering clearances required by 404.2.3 and 404.3.2 shall be permitted to overlap the required landing area. Where a door that is subject to locking is located adjacent to a ramp landing, the landing shall be sized to provide a turning space complying with Section 304.3	Ramp runs with a rise greater than 6 inches (150mm) shall have handrails complying with 505.
ltem	Forward Reach: Obstructed High Reach	Operable Parts: Operation	Landings	Landings: Width	Landings: Length	Landings: Doorways	Handrails
Element	Access Route Interior	Access Route Interior	Ramps	Ramps	Ramps	Ramps	Ramps
Code Reference	308.2.2	309.4	405.7	405.7.2	405.7.3	405.7.5	405.8
Priority							
ntry #	42	43	51	53	54	56	57

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Date Prepared: 8/22/2023

ADA Compliance Survey

Rockville High School

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Notes						
Plan Ref #						
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Readily Achievable	~	>	>	×		٢
Compliance Requirement	The floor surface of the ramp run or ramp landing shall extend 12 inches (305mm) minimum beyond the inside face of a railing complying with 505.	Handrails shall be provided on both sides of stairs and ramps. EXCEPTION: in assembly seating areas, handrails shall not be required on both sides of aisle stairs, provided with a handrail either at the side or within the aisle.	Top of gripping surfaces of handrails shall be 34 inches (865mm) minimum and 38 inches (965mm) maximum vertically above walking surfaces, stair nosings, and ramp surfaces. Handrails shall be at a consistent height above walking surfaces, stair nosings, and ramp surfaces.	Clearance between handrail gripping surface and adjacent surfaces shall be 1½ inches (38mm) minimum.	Gripping surfaces shall be continuous, without interruption by newel posts, other construction elements, or obstructions. EXCEPTIONS: 1. Handrail brackets or balusters attached to the bottom surface of the handrail shall not be considered obstructions, provided the brackets or balusters comply with the following criteria: a. Not more than 20% of the handrail length is obstructed. b. Horizontal projections beyond the sides of the handrail perimeter dimension above 4 inches that for each 1/2 inches (38mm) minimum below the bottom of the handrail, and provided that for each 1/2 inches (38mm) of additional handrail perimeter dimension above 4 inches (100mm), the vertical clearance dimension of 1 1/2 inch (38mm) can be reduced by 1/8 inch (3.2mm) are provided along walking surfaces with slopes not steeper than 1:20, the bottom of handrail gripping surfaces shall be permitted to be obstructed along their entire length where they are intergal to crash rails or bumper guards.	
ltem	Extended Floor Surfaces	Handrails: Where Required	Handrails: Height	Handrails: Clearance	Handrails: Gripping Surface	
Element	Ramps	Ramps	Ramps	Ramps	Ramps	
Code Reference	405.9.1	505.2	505.4	505.5	505.6	
ntry Priority #	20	62	64	65	99	

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Rockville High School

Date Prepared: 8/22/2023

Cost	o Fix						
Notes		Ramp at VOAG Classrooms has handrail mounted on rectangular concrete wall that extends up 24 .					
Plan	Ref #						
Photo Ref	#	24	24	24	24	24	24
Pass/	Fail	ш	Ľ	ш	E	ш	F
Readily	Achievable	٨	*	~	Å	×	٨
Compliance Requirement		Handrails, and any wall or other surfaces adjacent to them, shall be free of sharp or abrasive elements. Edges shall be rounded.	Handrails shall extend beyond and in the same direction of stair flights and ramp runs in accordance with 505.10. EXCEPTIONS: 1. Continuous handrails at the inside turn of stairs and ramps. 2. Handrail extensions are not required in aisles serving seating where the handrails are discontinuous to provide access to seating and to permit crossovers within aisles. 3. In alterations, full extensions of handrails shall not be required where such extensions would be hazardous due to plan configuration.	Ramp handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or floor, or shall be continuous to the handrail of an adjacent ramp run.	Handrails shall be provided on both sides of stairs and ramps. EXCEPTION: In assembly seating areas, handrails shall not be required on both sides of aisle stairs, provided with a handrail either at the side or within the aisle.	Top of gripping surfaces of handrails shall be 34 inches minimum and 38 inches maximum vertically above walking surfaces, stair nosings, and ramp surfaces. Handrails shall be at a consistent height above walking surfaces, stair nosings, and ramp surfaces.	Clearance between handrail gripping surfaces and adjacent surfaces shall be 1% inches minimum.
ltem		Handrails: Surfaces	Handrails: Handrail Extensions	Handrails: Top and Bottom Extension at Ramps	Handrails: Where Required	Handrails: Height	Handrails: Clearance
Flement		Ramps	Ramps	Ramps	Handrails	Handrails	Handrails
Code Reference		505.8	505.10	505.10.1	505.2	505.4	505.5
Priority							
Entry	#	69	71	72	77	62	80

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ADA Compliance Survey

Rockville High School

Cost to Fix			
Notes			
Plan Ref #			
Photo Ref #	24	24	24
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Readily Achievable	×	×	~
Compliance Requirement	Gripping surfaces shall be continuous, without nterruption by newel posts, other construction elements, or obstructions. EXCEPTIONS: 1. Handrail orackets or balusters attached to the botom surface of the handrail shall not be considered obstructions, provided the brackets or balusters comply with the following criteria: a. Not more than 20% of the handrail length is obstructed, b. Horizontal projections beyond the sides of the andrail occur 1 1/2 inches minimum below the ottom of the handrail y and provided that for each tr/2 inch of additional handrail perimeter dimension above 4 inches, the vertical clearance dimension of 1.1/2 inch can be reduced by 1/8 inch, and c. Edges shall be rounded 2. Where handrail gripping surfaces shall be permitted to be obstructed along the entire ength where they are integral to crash rails or oumper guards.	Handrail shall extend beyond and in the same direction of stair flights and ramp runs in accordance with 505.10. EXCEPTIONS: 1. Continuous handrails at the inside turn of stairs and amps.2. Handrail extensions are not required in aisles serving seating where the handrails are discontinuous to provide access to seating and to permit crossovers within aisles. 3. In alterations, full extensions of handrails shall not be required where such extensions would be hazardous due to plan configuration.	At the top of a stair flight, Handrails shall extend norizontally above the landing for 12 inches (305 mm) minimum beginning directly above the landing nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the nandrail of an adjacent stair flight.
ltem	Handrails: Gripping Surface	Handrails: Extensions	Handrails: Top Extension at Stairs
Element	Handrails	Handrails	Handrails
Code Reference	505.6	505.10	505.10.2
Priority			
Entry #	8	86	87

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Rockville High School | June 2023

ate Prepar	ed: 8/22/2023			ADA Compliance Survey					Rockville High	l School
Entry Prio #	rity Code Referenc	e Element	ltem	Compliance Requirement	Readily Achievable	Pass/ F Fail	2hoto Ref P # R	'lan ef #	Notes	Cost to Fix
88	505.10.3	Handrails	Handrails: Bottom Extension at Stairs	At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance equal to one tread depth beyond the bottom tread nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.	×		24			
117	404.1	Doors	General	Doors, doorways, and gates that are part of an accessible route shall comply with 404. EXCEPTION: Doors, doorways, and gates designed to be operated only by security personnel shall not be required to comply with 404.2.6, 404.2.7, and 404.2.8.	×		.1,19,21			
118	404.2.1	Doors	Double-Leaf Doors and Gates	At least one of the active leaves of doorways with two leaves shall comply with 404,2.2 and 404.2.3.	×					
120	404.2.3	Doors	Maneuvering Clearances	Minimum maneuvering clearances at doors shall comply with 404.2.3 and shall include the full clear opening width of the doorway. Required door maneuvering clearance shall not include knee and toe clearance.			.1,19,21	- 4 0 t	Auttiple door ways do not have proper ush/pull clearances on the latch sides of front approach doors. Mainly older oilet rooms and older classrooms.	
123	404.2.6	Doors	Door Hardware	Handles, pulls, latches, locks, and other operable parts on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, pinching, or twisting of the wrist to operate. Operable parts of such hardware shall be 34 inches minimum and 48 inches maximum above the floor. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides. EXCEPTION: Locks used only for security purposes and not used for normal operation shall not be required to comply with Section 404.2.6.					boor hardware for casework and torage cabinets throughout lasstooms require tight pinching or with less than 1-1/2" of clearance or nob based hardware should be eplaced.	
128	602.1	Drinking Fountains	General	Accessible drinking fountains shall comply with 307 and 602	>					

Date Prepared: 8/22/2023

ADA Compliance Survey

Cost to Fix Notes Plan Ref # noto Rei SSE Fail Achievable standing persons. 2. Drinking fountains primarily for accessible compartments shall comply with Section complying with Section 306 shall be provided. The compartments primarily for children's use shall be hardware, shall comply with 404, except that if the clear floor space shall be centered on the drinking more than one plumbing fixture shall comply with children's use shall be permitted where the spout Section 603. Wheelchair accessible compartments positioned for a forward approach to the drinking Accessible water closets and toilet compartments shall comply with 604. Compartments containing door, the clearance between the door side of the provided and the clear floor space is centered on approach is to the latch side of the compartment fountain. EXCEPTIONS: 1. Drinking fountains for parallel approach complying with Section 305 is Wheelchair accessible toilet compartments shall ountain, shall be provided. Knee and toe space outlet is 30 inches maximum above the floor, a permitted to comply with 604.11 as applicable. A clear floor space complying with Section 305, compartment and any obstruction shall be 42 604.10. EXCEPTION: Water closets and toilet shall comply with Section 604.9. Ambulatory Toilet compartment doors, including door Compliance Requi the drinking fountain. comply with 604.9. Clear Floor Space Compartments: Ambulatory Accessible General General Doors Item Compartments Compartments Water Closets Drinking Fountains Toilet Toilet 602.2, 305, 306 604.10.3 604.9.1 604.1 129 132 142 ntrv 137

Ambulatory stalls were renovated into doors for these ambulatory stalls do not have clear space required, and interfere with the circulation path.

door pull complying with 404.2.6 shall be placed on both sides of the door near the latch. Compartment

doors shall not swing into the required minimum

irea of the compartment

nches minimum. The door shall be self-closing. A

several existing toilet rooms. The

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Date Prepared: 8/22/2023

Cost to Fix			
Notes			n several marked accessible toilet ooms there are mirror located above
Plan Ref #			
hoto Ref #	12	4	
Pass/ F Fail			
Readily Achievable			
Compliance Requirement	Grab bars shall comply with 609. Sidewall grab bar complying with 604.5.1 located on the wall closest to the water closet and a rear wall grab bar complying with Section 604.5.2 shall be provided.	Reach ranges shall comply with 308.	Where mirrors are located above lavatories, a mirror shall be located over the accessible lavatory and shall be mounted with the bottom edge of the reflecting surface 40 inches maximum above the floor. Where mirrors are located above counters that do not contain lavatories, the mirror shall be mounted with the bottom edga of the reflecting surface 40 inches maximum above the floor.
ltem	Ambulatory Accessible Compartments: Grab Bars	Reach Ranges	Mirrors
Element	Toilet Compartments	Mirrors / Accessories	Mirrors / Accessories
Code Reference	604.9.6	308	603.3
Priority			
ntry #	143	148	149

Date Prepared: 8/22/2023

ADA Compliance Survey

Rockville High School

Cost to Fix				
Notes	Several marked accessible toilet rooms do not have required knee or toe clearance.			
Plan Ref #				
/ Photo Ref #	20	10		
Pass, le Fail	<u> </u>	u.	ш.	Ľ
Readily Achievabl		~	~	٨
Compliance Requirement	A clear floor space complying with 305.3, positioned for a forward approach, shall be provided. Knee and toe cleanance complying with 305 shall be provided. The dip or the overflow shall not be considered in determining knee and toe clearances. EXCEPTIONS: 1. A parallel approach complying with 305 and centered on the sink, shall be permitted to a kitchen sink in a space where a cook top or conventional range is not provided. 2. The requirement for knee and toe clearance shall not apply to a lavatory in a toilet or bathing facility for a single occupant, accessed only through a private office and not for common use or public use. 3 A knee clearance of 24 inches minimum above the floor shall be permitted at lavatories and sinks used primarily by children 6 through 12 years where the rim or counter surface is 31 inches maximum above the floor. 4. A parallel approach complying with 305 and centered on the sink, shall be permitted at lavatories and sinks used primarily by children 5 years and younger. 5. The requirement for the knee and toe clearance shall not apply to more that one bowl of a multibowl sink. 6. A parallel approach complying with 5 ction 305 and centered on the sink, shall be permitted at wet bars.	Water supply and drain pipes under lavatories and sinks shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under lavatories and sinks	A clear floor or ground space complying with 305 shall be provided. The clear floor or ground space shall not be obstructed by bases, enclosures or seats.	Where a parallel approach is provided, the distance from the edge of the telephone enclosure to the face of the telephone shall be 10 inches maximum.
ltem	Clear Floor Space	Exposed Pipes and Surfaces	Clear Floor or Ground Space	Parallel Approach
Element	Lavatories / Sinks	Lavatories / Sinks	Telephones	Telephones
Code Reference	606.2, 305, 306	606.6	704.2.1, 305.3	704.2.1.1
Priority				
Entry #	151	154	181	182

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ADA Compliance Survey

Rockville High School

Priorit	ty Code Reference	Element	ltem	Compliance Requirement	Readily	Pass/	Photo Ref	Plan	Notes	Cost
					Achievable	Fail	#	Ref #		to Fix
	704.2.1.2	Telephones	Forward Approach	Where a forward approach is provided, the distance from the front edge of a counter within the enclosure to the face of the telephone shall be 20 inches (510 mm) maximum.	>	ш				
	704.2.2	Telephones	Wheelchair Accessible Telephones: Operable Parts	Operable parts shall comply with Section 309. Telephones shall have push-button controls where such service is available.	~	ш				
	703.1	Signage	General	Accessible signs shall comply with Section 703. Tactile signs shall contain both raised characters and braille. Where signs with both visual and raised characters are required, either one sign with both viaual and raised characters, or two separate signs, one with visual, and one with raised characters, shall be provided.	×	L. L	15			
	703.1.1	Signage	Designations	Interior and exterior signs identifying permanent rooms and spaces shall comply with sections 703.1, 703.2, and 703.3. EXCEPTION: Exterior signs that are not located at the door to the space they serve shall not be required to comply with 703.3.	×	н	15			
	703.4.5	Signage	Installation Height and Location	Braille shall be 48 inches and 60 inches maximum above the floor, measured from the baseline of the braille cell. EXCEPTION: Elevator car controls shall not be required to comply with 703.4.5.	>	Ľ	5			
	308	Storage	Reach Ranges	Reach ranges shall comply with Section 308.		Pass				
	309	Storage	Operable Parts	Operable parts required to be accessible shall comply with Section 309.		Pass				
	802.4	Assembly Areas	Wheechair Spaces: Depth	Where a wheelchair space can be entered from the front or rear, the wheelchair space shall be 48 inches minimum in depth. Where a wheelchair space can only be entered from the side, the						
				wheelchair space shall be buillches minimum in depth.	~	Ľ	22			
	802.5.1	Assembly Areas	Overlap	A wheelchair space shall not overlap the required width of an aisle.	~	ц	22			
	802.7	Assembly Areas	Companion Seats	A companion seat, complying with Section 802.7, shall be provided beside each whellchair space.	~	Ц	22		Companion seats must sit "shoulder to shoulder" with accessible seat.	

ADA Survey Photographs



1. Location:

Classroom/Offices

Description:

Light switch / Hand sanitizer does not have 18" x 18" clear space to access.

2. Location:

Classroom

Description:

Storage casework has improper door handle hardware. Typical at multiple classrooms.

3. Location:

Classroom

Description:

Pencil sharpener located above 48" maximum. No other pencil sharpener in room.





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ADA Survey Photographs



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CLASSROOM

4. Location:

Corridor

Description:

Signage does not indicate this is an accessible restroom, if restroom is not accessible there must be signage indicating direction of closest accessible restroom. Typical at non-accessible restrooms.

5. Location:

Corridor

Description:

Critical information on signage is located above the maximum 60" above floor level. Typical at multiple entries to rooms.

6. Location:

Corridor

Description:

Drinking fountain does not provide knee and toe clearance for a front approach.



ADA Survey Photographs



62 63

61

48

57, 58



Corridor

Description:

Drinking fountain leading edge protrudes greater than 4" into circulation space.

8. Location:

Toilet Room

Description:

Soap Dispenser operable components located above 48" maximum height.

9. Location:

Art Classrooms

Description:

Typical furniture systems lowest edge is 24", below the required 27" for accessible pull under requirements. No alternate work tables provided.



ADA Survey Photographs



10. Location:

Toilet Room

Description:

Marked accessible restroom has mirror located above minimum 40" base height.



11. Location:

Toilet Room

Description:

Marked accessible restroom does not satisfy the horizontal clear space requirement of 12" for a front approach push door with closer.

12. Location:

Toilet Room

Description:

Modified toilet stall interferes with clearance of access route when opened.



ADA Survey Photographs



13. Location:

Classroom

Description:

Sink used for curriculum purposes does not meet accessibility requirements.



14. Location:

Library

Description:

There must be a 30" x 48" clear space provided at the expected checkout counter. The expected checkout counter space must measure at least 36" wide, with the clear space centered on this length.

15. Location:

Corridor

Description:

Locker room requires proper signage located on the latch side of the door in corridor.

ADA Survey Photographs



16. Location:

Technical Education Classroom

Description:

Typical classroom seating does not allow for minimum 17" pull under distance.

Girls Locker Room

Description:

17. Location:

Restroom is unmarked, improper signage located at the shows stalls calls them an accessible restroom.

18. Location:

Boys Locker Room

Description:

Mirror is mounted above the minimum 40" height, sinks do not provide proper 17" of pull under distance without hitting plumbing.



ADA Survey Photographs



19. Location:

2nd Floor Boys Toilet Room

Description:

Proper push distance on doors with automatic closers is not achieved.

20. Location:

2nd Floor Boys Toilet Room

Description:

Mirror and accessories are mounted above maximum accessible heights. Plumbing for sinks is uninsulated and does not allow for 17" minimum pull under distance.

21. Location:

2nd Floor Corridor

Description:

Improper pull distance provided for classroom doors with automatic closers. Typical at most classroom doors on this level.

ADA Survey Photograph Key Plans

The following plan shows the actual building plan as verified during field surveys. Photographs from the previous pages are keyed into the building plans with numbered arrows at the approximate photograph site and direction from which the photographs were taken.

Rockville High School | June 2023









ADA Survey Recommendations

Rockville High School was also evaluated based on the Americans with Disabilities Act (ADA), Title II, for public building accessibility. ADA is an act of Congress mandating certain standards for accessibility that are enforceable through the civil courts. Rockville High School fails to meet some of these requirements, evident in the "ADA Compliance Survey".

The building was evaluated based on a review of existing documentation, field verification of existing space usage and discussions with building staff to confirm existing space allocation and usage.

The work recommended to address ADA compliance issues includes providing:

- Modify existing light switches and existing casework to ensure there is an 18" x 18" clear space centered on the light switch.
- Modify or replace any existing door hardware that does not meet accessibility requirements. Mainly related to knob type door handles.
- At any toilet room or entry that is not accessible, provide signage indicating the direction of the closest accessible option.
- Modify existing signage so that the bottom of the top most line of text is below 60" min.
- Provide wing walls for all drinking fountains that are not recessed and that protrude further than 4" into the circulation path.
- Provide furniture in art and technical education classrooms that conforms to both height and pull under requirements.
- Modify mirror mounting heights in all accessible toilet rooms to the minimum 40" requirement.
- Provide signage in corridors for all spaces, specifically there are sets of locker rooms at the gym that do not have their use indicated with accessible signage.
- Modify doors locations at existing classrooms and restrooms to provide adequate push/pull offsets.
- Provide curb ramp at exit marked as accessible at the rear parking lot, or remove reference to this being an accessible exit.
- Replace existing bituminous ramp at VOAG Classrooms entrance. Modify width and handrails to comply with accessibility requirements.
- Provide clearly indicated accessible lockers throughout the school.

Existing Conditions Evaluation:

The graph below represents the building's overall conformity with ADA requirements. Compliance was rated on a scale of 1-4, with a 4 rating equating to full compliance. A rating of 2 or under indicates that the building requires moderate to substantial code compliance updates in order to protect the safety of the building's occupants.


Section 7 : Site Survey

Existing Site Conditions

This section provides a listing of existing conditions followed by summary descriptions for the site components. A site plan is provided along with photographs of existing conditions that identify areas requiring attention. Existing site utilities are also identified. Recommendations for site improvements are discussed to provide Vernon Public Schools with an overview of the required work.



Map Data: Google

Plan Drawings	2007 Addition & Alterations / 2010 VOAG Renovation
Photos	2023 Survey
Date Built	1957
Site / Civil & Landscape	2007 Addition & Alterations: Ferrero, Hixon Associates / Diversified
Architect	Technology Consultants
Date(s) Additions	1963, 1974, 2007 Addition & Alterations / 2010 VOAG Renovation
Zone	R-22
Gross Area (site)	63.72 Acres

Rockville High School

The following is a data summary of the site conditions that were observed and noted during the survey. This information was gathered by a field survey, reviewing the existing drawings and discussions with various building personnel.



148 Site Survey

Site Conditions

The following codes are used throughout this report to identify the condition of various elements.

Condition Codes	
Excellent	16-20 years useful life
Good	Good at present (11-15 years)
Fair	Minor / cosmetic repairs needed to maintain condition (6-10 years)
Poor	Immediate repairs needed to prevent deterioration (0-5 years)

	Material	Condition
Entry Drive		
Drimary Surface	Rituminous	Good
	Asphalt	Good
Curbs	Asphat	Good
Striping	Yes	Good
Signage	Yes	Good
Walkways		
Primary Surface	Bituminous, Concrete	Fair - Good
Curbs	Bituminous, Concrete	Fair - Good
Signage	Yes	Good
Handicap Access	Yes	Fair - Good
Parking		
Total Spaces	500	Good
Designated Handicap Spaces	30	Good
Primary Surface	Bituminous	Good
Curbs	Bituminous, Concrete	Fair - Good
Striping	Yes	Fair - Good
Signage	Yes	Good
Fields/Play Areas		
Field(s)	Grass Rubber	Good Excellent
Play Area(s)	N/A	N/A
Play Scape(s)	N/A	N/A
Special features	Animal enclosures	Good
Planting/Features		
Plant Beds	Yes , Various	Good
Trees/Shrubs	Yes . Various	Good

Service Drive/ Loading Area		
Primary Surface	Bituminous	Good
Curbs	Bituminous	Good
Striping	Some	Fair
Signage	Minimal	

The following is a summary of the site survey of this building.

Item	Summary		
Site Lighting	There are pole lights at the parking areas and lighting around the play fields. See MEP reports for additional utility information.		
Driveways/Walkways	The walkways are in fair to good condition. The most damaged walkways are in the courtyard area between the Gymnasium and Auditorium. There is a stone staircase leading to baseball fields on the South side of the site.		
Parking	Parking is spread throughout the site. Handicap spaces are available near the main entrance and at the north end of the site near play fields. At the time of the survey cars were parked between the VOAG building and what is assumed to be the Service area but no stripping was visible to designate these parking spaces. In the pave courtyard area adjacent to the Cafeterias there was striping for what is assumed bus parking - 8 total spaces.		
Topography	The site slopes up from the road to the main entrance of the building and stays mostly flat directly around the building. On the east side of the site the grade slopes up toward the play fields.		
Drainage	Drainage is spread throughout the site. Man holes in the parking show signs of possible ponding. The drains within the grassy and mulched areas need to be further evaluated for effectiveness.		
Field/Play Areas	There are several soccer and baseball fields. Additional there are several tennis court surrounded by a metal fence. The football field appears to be very new and is in excellent condition. There are two stands of bleachers directly associated with the football field. There is also a scoreboard and rubberized track around the football field. A batting cage is adjacent to the tennis courts. The vegetation is a little overgrown in this area. The tennis courts flooring is cracking and the colors are fading.		
Plantings	There are various planting beds and trees spread throughout the site.		
Service Area	Service areas are not indicated by signage but the areas assumed to be service are paved.		
Special Features	The VOAG building has various barns and animal enclosures.		

150 Site Survey

Site Survey Photographs



1. Location:

Entry Drive

Description:

Crosswalk painting is fading. No additional directional signage beyond crosswalk, stop sign and stop line.



2. Location:

Parking Entrance Near Main Entry

Description:

Parking area appears to be a more recent addition.

3. Location:

Parking Near Main Entry

Description:

Parking lot has been patched over time. Handicap parking spaces are designated with signage and stripping.



Site Survey Photographs



4. Location:

Parking Near Main Entry

Description:

Signs of pooling visible around drainage.



5. Location:

Walkway Near VOAG Building

Description:

Yellow paint indicating fire lane is faded.

6. Location:

North Parking Lot

Description:

Damaged concrete curb

152 Site Survey

Site Survey Photographs



7. Location: North Parking Lot Description: Faded markings

8. Location: North Parking Lot

Description:

Tactile warning pad heavily worn

9. Location:

Adjacent to North Fields

Description:

Deterioration of wood siding and frame clearly visible at storage shed.



Site Survey Photographs





Shed Adjacent to Football Field

Description:

Deterioration of wood siding and frame clearly visible at storage shed.

11. Location:

Adjacent to Football Field

Description:

Ramped pavement adjacent leading from football fields appears to be very steep.



12. Location:

Service Area

Description:

Possible Service Area - no signage and no parking indications.

154 Site Survey

Site Survey Photographs



13. Location:

Paved Area at East of Site

Description:

Cracking of bituminous and around drainage



14. Location: East Entry **Description:**

Tactile warning pad heavily worn

15. Location:

Walkway to Tennis Court

Description:

Patching and cracks in concrete walkway.

Site Survey Photographs



16. Location:

Tennis Court

Description:

Cracked concrete around pole of fence



17. Location:

Tennis Court

Description:

Courts are cracked and colors are worn and fading.

18. Location:

South Drive Leading Toward Main Entry

Description:

Water pooling around the drainage. Bent pole of newspaper box.





156 Site Survey

Site Survey Photographs



19. Location:

South Wooden Structure

Description:

Paint faded but in fairly good condition.



20. Location:

South Courtyard Adjacent to Gymnasium

Description:

Bituminous walkway deteriorating due to age and water flow

21. Location:

South Drive Walkway

Description:

Cracks visible and weeds growing in cracks. Sloped area but no indication of accessibility.



Site Photograph Key Plan

The following plan shows the actual building plan as verified during field surveys. Photographs from the previous pages are keyed into the building plans with numbered arrows at the approximate photograph site and direction from which the photographs were taken.

FRIAR | VERNON





Site Recommendations

The site components of Rockville High School are in fair to good condition.

The following represents areas of necessary site improvements and / or required work.

- Repaint fire lane striping for clear designation.
- Provide signage for deliveries and services area(s).
- Provide striping for designated parking areas near service area(s)
- Replace worn tactile warning pads
- Wood sheds will need to be resided in the future.
- Replace exterior tennis court with all new flooring and equipment.
- Replaced walkways near Gymnasium
- See ADA report for areas of accessibility related concerns

Existing Conditions Evaluation:

The elements reviewed under this assessment were ranked on a scale of 1-4, with a 4 rating equating to excellent conditions. Components that received a ranking of 3 are considered to be in good condition, while rankings of 2 and 1 are considered to be in fair and poor condition, respectively. The following chart graphically presents the results and their expected life spans.



complete utility prioritization.

Section 8 : Opinion of Probable Costs

Opinion of Probable Costs

This section provides an estimate of probable costs for the work required to bring the building into compliance with applicable codes and meet safety requirements. Non-code related items are also included to identify the costs associated with meeting suitable architectural, structural and site standards. The estimates for this work are compared to the cost of replacing the existing structure.

The following opinion of probable costs was developed utilizing data obtained by conducting a survey of the existing building as well as knowledge of upgrades required at similar facilities and industry standards. The estimate was generated on the basis of a 20-year life expectancy for all building elements. The need for the building to be provided with the same features and upgrades as a typical building was taken into account. This estimate can be used as a tool to help facilitate prudent fiscal decisions relating to future projects at Rockville High School.

The estimate of work required at Rockville High School is based on meeting current applicable code and safety requirements. Non-code related items necessary to meet suitable architectural standards for occupancy are also included. Both unit and square-footage prices were utilized to prepare the estimate, based on Means Building Construction Cost Data and recent bid data. The itemized ADA Compliance Survey Information estimates were used as a basis in determining the costs related to ADA compliance. Items were reviewed for duplicity.

The estimate includes the following modifications:

- XXXX

Section 9 : Appendix

This section contains miscellaneous items that support information provided within this report and is included for reference.

This appendix includes the following items:

- Roof Survey Report Garland
- Infrared Roof Moisture Survey
- AHERA Six Month Periodic Surveillance



Facility Summary

Client: Vernon Public School District Facility: Rockville High School



Facility Data	
Address 1	70 Loveland Hill Road
City	Vernon
State	Connecticut
ZIP	06066
Type of Facility	School
Square Footage	215,673
Contact Person	Mr. Mark Rizzo

Asset Information			
Name	Date Installed	Square Footage	Roof Access
Low Slope BUR Section's	Unknown	85,145	Internal Roof Hatch
SinglePly Low Slope Sections	Unknown	130,000	Internal Roof Hatch

Facility Summary



Construction Details

Client: Vernon Public School District Facility: Rockville High School Roof Section: Low Slope BUR Section's



Information			
Year Installed	Unknown	Square Footage	85,145
Slope Dimension	1/4:12"	Eave Height	20
Roof Access	Internal Roof Hatch	System Type	Gravel Surface BUR

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Photo Report

Client: Vernon Public School District Facility: Rockville High School Roof Section: Low Slope BUR Section's

Report Date: 03/31/2023 Title: Visual Inspection & Core







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Construction Details

Client: Vernon Public School District Facility: Rockville High School Roof Section: SinglePly Low Slope Sections



Information			
Year Installed	Unknown	Square Footage	130,000
Slope Dimension	1/4:12"	Eave Height	15
Roof Access	Internal Roof Hatch	System Type	Single Ply



Photo Report

Client: Vernon Public School District Facility: Rockville High School Roof Section: SinglePly Low Slope Sections

Report Date: 03/31/2023

Title: Visual Inspection









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PRO INFRARED 1	SCAN [®] TECHNOLOGIES					
INFRARED ROOF ROCKVILLE	MOISTURE SURVEY CHIGH SCHOOL on, CT					
	Prepared for: Mr. Mark Rizzo Supervisor of School Facilities Vernon Public Schools Date of Survey: July 31-August 1, 2023					
109R Main St. Suite 9 • P.O. I (978) 388-5155 • Fma	BOX 513 • AMESBURY, MA 01913					

CONTENTS

Introduction

Purpose & Scope of Work

Equipment/Procedure

Environment

Summary of Results

Roof Diagrams with Infrared Images

I. Introduction

Non-Invasive Roof Moisture Surveys

Because of the many potential problems associated with entrapped moisture, good roofing practice requires that wet roof materials be removed and replaced with new dry materials. Periodic roof moisture surveys are a good way to detect moisture damage in the roof components and to find small problems that can be repaired before they involve large areas of the roof, potentially adding years to the serviceable life of the roof system.

Two *non-invasive* procedures are available for detecting areas of moisture damage in almost any type of flat roof. These procedures utilize infrared thermal imaging cameras and nuclear moisture/density gauges to detect moisture beneath the surface of the roof, particularly in the insulation layer or roofing board beneath the membrane. Used separately or together, infrared and nuclear surveys are fast and cost-effective means of developing a detailed and accurate moisture profile of the roof.

Entrapped moisture may be detected by analyzing roof surface temperature patterns with an infrared camera at night. During the day, the roof absorbs heat energy from sunlight, passing a portion of this energy into the insulation beneath the membrane. As the sun sets and the roof begins to cool, dry insulation, which consists mostly of air, cools relatively quickly while wet insulation stays warm later into the evening. Heat stored by the wet insulation is conducted to the roof's surface, creating warm areas that can be detected with an infrared camera.

Not all warm areas on the roof are caused by moisture. Heat discharged by mechanical equipment, variations in interior temperature and differential exposure to sunlight may cause temperature differences unrelated to moisture. As part of a properly conducted moisture survey, a nuclear moisture/density gauge is used to conduct further testing in such areas. The nuclear gauge operates by emitting a signal from a low-level radioactive source that reacts to the presence of moisture without piercing the roof. As the nuclear gauge does not rely on temperature variations to detect moisture, it is also used to cross check results obtained with the infrared camera, thus limiting the number of invasive test cuts required to confirm our results and reducing the likelihood of false positives. *Nuclear gauge testing is also the only viable method of moisture testing stone ballasted membrane roofs.*

In the final stage of the roof moisture survey, confirmed wet areas are outlined on the roof with marking paint, measured, photographed and plotted on a computer-generated diagram of the roof. The information presented in this report is intended to help establish an appropriate roofing application, and may serve as the basis for bid comparison for any needed moisture related replacement work.

II. Purpose and Scope of Work:

In response to a request by the Vernon Public Schools Facilities Department and the Garland Company, Proscan technicians conducted an infrared roof moisture survey at Rockville High School, located at 70 Loveland Hill Road in Vernon, CT. The purpose of the survey was to detect and document the locations and extent of moisture damage to the roof's components beneath the membrane using non-invasive test methods.

Moisture entrapped within the roofing materials may lead to one or more of the following problems:

- Structural degradation of the roof and other building components
- Increased weight load to the roof structure
- Increased energy losses
- Mold and insect infestation
- Interior damage due to roof leaks
- Reduced serviceable life of the roof

Wet roof materials identified by our survey should therefore be removed and replaced with new dry materials in conjunction with roof maintenance, repair or replacement.

Our survey was conducted during evening hours on July 31st and August 1st, 2023, and included all flat or low-slope membrane roof areas on the main building and the ASTE facility. Post-inspection, follow-up and mapping took place during daylight hours on August 1st. Total area scanned was approximately 214,500 square feet of built-up and single-ply membrane roofing in 28 separate sections on the main building, and approximately 2,900 square feet in one roof section on the ASTE building.

III. Equipment & Procedure

Equipment used for the survey consisted of a FLIR Model PM360 High Resolution Thermal Imaging Camera operating in the short-wave spectrum (best for roof testing), sensitive to a temperature differential of 0.1° F, and a Troxler Model 3216 Nuclear Moisture/Density Gauge. The infrared camera was used to scan all roof areas to detect thermal anomalies potentially indicating the presence of sub-surface moisture. The nuclear gauge was used to cross-check the results obtained with the infrared camera, and to test areas of the roof where conditions such as those described in the *Introduction* limited the use of the infrared camera.

Where either the nuclear gauge or infrared camera indicated the presence of moisture, the location was marked on the roof, measured, photographed and plotted on a roof diagram. All areas of the roof were scanned at least twice.

To the extent possible, our scanning and reporting procedures are conducted in accordance with ASTM C1153-10-R2015 (*Standard Practice for Location of Wet Insulation in Roofing Systems Using Infrared Imaging*).

IV. Environment:

The following information is provided in compliance with the *Standard* referenced above.

Weather conditions for the infrared scan were favorable on both dates, with daytime high temperature at 79° F on 7/31 and 81° F on 8/1, with mostly clear sky on both days. Nighttime low temperature during the time of the survey was 63° & 70° F, respectively, with clear sky and wind at 5-10 mph on both nights. There was no precipitation during the 24-hour period preceding the survey and there were no areas of standing water on the roof, nor was there any debris, stored material or other objects limiting access to any roof area.

V. Summary of Results:

The results of our survey are shown in detail on the roof diagrams and in the accompanying charts in the next section of this report. The following is a summary of our findings:

- Our survey detected thermal anomalies and/or elevated nuclear gauge readings indicating the presence of sub-surface moisture in 54 locations, affecting a total combined area of 9,566 square feet, or slightly over four percent of the total roof area scanned.
- Wet areas range in size from 16 square feet to 1,088 square feet, and are scattered throughout 17 of the 29 roof sections. Of the 54 wet areas, 41 were found in the single-ply roofs (6,401 sq. ft. 4.9%) and 13 in the built-up sections (3,165 sq. ft. 3.7%).
- Numerical nuclear gauge readings in the areas that appeared wet to the infrared camera were recorded on all roof sections and compared with baseline readings in areas that appeared to be dry. Higher readings generally indicate higher levels of moisture. Baseline readings for the main roof were between 4 and 7 in the single-ply sections, and slightly higher (5-8) in the built-up sections (see note*). Nuclear gauge readings in the wet areas on the main roof ranged between 13 and 69, consistent with areas of damp to likely saturated insulation.
- Baseline readings for the ASTE roof were between 10 and 15, with readings in the single wet area ranging between 32 and 74, indicating wet to saturated substrate. The higher baseline readings in that area may indicate the existence of a second roof assembly beneath the exposed EPDM membrane.
- Eight of the 43 wet areas found in the single-ply roofs exhibited punctures or tears in the membrane, a likely cause of moisture damage at those locations. Where found, punctures

were circled with spray paint in order to facilitate locating them for repair prior to replacement of the wet area. Circled punctures are shown in Photos 3, 5 & 13 accompanying the roof diagrams, and their locations are indicated in the Wet Area Charts. No obvious physical defects were noted in the other wet locations, although additional punctures or other defects may be found on close visual inspection during daylight hours.

All wet areas are marked on the roof membrane with weather resistant white or orange spray paint.

No cores samples, moisture probes or other invasive procedures were conducted by our technicians. As shown in the infrared images accompanying the roof diagrams, our results were sufficiently clear to preclude the need for cutting or otherwise compromising the membrane.

The above figures represent the actual dimensions of the wet areas as they are marked on the roof and shown on the diagram. For replacement purposes, each area should be expanded slightly beyond its marked boundaries in order to include any moisture migration that may occur prior to replacement and simplified in shape. Adjacent areas may also be combined. The final moisture-related replacement figure will therefore be somewhat larger than noted above, typically by 10-25 percent for most roofs.

This report is intended to provide information as to the current locations and extent of moisture damaged materials. While locating wet material often helps to resolve leaks, infrared and nuclear surveys are not guaranteed to determine the source or cause of any leak. Roof leaks may occur as a result of many different causes, including membrane defects such as small tears or punctures, worn or improper sealing of equipment penetrations and defective equipment or wall flashings. Such defects may result in water entering the interior space without leaving detectable traces within the roof assembly. Unless these defects cause the insulation layer or other materials under the membrane to become wet, it is unlikely that infrared or nuclear surveys will be useful in resolving leaks.

Once moisture penetration of the roof components occurs, it is likely to spread. Infrared and nuclear surveys are effective means of identifying small moisture problems before they involve large areas of the roof, resulting in potential moisture damage and costly replacement. Consideration should be given to performing moisture surveys on a regular basis, typically every three years during the warranty period and every year thereafter in order to extend the potential serviceable life of the roof.

*Note: The nuclear gauge operates by sensing the hydrogen component of water molecules within the roof assembly. Because most roofs contain other hydrogen bearing materials such as wood, concrete or asphalt, a dry roof will not produce a baseline reading of zero, but will typically be in the single digits or low teens, depending on the composition of the roof.









AHERA SIX MONTH PERIODIC SURVEILLANCE Rockville High School 70 Loveland Hill Road Vernon, CT 06066

	PREVIOUS CHANGE COMMENTS CONDITION IN COMMENTS CONDITION CONDITION COMMENTS	t building Known ACM	236.243 No damage Material is inaccessible, and in good condition. Second Second Seco	nge + Red) No damage Material in Good Condition Known ACM	No damage Material Presumed in Good Conditi Presumed under Cabinetry Abated under Cabinets in ABI Classroom 2018
	LOCATION(S)	Mechanical/Boiler room tunnels in walls/ceilings throughout	Classrooms 117-121, 124, 124 135,166-169, 122, 122, 23	Computer lab 131, 132 (Oran; Hallways	Classrooms
Vernon, CT 06066	MATERIAL DESCRIPTION	Pipe fitting insulation	Blackboard glue daubs	1x1 ceiling tile w/glue daubs on walls	9" floor tile and associated mastic beneath built-in cabinetry

DATE 7-17-73



AHERA Six Month Periodic Surveillance