MILONE & MACBROOM

July 30, 2019

Mr. Daniel M. Watson, Director of School Facilities
Greenwich Public Schools
290 Greenwich Avenue
Greenwich, CT 06830

RE: Environmental Soil Investigation at Hamilton Avenue School
Greenwich, Connecticut
MMI #5062-08-04

Dear Mr. Watson:

Milone & MacBroom, Inc. (MMI) conducted a limited investigation of information and files pertaining to past construction activities associated with the playing field at the Hamilton Avenue School athletic field located at 184 Hamilton Avenue in Greenwich, Connecticut. This work was performed in an effort to determine if, and potentially when, additional fill material was imported and/or placed at the field. Concurrently with this investigation, MMI also collected soil samples from 20 locations throughout the field area. This work was completed in an effort to inform the design process for the proposed field improvements.

Background Investigation Summary

The background research on the history of field construction included a review of historical aerial photography, a request to review pertinent town documentation, and in-person interviews of staff at the Town Hall of Greenwich. The following departments were contacted and interviewed: Department of Public Works (Building Inspection); Planning & Zoning Department (includes Land Use and Environmental Affairs); Engineering Department; Assessor and Clerk Offices; and Parks & Recreation.

None of the town departments had any documentation pertaining to the construction of the playing field with the exception of the Planning and Zoning and Engineering offices. Both offices had proposed school improvement and addition plans dated 2004-2006 that seemingly did not involve changes to the playing field.

The Engineering Department also had an August 29, 2005 Grading and Drainage Plan designed by Swanke Hayden Connell Architects for Langan Engineering and Environmental Services. This plan showed proposed storm drainage piping throughout the southern portion of the field and included a brief summary of geologic descriptions of the material from grade to approximately 69 inches below grade. The geologic descriptions came from observations of two deep test pits and one percolation test conducted on the southern portion of the field. The material was generally described on the plan as topsoil underlain by silty loam, then sand and silt with fractured rock.

There was no information on the plan suggesting that the soil was imported from another area or source.

The in-person interviews with Town Hall staff resulted in no new or additional information.

Historical aerials from Connecticut Environmental Conditions Online (CT ECO) covering the following years were reviewed: 1934, 1965, 1970, 1985, 1990, 1996, 2004, 2006, 2008, and 2010. The aerial photography review indicated that the field had been constructed by 1965 and appeared grass-covered until the 2006 photo. The 2006 photo showed that approximately 75 percent of the field had been stripped of vegetation. It was also evident in this photo that the school building was under construction. Presumably the topsoil in the southern portions of the field had been removed to facilitate the reconstruction of the school and possibly the installation of the geothermal wells. The 2008 and forward photographs showed the field grass covered and the school building as it appears in the present.

Soil Sampling Method

On June 27, 2019, MMI personnel collected a total of 25 soil samples from 20 borings at the athletic field (see Figure 1) using a hand auger. Ten soil samples were collected from the northern portion of the field at a depth from grade to 8 inches below grade (sample locations A1 through C3). An additional five soil samples representing the topsoil only (the upper 4 to 6 inches of the soil profile) were collected from five of these 10 borings (A1, A2, A3, B2, and B3). The remaining 10 soil samples were collected from the upper 12 to 24 inches of soil at borings located on the southern portion of the field (sample locations D1 through G1).

MMI personnel used clean hand tools to collect each sample. The soil samples were placed into laboratory-supplied glassware and delivered to Complete Environmental Testing, Inc. (CET), a State of Connecticut certified laboratory, for analysis that same day. The soil samples were analyzed for the following parameters:

- Polychlorinated biphenyls (PCBs) by the Environmental Protection Agency (EPA) 8082A Method
- Connecticut Department of Energy & Environmental Protection (CTDEEP) list of 15 metals
- Extractable total petroleum hydrocarbons by the Connecticut ETPH Method
- Polynuclear aromatic hydrocarbons (PAHs) by the EPA 8270D Method
- Organochlorine pesticides by EPA 8081B Method (topsoil only)

Soil Sampling Results

In general, the soil encountered at the athletic field consisted of a thin layer (approximately 4 to 6 inches) of fine-to-medium, dark-brown-to-black sandy loam underlain by gravelly fill. The fill layer generally consisted of medium to coarse light brown sand and subangular gravel but also contained traces of concrete, asphalt, and brick.

The laboratory results indicated the following:

- No PCBs were detected in any of the samples.
- The soil sample collected from the eastern-central portion of the field, C3 (0 to 8"), had a detection of ETPH of 66 milligrams per kilogram (mg/kg), which is well below the CTDEEP Residential Direct Exposure Criteria (RDEC) for ETPH of 500 mg/kg. No other samples had detections of ETPH above the laboratory reporting limit.
- Several metals were detected in all the soil samples at trace concentrations, which is likely indicative of naturally occurring levels, with the exception of arsenic. Generally, arsenic was detected in the soil samples at concentrations below and approaching the CTDEEP RDEC of 10 mg/kg; however, one soil sample, D2 (0 to 12") (central-southern portion of the field), contained arsenic at 11 mg/kg, which exceeded the RDEC.
- Low concentrations of several PAH compounds were detected in nine of the soil samples (central and southern portions of the field). None exceeded CTDEEP criteria.
- All five topsoil samples collected from the northern portion of the field contained one or more of the following five organochlorine pesticide constituents: 4,4 DDD, 4,4 DDE, 4,4 DDT, dieldrin, and/or chlordane.
    - The CTDEEP currently only specifies criteria for dieldrin and chlordane but has in the past suggested criteria for DDD, DDE, and DDT.
    - The topsoil sample collected at location A1 contained chlordane at 540 mg/kg (RDEC is 490 mg/kg).
    - The topsoil sampled collected at location B3 contained dieldrin at 170 mg/kg (RDEC is 38 mg/kg).

Discussion of Results

It appears that at least some portions of the playing field were disturbed during school renovation work in the early 2000s. The presence of PAH and ETPH compounds in the southern portion of the site may be a result of the use of fill from other portions of the property during the construction activities, and based upon observations made during the sampling activities, these compounds may be the result of the various yet minor presences of asphalt fragments.

The sample results also indicate the presence of organochlorine pesticides in the topsoil. These types of pesticides were generally discontinued in the 1970s and 1980s; however, they are still commonly detected in topsoil, especially topsoil that has originated at farms or orchards. The noted concentrations were above generally accepted limits for residential land use at sample locations A2 and D3. The CTDEEP has issued guidance on remediation of organochlorine pesticides (attached), and that guidance generally involves either the removal or the blending of affected topsoil with other soil so that the overall concentrations are decreased. The topsoil in the southern portion of the field was not sampled although as noted above, this portion of the field was disturbed during the construction activities in the early 2000s.

MMI understands that the Greenwich school system does not currently utilize synthetic pesticides on the playing field. The types of pesticides detected are routinely found in soil even after several decades from their last application. The presence therefore does not necessarily constitute evidence of an off-site origin of the topsoil.

The proposed field improvements should consider either the removal or replacement of the topsoil in the northern portion of the field or the management of that topsoil in accordance with the CTDEEP guidance document. Preliminary plans call for the leveling of the field, including the removal of a certain quantity

of soil from the southern portion and the slight raising of grade in the northern portion of the field. If surplus material is generated, the removed soil may not meet the CTDEEP's definition of clean fill, and off-site disposal may incur an added cost. If the material is all reused on site, blending or amendment of the existing topsoil may be necessary to improve the overall quality of the topsoil and to reduce the concentrations of the noted compounds.

The limited data set suggests that blending the topsoil may be a viable option for decreasing the overall concentrations of pesticides. As stated above, only two of the five sampled locations contained concentrations of pesticides greater than the recommended values. A simple averaging of the five sets of results suggests that blending may achieve final concentrations less than the recommended values, and if the soil is amended with additional organic matter to improve the overall quality, then lower concentrations may be achieved. If Greenwich Public Schools prefers instead to ensure that the topsoil at the newly constructed fields is absolutely free of organochlorine pesticides, then the topsoil will need to be stripped and disposed of off site and new topsoil imported. The total cost of this approach would likely exceed $100,000, and while it would address the playing field, it would not address other areas of the school grounds that could potentially contain similar residual pesticide concentrations.

Very truly yours,

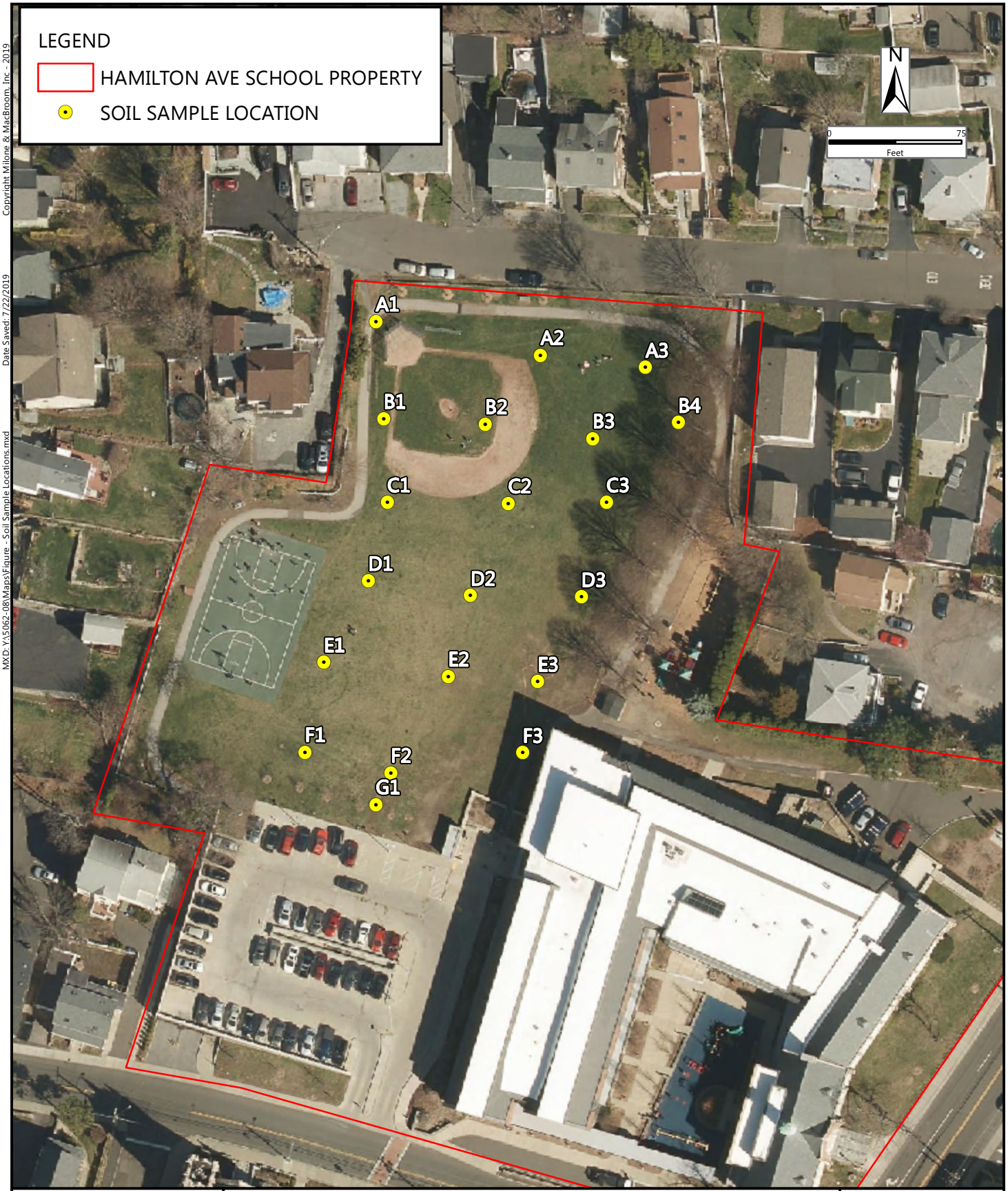
MILONE & MACBROOM, INC.

Scott G. Bristol, LEP, PG
Associate, Manager of Environmental Services

Enclosure

5062-08-04-jl2219-ltr.docx

SOIL SAMPLE LOCATION FIGURE



Date Saved: 7/22/2019

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MILONE & MACBROOM
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
WWW.MMINC.COM

SOIL SAMPLE MAP

HAMILTON AVE SCHOOL ENVIRONMENTAL SOIL INVESTIGATION
GREENWICH PUBLIC SCHOOLS
184 HAMILTON AVENUE
GREENWICH, CONNECTICUT

SCALE	1 " = 75 '
DATE	7/22/2019
PROJ. NO.	5062-08-04

FIGURE

TABLE

Summary Table of Soil Results
Hamilton Ave School
Greenwich, Connecticut

Samples Collected on June 27, 2019

Sample ID		A1	A1 Topsoil	A2	A2 Topsoil	A3
Parameter	**RDEC**	**0 - 8"**	**0 - 4"**	**0 - 8"**	**0 - 6"**	**0 - 8"**
CT-ETPH by CT ETPH Method (mg/kg)						
ETPH	500	ND<60	--	ND<62	--	ND<60
Connecticut 15 Metals List by the EPA 6010C Method (mg/kg)						
Antimony	27	ND<2.2	--	ND<2.5	--	ND<2.3
Arsenic	10	3.3	--	6	--	6.1
Barium	4,700	22	--	98	--	96
Beryllium	2	ND<1.1	--	ND<1.2	--	ND<1.2
Cadmium	34	ND<0.56	--	ND<0.62	--	ND<0.58
Chromium	NE	10	--	30	--	35
Copper	2,500	8.3	--	18	--	22
Lead	400	17	--	42	--	46
Nickel	1,400	4.9	--	17	--	19
Selenium	340	1.9	--	5.1	--	5.5
Silver	340	ND<2.2	--	ND<2.5	--	ND<2.3
Thallium	5	ND<2.2	--	ND<2.5	--	ND<2.3
Vanadium	470	16	--	41	--	39
Zinc	20,000	35	--	70	--	72
Total Mercury by the EPA 7471B Method (mg/kg)						
Mercury	20	ND<0.14	--	ND<0.16	--	ND<0.14
Pesticides by the EPA 8081B Method (ug/Kg)						
4,4-DDD	1,800 (see note 1)	--	57	--	33	--
4,4-DDE	1,800 (see note 1)	--	87	--	1,800	--
4,4-DDT	1,800 (see note 1)	--	63	--	320	--
4,4-Methoxychlor	340,000	--	ND<6.0	--	ND<6.2	--
alachlor	7,700	--	ND<60	--	ND<62	--
Aldrin	NA	--	ND<6.0	--	ND<6.2	--
alpha-BHC	NA	--	ND<6.0	--	ND<6.2	--
beta-BHC	NA	--	ND<6.0	--	ND<6.2	--
Chlordane	490	--	540	--	ND<37	--
Delta-BHC	NA	--	ND<6.0	--	ND<6.2	--
Dieldrin	38	--	ND<1.2	--	ND<1.2	--
Endosulfan I	NA	--	ND<6.0	--	ND<6.2	--
Endosulfan II	NA	--	ND<6.0	--	ND<6.2	--
Endosulfan sulfate	NA	--	ND<6.0	--	ND<6.2	--
Endrin	20,000	--	ND<6.0	--	ND<6.2	--
Endrin aldehyde	NA	--	ND<6.0	--	ND<6.2	--
Endrin ketone	NA	--	ND<6.0	--	ND<6.2	--
Gamma-BHC	20,000	--	ND<6.0	--	ND<6.2	--
Heptachlor	140	--	ND<6.0	--	ND<6.2	--
Heptachlor epoxide	67	--	ND<6.0	--	ND<6.2	--
Toxaphene	560	--	ND<120	--	ND<120	--
PCBs by the EPA 8082A Method (mg/kg)						
PCB-1016	1	ND<0.12	--	ND<0.12	--	ND<0.12
PCB-1221	1	ND<0.12	--	ND<0.12	--	ND<0.12
PCB-1232	1	ND<0.12	--	ND<0.12	--	ND<0.12
PCB-1242	1	ND<0.12	--	ND<0.12	--	ND<0.12
PCB-1248	1	ND<0.12	--	ND<0.12	--	ND<0.12
PCB-1254	1	ND<0.12	--	ND<0.12	--	ND<0.12
PCB-1260	1	ND<0.12	--	ND<0.12	--	ND<0.12
PCB-1262	1	ND<0.12	--	ND<0.12	--	ND<0.12
PCB-1268	1	ND<0.12	--	ND<0.12	--	ND<0.12
PAHs by the EPA 8270D Method (ug/Kg)						
Acenaphthene	1,000,000 (see note 1)	ND<360	--	ND<370	--	ND<360
Acenaphthylene	1,000,000	ND<360	--	ND<370	--	ND<360
Anthracene	1,000,000	ND<360	--	ND<370	--	ND<360
Benzo[a]anthracene	1,000	ND<360	--	ND<370	--	ND<360
Benzo[a]pyrene	1,000	ND<360	--	ND<370	--	ND<360
Benzo[b]fluoranthene	1,000	ND<360	--	ND<370	--	ND<360
Benzo[g,h,i]perylene	8,400 (see note 1)	ND<360	--	ND<370	--	ND<360
Benzo[k]fluoranthene	8,400	ND<360	--	ND<370	--	ND<360
Chrysene	84,000 (see note 1)	ND<360	--	ND<370	--	ND<360
Dibenz[a,h]anthracene	1,000 (see note 1)	ND<360	--	ND<370	--	ND<360
Fluoranthene	1,000,000	ND<360	--	ND<370	--	ND<360
Fluorene	1,000,000	ND<360	--	ND<370	--	ND<360
Indeno[1,2,3-cd]pyrene	1,000 (see note 1)	ND<360	--	ND<370	--	ND<360
2-Methyl Naphthalene	270,000 (see note 1)	ND<360	--	ND<370	--	ND<360
Phenanthrene	1,000,000	ND<360	--	ND<370	--	ND<360
Pyrene	1,000,000	ND<360	--	ND<370	--	ND<360
Naphthalene	1,000,000	ND<360	--	ND<370	--	ND<360

Notes:

CT ETPH	Connecticut (CT) Extractable Total Petroleum Hydrocarbons
PCBs	Polychlorinated biphenyls
PAHs	Polycyclic aromatic hydrocarbons
RDEC	Residential Direct Exposure Criteria
ug/kg	Micrograms per kilogram
mg/kg	Milligrams per kilogram
ND<60	Not detected above indicated laboratory reporting limit
NA	Not applicable
NE	Not established
---	Not analyzed
Note 1	Suggested CTDEEP criteria for reference purposes.

Summary Table of Soil Results
Hamilton Ave School
Greenwich, Connecticut

Samples Collected on June 27, 2019

Sample ID		A3 Topsoil	B1	B2	B2 Topsoil	B3	B3 Topsoil
Parameter	**RDEC**	**0 - 6"**	**0 - 8"**	**0 - 8"**	**0 - 6"**	**0 - 8"**	**0 - 6"**
CT-ETPH by CT ETPH Method (mg/kg)							
ETPH	500	--	ND<63	ND<57	--	ND<60	--
Connecticut 15 Metals List by the EPA 6010C Metho							
Antimony	27	--	ND<2.3	ND<2.3	--	ND<2.4	--
Arsenic	10	--	7.1	5.2	--	6.5	--
Barium	4,700	--	60	39	--	100	--
Beryllium	2	--	ND<1.2	ND<1.1	--	ND<1.2	--
Cadmium	34	--	ND<0.59	ND<0.56	--	ND<0.59	--
Chromium	NE	--	19	10	--	42	--
Copper	2,500	--	16	11	--	22	--
Lead	400	--	46	8.5	--	56	--
Nickel	1,400	--	10	7.9	--	19	--
Selenium	340	--	2.8	2.6	--	4.9	--
Silver	340	--	ND<2.3	ND<2.3	--	ND<2.4	--
Thallium	5	--	ND<2.3	ND<2.3	--	ND<2.4	--
Vanadium	470	--	22	15	--	43	--
Zinc	20,000	--	60	27	--	70	--
Total Mercury by the EPA 7471B Method (mg/kg)							
Mercury	20	--	ND<0.15	ND<0.14	--	ND<0.16	--
Pesticides by the EPA 8081B Method (ug/Kg)							
4,4-DDD	1,800 (see note 1)	26	--	--	ND<5.7	--	1,100
4,4-DDE	1,800 (see note 1)	560	--	--	91	--	6,500
4,4-DDT	1,800 (see note 1)	120	--	--	48	--	8,500
4,4-Methoxychlor	340,000	ND<5.9	--	--	ND<5.7	--	ND<6.0
alachlor	7,700	ND<59	--	--	ND<57	--	ND<60
Aldrin	NA	ND<5.9	--	--	ND<5.7	--	ND<6.0
alpha-BHC	NA	ND<5.9	--	--	ND<5.7	--	ND<6.0
beta-BHC	NA	ND<5.9	--	--	ND<5.7	--	ND<6.0
Chlordane	490	ND<36	--	--	ND<34	--	ND<36
Delta-BHC	NA	ND<5.9	--	--	ND<5.7	--	ND<6.0
Dieldrin	38	ND<1.2	--	--	ND<1.1	--	170
Endosulfan I	NA	ND<5.9	--	--	ND<5.7	--	ND<6.0
Endosulfan II	NA	ND<5.9	--	--	ND<5.7	--	ND<6.0
Endosulfan sulfate	NA	ND<5.9	--	--	ND<5.7	--	ND<6.0
Endrin	20,000	ND<5.9	--	--	ND<5.7	--	ND<6.0
Endrin aldehyde	NA	ND<5.9	--	--	ND<5.7	--	ND<6.0
Endrin ketone	NA	ND<5.9	--	--	ND<5.7	--	ND<6.0
Gamma-BHC	20,000	ND<5.9	--	--	ND<5.7	--	ND<6.0
Heptachlor	140	ND<5.9	--	--	ND<5.7	--	ND<6.0
Heptachlor epoxide	67	ND<5.9	--	--	ND<5.7	--	ND<6.0
Toxaphene	560	ND<120	--	--	ND<110	--	ND<120
PCBs by the EPA 8082A Method (mg/kg)							
PCB-1016	1	--	ND<0.13	ND<0.11	--	ND<0.12	--
PCB-1221	1	--	ND<0.13	ND<0.11	--	ND<0.12	--
PCB-1232	1	--	ND<0.13	ND<0.11	--	ND<0.12	--
PCB-1242	1	--	ND<0.13	ND<0.11	--	ND<0.12	--
PCB-1248	1	--	ND<0.13	ND<0.11	--	ND<0.12	--
PCB-1254	1	--	ND<0.13	ND<0.11	--	ND<0.12	--
PCB-1260	1	--	ND<0.13	ND<0.11	--	ND<0.12	--
PCB-1262	1	--	ND<0.13	ND<0.11	--	ND<0.12	--
PCB-1268	1	--	ND<0.13	ND<0.11	--	ND<0.12	--
PAHs by the EPA 8270D Method (ug/Kg)							
Acenaphthene	1,000,000 (see note 1)	--	ND<380	ND<340	--	ND<360	--
Acenaphthylene	1,000,000	--	ND<380	ND<340	--	ND<360	--
Anthracene	1,000,000	--	ND<380	ND<340	--	ND<360	--
Benzo[a]anthracene	1,000	--	ND<380	ND<340	--	ND<360	--
Benzo[a]pyrene	1,000	--	ND<380	ND<340	--	ND<360	--
Benzo[b]fluoranthene	1,000	--	ND<380	ND<340	--	ND<360	--
Benzo[g,h,i]perylene	8,400 (see note 1)	--	ND<380	ND<340	--	ND<360	--
Benzo[k]fluoranthene	8,400	--	ND<380	ND<340	--	ND<360	--
Chrysene	84,000 (see note 1)	--	ND<380	ND<340	--	ND<360	--
Dibenz[a,h]anthracene	1,000 (see note 1)	--	ND<380	ND<340	--	ND<360	--
Fluoranthene	1,000,000	--	ND<380	ND<340	--	ND<360	--
Fluorene	1,000,000	--	ND<380	ND<340	--	ND<360	--
Indeno[1,2,3-cd]pyrene	1,000 (see note 1)	--	ND<380	ND<340	--	ND<360	--
2-Methyl Naphthalene	270,000 (see note 1)	--	ND<380	ND<340	--	ND<360	--
Phenanthrene	1,000,000	--	ND<380	ND<340	--	ND<360	--
Pyrene	1,000,000	--	ND<380	ND<340	--	ND<360	--
Naphthalene	1,000,000	--	ND<380	ND<340	--	ND<360	--

Notes:

CT ETPH	Connecticut (CT) Extractable Total Petroleum Hydrocarbons
PCBs	Polychlorinated biphenyls
PAHs	Polycyclic aromatic hydrocarbons
RDEC	Residential Direct Exposure Criteria
ug/kg	Micrograms per kilogram
mg/kg	Milligrams per kilogram
ND<60	Not detected above indicated laboratory reporting limit
NA	Not applicable
NE	Not established
---	Not analyzed
Note 1	Suggested CTDEEP criteria for reference purposes.

Summary Table of Soil Results
Hamilton Ave School
Greenwich, Connecticut

Samples Collected on June 27, 2019

Sample ID		B4	C1	C2	C3	D1	D2	D3
Parameter	**RDEC**	**0 - 8"**	**0 - 8"**	**0 - 8"**	**0 - 8"**	**0 - 13"**	**0 - 12"**	**0 - 12"**
CT-ETPH by CT ETPH Method (mg/kg)								
ETPH	500	ND<54	ND<60	ND<58	66	ND<54	ND<56	ND<58
Connecticut 15 Metals List by the EPA 6010C Metho								
Antimony	27	ND<2.2	ND<2.4	ND<2.2	ND<2.2	ND<2.1	ND<2.1	ND<2.3
Arsenic	10	6.6	9.6	8.3	7	7.4	11	9.5
Barium	4,700	92	140	120	120	230	140	130
Beryllium	2	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.0	ND<1.0	ND<1.1
Cadmium	34	ND<0.55	ND<0.61	ND<0.56	ND<0.56	ND<0.51	ND<0.52	ND<0.57
Chromium	NE	28	39	34	33	59	39	37
Copper	2,500	22	27	25	28	31	27	25
Lead	400	82	100	86	82	71	110	97
Nickel	1,400	16	21	18	20	28	26	19
Selenium	340	4.3	5.4	4	3.9	4.6	4.7	4.2
Silver	340	ND<2.2	ND<2.4	ND<2.2	ND<2.2	ND<2.1	ND<2.1	ND<2.3
Thallium	5	ND<2.2	ND<2.4	ND<2.2	ND<2.2	ND<2.1	ND<2.1	ND<2.3
Vanadium	470	35	41	35	38	50	40	39
Zinc	20,000	120	100	100	130	86	100	97
Total Mercury by the EPA 7471B Method (mg/kg)								
Mercury	20	ND<0.15	ND<0.15	ND<0.15	ND<0.14	ND<0.14	ND<0.15	ND<0.14
Pesticides by the EPA 8081B Method (ug/Kg)								
4,4-DDD	1,800 (see note 1)	--	--	--	--	--	--	--
4,4-DDE	1,800 (see note 1)	--	--	--	--	--	--	--
4,4-DDT	1,800 (see note 1)	--	--	--	--	--	--	--
4,4-Methoxychlor	340,000	--	--	--	--	--	--	--
alachlor	7,700	--	--	--	--	--	--	--
Aldrin	NA	--	--	--	--	--	--	--
alpha-BHC	NA	--	--	--	--	--	--	--
beta-BHC	NA	--	--	--	--	--	--	--
Chlordane	490	--	--	--	--	--	--	--
Delta-BHC	NA	--	--	--	--	--	--	--
Dieldrin	38	--	--	--	--	--	--	--
Endosulfan I	NA	--	--	--	--	--	--	--
Endosulfan II	NA	--	--	--	--	--	--	--
Endosulfan sulfate	NA	--	--	--	--	--	--	--
Endrin	20,000	--	--	--	--	--	--	--
Endrin aldehyde	NA	--	--	--	--	--	--	--
Endrin ketone	NA	--	--	--	--	--	--	--
Gamma-BHC	20,000	--	--	--	--	--	--	--
Heptachlor	140	--	--	--	--	--	--	--
Heptachlor epoxide	67	--	--	--	--	--	--	--
Toxaphene	560	--	--	--	--	--	--	--
PCBs by the EPA 8082A Method (mg/kg)								
PCB-1016	1	ND<0.11	ND<0.12	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1221	1	ND<0.11	ND<0.12	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1232	1	ND<0.11	ND<0.12	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1242	1	ND<0.11	ND<0.12	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1248	1	ND<0.11	ND<0.12	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1254	1	ND<0.11	ND<0.12	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1260	1	ND<0.11	ND<0.12	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1262	1	ND<0.11	ND<0.12	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1268	1	ND<0.11	ND<0.12	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PAHs by the EPA 8270D Method (ug/Kg)								
Acenaphthene	1,000,000 (see note 1)	ND<330	ND<370	ND<350	ND<340	ND<320	ND<340	ND<350
Acenaphthylene	1,000,000	ND<330	ND<370	ND<350	ND<340	ND<320	ND<340	ND<350
Anthracene	1,000,000	ND<330	ND<370	ND<350	ND<340	ND<320	ND<340	ND<350
Benzo[a]anthracene	1,000	ND<330	ND<370	ND<350	ND<340	ND<320	470	ND<350
Benzo[a]pyrene	1,000	ND<330	ND<370	ND<350	380	ND<320	520	ND<350
Benzo[b]fluoranthene	1,000	ND<330	ND<370	ND<350	450	ND<320	640	ND<350
Benzo[g,h,i]perylene	8,400 (see note 1)	ND<330	ND<370	ND<350	ND<340	ND<320	ND<340	ND<350
Benzo[k]fluoranthene	8,400	ND<330	ND<370	ND<350	ND<340	ND<320	ND<340	ND<350
Chrysene	84,000 (see note 1)	ND<330	ND<370	ND<350	ND<340	ND<320	390	ND<350
Dibenz[a,h]anthracene	1,000 (see note 1)	ND<330	ND<370	ND<350	ND<340	ND<320	ND<340	ND<350
Fluoranthene	1,000,000	ND<330	490	ND<350	480	390	980	390
Fluorene	1,000,000	ND<330	ND<370	ND<350	ND<340	ND<320	ND<340	ND<350
Indeno[1,2,3-cd]pyrene	1,000 (see note 1)	ND<330	ND<370	ND<350	ND<340	ND<320	ND<340	ND<350
2-Methyl Naphthalene	270,000 (see note 1)	ND<330	ND<370	ND<350	ND<340	ND<320	ND<340	ND<350
Phenanthrene	1,000,000	ND<330	ND<370	ND<350	ND<340	ND<320	390	ND<350
Pyrene	1,000,000	ND<330	410	ND<350	420	350	760	ND<350
Naphthalene	1,000,000	ND<330	ND<370	ND<350	ND<340	ND<320	ND<340	ND<350

Notes:

CT ETPH	Connecticut (CT) Extractable Total Petroleum Hydrocarbons
PCBs	Polychlorinated biphenyls
PAHs	Polycyclic aromatic hydrocarbons
RDEC	Residential Direct Exposure Criteria
ug/kg	Micrograms per kilogram
mg/kg	Milligrams per kilogram
ND<60	Not detected above indicated laboratory reporting limit
NA	Not applicable
NE	Not established
---	Not analyzed
Note 1	Suggested CTDEEP criteria for reference purposes.

Summary Table of Soil Results
Hamilton Ave School
Greenwich, Connecticut

Samples Collected on June 27, 2019

Sample ID		E1	E2	E3	F1	F2	F3	G1
Parameter	**RDEC**	**0 - 24"**	**0 - 24"**	**0 - 12"**	**0 - 24"**	**0 - 24"**	**0 - 24"**	**0 - 24"**
CT-ETPH by CT ETPH Method (mg/kg)								
ETPH	500	ND<53	ND<54	ND<54	ND<56	ND<54	ND<56	ND<55
Connecticut 15 Metals List by the EPA 6010C Metho								
Antimony	27	ND<2.1	ND<2.1	ND<2.2	ND<2.1	ND<2.0	ND<2.1	ND<2.2
Arsenic	10	6.1	5.7	7	9.2	7.6	8.2	6.4
Barium	4,700	400	180	160	190	190	180	190
Beryllium	2	ND<1.1	ND<1.1	ND<1.1	ND<1.1	ND<1.0	ND<1.0	ND<1.1
Cadmium	34	ND<0.53	ND<0.54	ND<0.55	ND<0.53	ND<0.50	ND<0.52	ND<0.55
Chromium	NE	69	49	43	46	52	48	49
Copper	2,500	25	28	24	36	29	33	32
Lead	400	26	42	73	110	71	87	76
Nickel	1,400	34	24	22	27	26	26	26
Selenium	340	4.5	4.3	2.7	2.8	2.6	3.6	2.9
Silver	340	ND<2.1	ND<2.1	ND<2.2	ND<2.1	ND<2.0	ND<2.1	ND<2.2
Thallium	5	ND<2.1	ND<2.1	ND<2.2	ND<2.1	ND<2.0	ND<2.1	ND<2.2
Vanadium	470	60	42	44	47	46	46	47
Zinc	20,000	67	76	80	100	87	91	91
Total Mercury by the EPA 7471B Method (mg/kg)								
Mercury	20	ND<0.14	ND<0.14	ND<0.14	ND<0.15	ND<0.13	ND<0.15	ND<0.14
Pesticides by the EPA 8081B Method (ug/Kg)								
4,4-DDD	1,800 (see note 1)	--	--	--	--	--	--	--
4,4-DDE	1,800 (see note 1)	--	--	--	--	--	--	--
4,4-DDT	1,800 (see note 1)	--	--	--	--	--	--	--
4,4-Methoxychlor	340,000	--	--	--	--	--	--	--
alachlor	7,700	--	--	--	--	--	--	--
Aldrin	NA	--	--	--	--	--	--	--
alpha-BHC	NA	--	--	--	--	--	--	--
beta-BHC	NA	--	--	--	--	--	--	--
Chlordane	490	--	--	--	--	--	--	--
Delta-BHC	NA	--	--	--	--	--	--	--
Dieldrin	38	--	--	--	--	--	--	--
Endosulfan I	NA	--	--	--	--	--	--	--
Endosulfan II	NA	--	--	--	--	--	--	--
Endosulfan sulfate	NA	--	--	--	--	--	--	--
Endrin	20,000	--	--	--	--	--	--	--
Endrin aldehyde	NA	--	--	--	--	--	--	--
Endrin ketone	NA	--	--	--	--	--	--	--
Gamma-BHC	20,000	--	--	--	--	--	--	--
Heptachlor	140	--	--	--	--	--	--	--
Heptachlor epoxide	67	--	--	--	--	--	--	--
Toxaphene	560	--	--	--	--	--	--	--
PCBs by the EPA 8082A Method (mg/kg)								
PCB-1016	1	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1221	1	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1232	1	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1242	1	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1248	1	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1254	1	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1260	1	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1262	1	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PCB-1268	1	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11	ND<0.11
PAHs by the EPA 8270D Method (ug/Kg)								
Acenaphthene	1,000,000 (see note 1)	ND<320	ND<320	ND<330	ND<340	ND<320	ND<340	ND<330
Acenaphthylene	1,000,000	ND<320	ND<320	ND<330	ND<340	ND<320	ND<340	ND<330
Anthracene	1,000,000	ND<320	ND<320	ND<330	ND<340	ND<320	ND<340	ND<330
Benzo[a]anthracene	1,000	ND<320	ND<320	ND<330	ND<340	360	390	ND<330
Benzo[a]pyrene	1,000	ND<320	ND<320	ND<330	ND<340	ND<320	340	ND<330
Benzo[b]fluoranthene	1,000	ND<320	ND<320	ND<330	ND<340	360	380	ND<330
Benzo[g,h,i]perylene	8,400 (see note 1)	ND<320	ND<320	ND<330	ND<340	ND<320	ND<340	ND<330
Benzo[k]fluoranthene	8,400	ND<320	ND<320	ND<330	ND<340	ND<320	ND<340	ND<330
Chrysene	84,000 (see note 1)	ND<320	ND<320	ND<330	ND<340	ND<320	340	ND<330
Dibenz[a,h]anthracene	1,000 (see note 1)	ND<320	ND<320	ND<330	ND<340	ND<320	ND<340	ND<330
Fluoranthene	1,000,000	ND<320	ND<320	390	ND<340	530	630	380
Fluorene	1,000,000	ND<320	ND<320	ND<330	ND<340	ND<320	ND<340	ND<330
Indeno[1,2,3-cd]pyrene	1,000 (see note 1)	ND<320	ND<320	ND<330	ND<340	ND<320	ND<340	ND<330
2-Methyl Naphthalene	270,000 (see note 1)	ND<320	ND<320	ND<330	ND<340	ND<320	ND<340	ND<330
Phenanthrene	1,000,000	ND<320	ND<320	ND<330	ND<340	ND<320	420	ND<330
Pyrene	1,000,000	ND<320	ND<320	350	ND<340	440	530	ND<330
Naphthalene	1,000,000	ND<320	ND<320	ND<330	ND<340	ND<320	ND<340	ND<330

Notes:

CT ETPH	Connecticut (CT) Extractable Total Petroleum Hydrocarbons
PCBs	Polychlorinated biphenyls
PAHs	Polycyclic aromatic hydrocarbons
RDEC	Residential Direct Exposure Criteria
ug/kg	Micrograms per kilogram
mg/kg	Milligrams per kilogram
ND<60	Not detected above indicated laboratory reporting limit
NA	Not applicable
NE	Not established
---	Not analyzed
Note 1	Suggested CTDEEP criteria for reference purposes.

CTDEEP GENERAL GUIDANCE ON DEVELOPMENT OF FORMER AGRICULTURAL PROPERTIES

MILONE & MACBROOM

Connecticut Department of Energy & Environmental Protection

General Guidance on Development of Former Agricultural Properties

(March 1999)

The Department of Public Health and the Department of Energy & Environmental Protection have become aware of a number of site development projects on former agricultural land in which persistent pesticides (primarily dieldrin, DDT and breakdown products, chlordane, arsenic) remain in soil at concentrations that approach or exceed the Connecticut Remediation Standard Regulations (RSRs). While such development projects do not specifically fall under the RSRs, concerns have been raised that the residual pesticides constitute a health risk. In light of this, DPH and DEEP offer general guidance for such sites as described below. This guidance is meant to provide an approach that is protective of public health and that also leaves a degree of flexibility. We expect municipal officials and site developers to consider our input together with other factors in deciding how best to handle site re-development projects.

- Evaluate site history and sample surface soil (ideally 0-3 inches depth) in areas where pesticides were applied, handled, and stored. A limited number of deeper samples are also recommended, particularly in areas where there is evidence of substantial surficial contamination. Total mass concentrations and leaching tests should be performed, with consideration given to analyses for newer pesticides if the site is currently agricultural.

- Evaluate detected pesticide concentrations against RSR values. If the concentrations are below the RSR values in all cases, there is no need for further consideration of pesticide contaminant issues at the site. If some concentrations are above the RSRs, the following options for managing the affected soil should be considered:

    1. Keep affected soil separate from other soils and use it on-site as fill under buildings, parking lots, or access roads or dispose of the soil in an approved landfill off-site.
    2. Mix it with unaffected soils to decrease the effective soil concentration. In this case, representative samples should be taken from the mixed soil piles following RCRA protocols regarding the number and location of samples from soil piles. If the mixed concentrations are below the RSRs, the soil pile can then be used anywhere on-site. If the mixed concentrations are still above RSR values, then the soil pile could be used as fill material below grade (but not topsoil) in parts of the site where digging will not occur (i.e., areas where children will not play; non-residential areas; uses as described under Option 1).
    3. Depending upon the degree of RSR exceedance, consideration should be given, in consultation with DPH and DEEP, to removal of specific hot spot areas.
    4. If affected soils are in some manner kept on-site, an additional precautionary step would be post-construction surface soil sampling to ensure that the practices described above have successfully reduced the potential for direct exposure.
    5. If any soils containing pesticides above RSR values remain on-site, the location of these affected soils should be recorded on a site map which is on file at the local health department.

Site-specific data can be provided to DPH (860-509-7742) and DEEP (860-424-3705) to make sure that a particular site does not present unique risks and that the data are suitable for comparing against RSR values.

Remediation Programs and Information

Content Last Updated: November 2006

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MXD: Y:\6142-18\Maps\FIG3 2016 AERIAL.mxd

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2016 AERIAL

HAMILTON AVE SCHOOL ENVIRONMENTAL SOIL INVESTIGATION
GREENWICH PUBLIC SCHOOLS

184 HAMILTON AVENUE
GREENWICH, CONNECTICUT

SCALE	1 " = 75 '
DATE	7/23/2019
PROJ. NO.	5062-08-04

FIG. 1

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MXD: YA6142-18\Maps\FIG3 2012 AERIAL.mxd

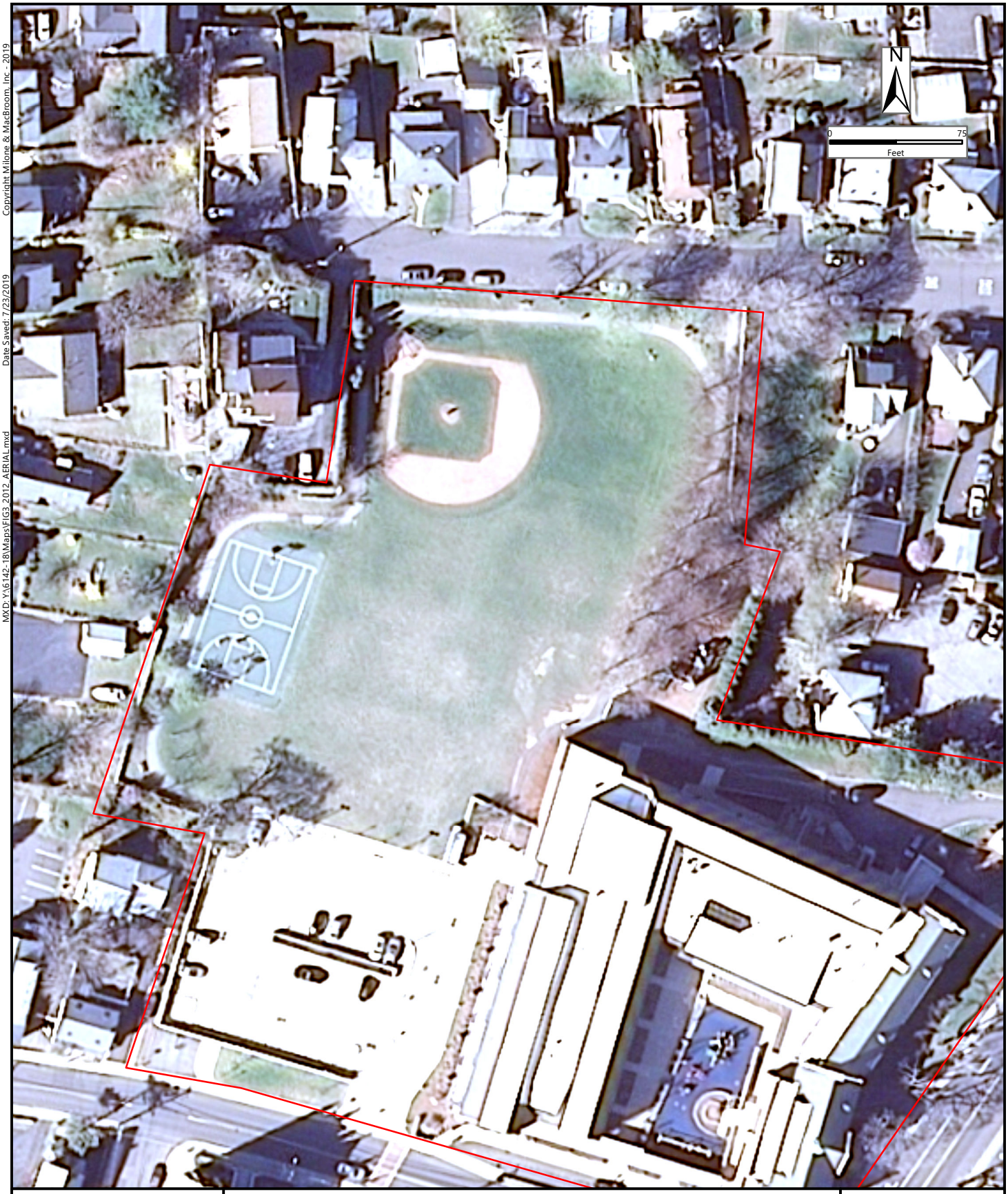

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FIG. 2

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2010 AERIAL

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184 HAMILTON AVENUE
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SCALE	1 " = 75 '
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FIG. 3

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GREENWICH PUBLIC SCHOOLS

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GREENWICH, CONNECTICUT

SCALE	1 " = 75 '
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PROJ. NO.	5062-08-04

FIG. 4

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SCALE	1 " = 75 '
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FIG. 5

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2005 INFRARED (IR) AERIAL

HAMILTON AVE SCHOOL ENVIRONMENTAL SOIL INVESTIGATION
GREENWICH PUBLIC SCHOOLS

184 HAMILTON AVENUE
GREENWICH, CONNECTICUT

SCALE	1 " = 75 '
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FIG. 6

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2004 AERIAL

HAMILTON AVE SCHOOL ENVIRONMENTAL SOIL INVESTIGATION
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SCALE	1 " = 75 '
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FIG. 7

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1996 AERIAL

HAMILTON AVE SCHOOL ENVIRONMENTAL SOIL INVESTIGATION
GREENWICH PUBLIC SCHOOLS

184 HAMILTON AVENUE
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SCALE	1 " = 100 '
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FIG. 8

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1990 AERIAL

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GREENWICH PUBLIC SCHOOLS

184 HAMILTON AVENUE
GREENWICH, CONNECTICUT

SCALE 1 " = 100 '

DATE 7/23/2019

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PROJ. NO.

FIG. 9

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1985 AERIAL

HAMILTON AVE SCHOOL ENVIRONMENTAL SOIL INVESTIGATION
GREENWICH PUBLIC SCHOOLS

184 HAMILTON AVENUE
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SCALE	1 " = 100 '
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FIG. 10

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1970 AERIAL

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FIG. 11

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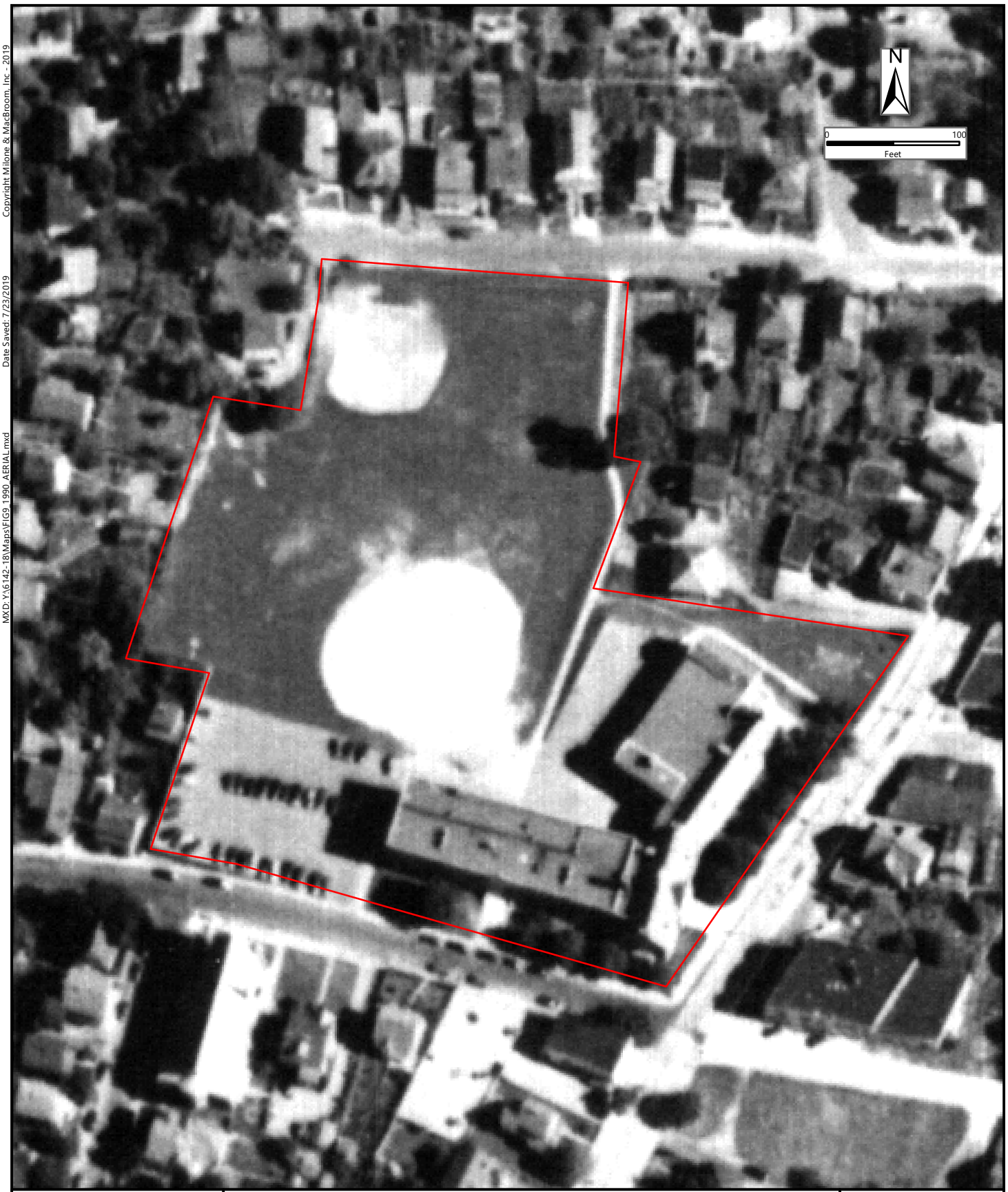

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1951 AERIAL

HAMILTON AVE SCHOOL ENVIRONMENTAL SOIL INVESTIGATION
GREENWICH PUBLIC SCHOOLS

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GREENWICH, CONNECTICUT

SCALE	1 " = 100 '
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FIG. 12

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1934 AERIAL

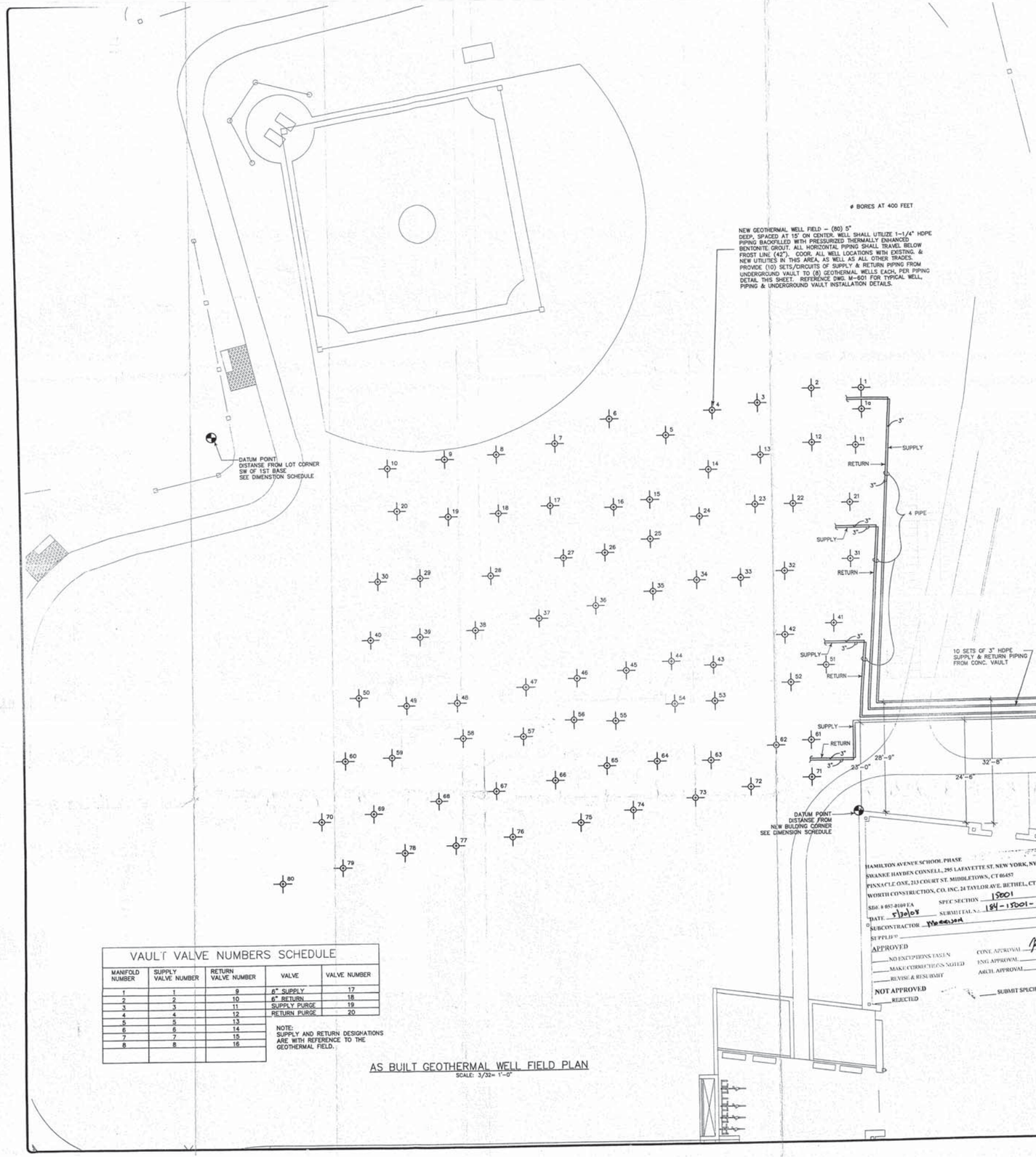
HAMILTON AVE SCHOOL ENVIRONMENTAL SOIL INVESTIGATION
GREENWICH PUBLIC SCHOOLS

184 HAMILTON AVENUE
GREENWICH, CONNECTICUT

SCALE	1 " = 200 '
DATE	7/23/2019
PROJ. NO.	5062-08-04

FIG. 13

MUNICIPAL DOCUMENTATION



MANIFOLD NUMBER	WELL NUMBER	DISTANCE FROM NW BLDG CORNER FEET	INCHES	DISTANCE FROM LOT CORNER SOUTHWEST OF 1ST BASE FEET	INCHES
1	1	111	6	172	0
	2	112	1	158	6
	3	110	10	144	0
	4	112	6	132	0
	5	111	6	119	6
	6	122	6	105	0
	7	125	9	90	6
	8	133	10	75	6
	9	143	10	62	0
	10	153	8	47	0
2	11	96	6	170	0
	12	98	0	158	0
	13	97	6	144	6
	14	98	6	131	0
	15	99	0	116	6
	16	103	0	107	6
	17	114	6	91	0
	18	123	0	78	6
	19	133	0	66	0
	20	145	3	52	6
3	21	81	6	169	3
	22	83	0	154	0
	23	85	6	144	0
	24	88	6	130	0
	25	90	6	118	6
	26	95	6	108	0
	27	102	6	98	0
	28	114	10	82	4
	29	130	9	66	6
	30	140	7	58	0
4	31	66	6	171	6
	32	66	2	154	10
	33	69	0	144	0
	34	74	6	133	0
	35	79	6	123	0
	36	88	0	110	6
	37	98	5	98	7
	38	111	7	86	3
	39	124	3	76	3
	40	136	6	68	0
5	41	50	0	171	0
	42	50	6	159	6
	43	54	6	145	0
	44	63	6	134	6
	45	71	8	125	3
	46	82	2	115	4
	47	93	6	106	0
	48	109	6	96	6
	49	122	6	87	6
	50	135	4	79	0
6	51	39	6	172	6
	52	38	6	165	6
	53	48	0	149	6
	54	56	6	140	6
	55	68	6	130	0
	56	79	0	121	0
	57	90	6	114	0
	58	106	0	103	6
	59	124	0	97	0
	60	136	3	92	6
7	61	22	10	176	8
	62	28	3	168	0
	63	41	6	156	6
	64	55	0	145	0
	65	67	6	135	6
	66	80	6	128	0
	67	95	6	120	0
	68	110	6	113	6
	69	128	0	108	6
	70	141	7	106	0
8	71	15	7	181	0
	72	29	6	157	0
	73	43	6	146	6
	74	59	6	139	6
	75	73	4	140	9
	76	91	2	132	3
	77	106	5	125	9
	78	120	2	121	3
	79	136	11	119	3
	80	153	1	120	0
1a				172	0

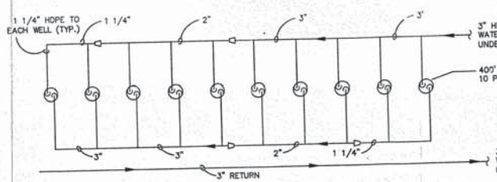
VAULT VALVE NUMBERS SCHEDULE

MANIFOLD NUMBER	SUPPLY VALVE NUMBER	RETURN VALVE NUMBER	VALVE	VALVE NUMBER
1	1	9	6" SUPPLY	17
2	2	10	6" RETURN	18
3	3	11	SUPPLY PURGE	19
4	4	12	RETURN PURGE	20
5	5	13		
6	6	14		
7	7	15		
8	8	16		

NOTE:
SUPPLY AND RETURN DESIGNATIONS ARE WITH REFERENCE TO THE GEOTHERMAL FIELD.

AS BUILT GEOTHERMAL WELL FIELD PLAN
SCALE: 3/32= 1'-0"

HAMILTON AVENUE SCHOOL PHASE
SWANKE HAYDEN CONNELL, 295 LAFAYETTE ST. NEW YORK, NY 10012
PINNACLE ONE, 213 COURT ST. MIDDLETOWN, CT 06457
WORTH CONSTRUCTION, CO. INC. 24 TAYLOR AVE. BETHEL, CT 06801
SDE. # 057-0109 EA — SPEC SECTION 15001
DATE 5/20/08 — SUBMITTAL N.: 184-15001-01
SUBCONTRACTOR Weckesser
SUPPLIER
APPROVED — CONT. APPROVAL
NO EXCEPTIONS TAKEN — ENG. APPROVAL
MAKE CORRECTIONS NOTED — ARCH. APPROVAL
REVISE & RESUBMIT
NOT APPROVED — SUBMIT SPECIFIED ITEM
REJECTED



TYPICAL GEOTHERMAL WELL CIRCUIT PIPING
NTS

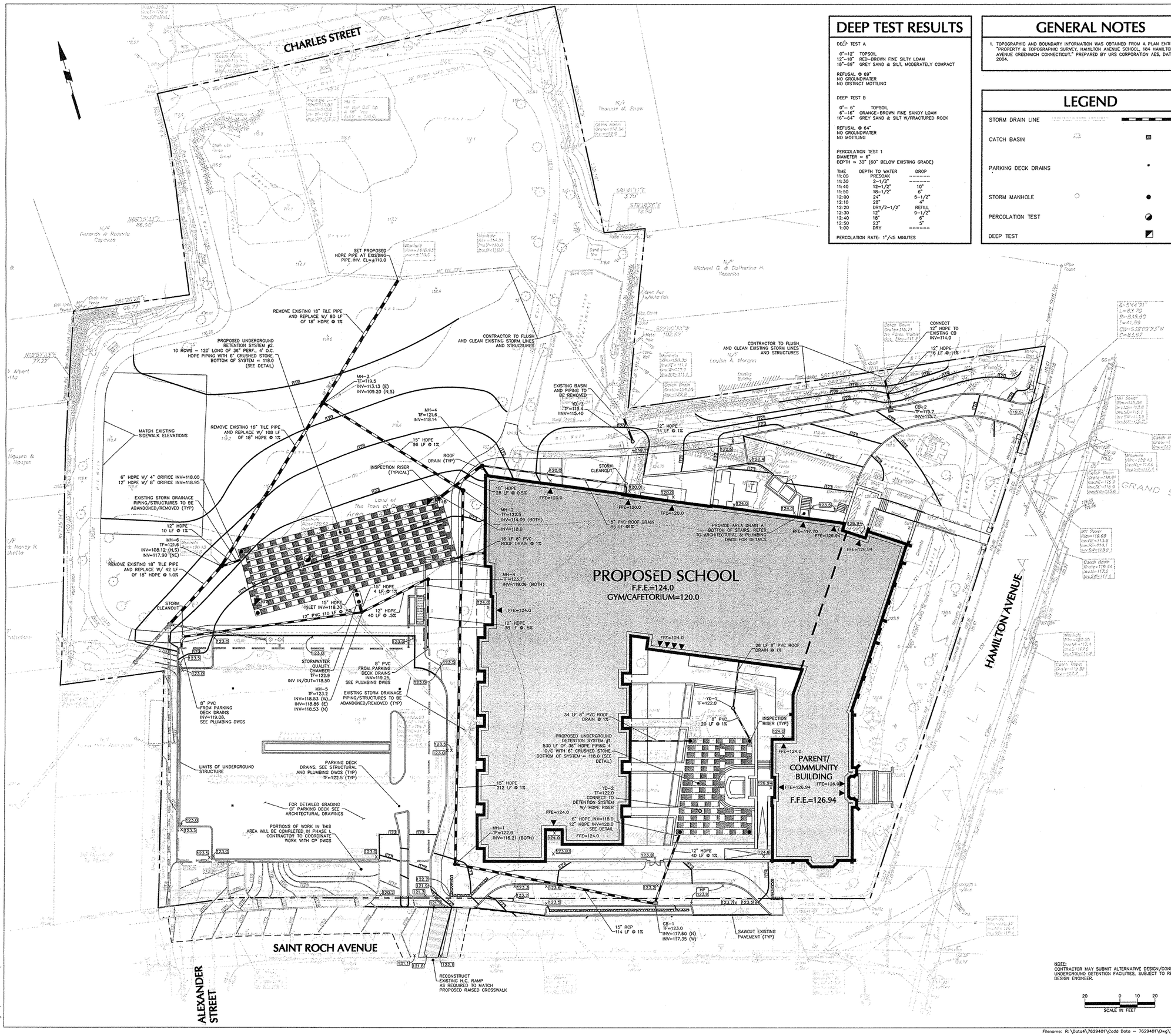
Morrison Incorporated
63 Gambers Corner Rd
Dunnconnon, PA 17020
* Tel: 717-834-5667

PHASE TWO
HAMILTON AVENUE SCHOOL
GREENWICH, CONNECTICUT
SDE # 057-0109 EA

GEOTHERMAL WELL FIELD PLAN

Drawn	K.G.R
Check	
Date	2/4/08
Job No.	

Sheet:
M-001



NOTE:
CONTRACTOR MAY SUBMIT ALTERNATIVE DESIGN/CONFIGURATION FOR UNDERGROUND DETENTION FACILITIES, SUBJECT TO REVIEW OF DESIGN ENGINEER.

20 0 10 20
SCALE IN FEET

DEEP TEST RESULTS

DEEP TEST A

0"–12" TOPSOIL
12"–18" RED–BROWN FINE SILTY LOAM
18"–69" GREY SAND & SILT, MODERATELY COMPACT

REFUSAL @ 69"
NO GROUNDWATER
NO DISTINCT MOTTLING

DEEP TEST B

0"– 6" TOPSOIL
6"–16" ORANGE–BROWN FINE SANDY LOAM
16"–64" GREY SAND & SILT W/FRACTURED ROCK

REFUSAL @ 64"
NO GROUNDWATER
NO MOTTLING

PERCOLATION TEST 1
DIAMETER = 6"
DEPTH = 30" (60" BELOW EXISTING GRADE)

TIME	DEPTH TO WATER	DROP
11:00	PRESOAK	
11:30	2–1/2"	
11:40	12–1/2"	10"
11:50	18–1/2"	6"
12:00	24"	5–1/2"
12:10	28"	4"
12:20	DRY/2–1/2"	REFILL
12:30	12"	9–1/2"
12:40	18"	6"
12:50	23"	5"
1:00	DRY	

PERCOLATION RATE: 1"/<5 MINUTES

GENERAL NOTES

1. TOPOGRAPHIC AND BOUNDARY INFORMATION WAS OBTAINED FROM A PLAN ENTITLED "PROPERTY & TOPOGRAPHIC SURVEY, HAMILTON AVENUE SCHOOL, 184 HAMILTON AVENUE GREENWICH CONNECTICUT," PREPARED BY URS CORPORATION AES, DATED JULY 2004.

LEGEND

STORM DRAIN LINE
CATCH BASIN
PARKING DECK DRAINS
STORM MANHOLE
PERCOLATION TEST
DEEP TEST

SWANKE HAYDEN CONNELL ARCHITECTS

Swanke Hayden Connell Ltd
Swanke Hayden Connell & Partners, LLP
295 Lafayette Street, New York, New York 10012
Phone 212 226 9696, Fax 212 219 0059

Client
Hamilton Avenue School Building Committee
c/o Greenwich Board of Education
290 Greenwich Avenue Havemeyer Building
Greenwich, CT 06830

Project Manager/ Owner's Representative
Pinnacle One
213 Court Street, Suite 700
Middletown, CT 06457

Civil Engineer / Landscape
LANGAN ENGINEERING & ENVIRONMENTAL SERVICES
Long Wharf Maritime Center
555 Long Wharf Drive
New Haven, CT 06511-6107

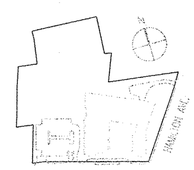
Structural Engineer
The DiSalvo Ericson Group
63 Copps Hill Road
Ridgefield, CT 06877

MEP Engineer
Thornton Tomasetti Group
LZA Associates Division
7 Cambridge Drive Suite 215
Trumbull, CT 06611

Consulting Environmental Designers
Atelier Ten
45 East 20th Street 4th Floor
New York, NY 10003

No.	Date	Revision
	8/29/2005	Construction Documents Issued for OSF Review

Key Plan



Job Title

Phase Two
Hamilton Avenue School
Greenwich, Connecticut
SDE # 057-0109 EA

Drawing Title
GRADING & DRAINAGE PLAN

Issue Date: 29 AUGUST 2005
Scale: 1"=20'
Seal
Drawn By: WKB
Checked By: RPP
Project No.: 7629401
Drawing No.: C101

ROBERT P. PRYOR, CT PE#19078

Aug 31, 2005 - 3:04pm

Filename: R:\Data4\7629401\Cadd Data – 7629401\Dwg\7629401C101.dwg Date: 8/31/2005 Time: 15:04 User: asuarato Style Table: Langan.stb Layout: FULL_SIZE