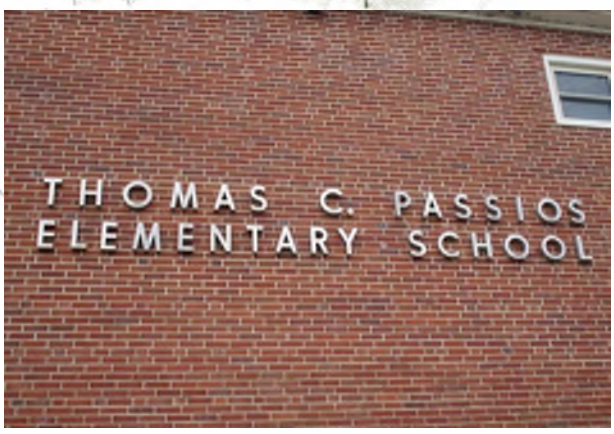

Final Report for Design Services for the Reuse of the TC Passios Building, Lunenburg, MA

Prepared For:
The Town of Lunenburg, MA

Prepared by:
DiGiorgio Associates, Inc.
529 Main Street, Suite 3303
Boston, MA 02129

DAI INC
A LiRo Group Company

March 19, 2021

DAI **DiGIORGIO** ASSOCIATES INCORPORATED
529 MAIN STREET · SUITE 3303 · BOSTON , MA 02129 · TEL (617) 723-7100 · FAX (617) 723-9113
A LiRo Group Company

March 19, 2021

Ms. Heather Lemieux
Town Manager
Town of Lunenburg
17 Main Street
Lunenburg, MA 01462

RE: Architectural and Design Services for Thomas C. Passios Building Reuse Study
Final Report
1025 Massachusetts Ave.
Lunenburg, MA 01462
DAI Project No.: 20-138-2329

Dear Heather,

On behalf of our team, DiGiorgio Associates, Inc./LiRo Group, is pleased to submit the Final Consolidated Study Report for this project.

The report summarizes and documents the series of tasks identified in our Contract with the Town and includes the final building reuse design plans, which were approved by the TCP Building Committee and the final construction cost estimate.

We thank you for the opportunity to work with you, members of the TCP Building Committee, and Town and School Administration staff.

Sincerely,

Thomas M. Lam, AIA, LEED AP, NCARB

Ed DiSalvio

Ed DiSalvio, PE

C: Greg Roy, Chair, TCP Building Committee

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Town of Lunenburg
Reuse of TC Passios Building
Project #: 20-138-2329
FINAL REPORT
March 19, 2021

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DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company

1 Executive Summary

a) DiGiorgio Associates, Inc. was retained by the Town of Lunenburg, MA to perform programming and design development-level design and cost estimating services for the reuse of the former TC Passios Elementary School Building as a multi-use facility for Town Hall Offices, School Administration Offices, Public Cable TV spaces, and community spaces including meeting rooms.

The Passios Elementary School was constructed circa 1952. The building is single story, 55,000 square feet in area, with a partial second floor adjacent to the gymnasium. Drawings for the original school building are dated 1951 and a drawing for a north classroom addition is dated 1952. There was an addition to the original building circa 1975 that added classrooms. In addition, two small CMU structures are attached to the original building, one for the boiler room/garage the other for the additional 1975 classroom space.

Our initial project kick-off meeting with the TCP Building Committee and Town stakeholders was on March 11, 2020. The project was delayed shortly thereafter due to Covid. Design services were authorized to begin by the Town in May 2020.

During the beginning phase of this project, the design team began visioning sessions with the TCP Building Committee and the various User Groups that were anticipated to be relocated into the TCP Building. Multiple space needs assessments and conceptual floor plans were developed.

In July of 2020, multidisciplinary teams of architects and engineers made evaluations of the existing building and site to determine existing conditions and to identify building components and systems that were in need of repair or replacement. A similar evaluation was also performed of the exterior building property. A formal land survey of the 12 acre site was also performed. In addition, during the summer the design team performed hazardous materials sampling and testing for building materials such as asbestos, lead-based paint, and PCBs. The traffic engineering team performed a traffic study that included five intersections surrounding the property and the environmental engineering team performed a Phase 1 assessment of the building and the site. The Appendix to this report includes these various specialty study reports and findings.

There were numerous meetings with the various proposed building user groups to identify their space and programming needs as well as 14 meetings with the TCP Building Committee, with the last official meeting held on January 27, 2021. DiGiorgio also participated with Town Meeting presentations for this project. Throughout the course of this project, many design plans were developed, with the final TCP Building Committee approved plans, and associated construction cost estimate being included in the Appendix to this report. Based on the final design plans and program as approved by the TCP Building Committee, the estimated cost of construction to renovate the existing TC Passios building and surrounding site is $18,380,000. Adding soft-costs brings the total estimated project cost to $23,570,000.

2 Methodology of Field Work

a) On July 22 and 23, 2020, a multidisciplinary team of architects and engineers from DiGiorgio performed visual observations of the existing interior and exterior areas of the existing TC

Passios building to document the existing conditions of the building and needed repairs. Our environmental engineers also performed fieldwork associated with the Phase 1 environmental assessment and hazardous materials assessment. In addition, our site/civil engineering subconsultant was also on site to make observations of the existing site elements. On August 13, 2020, additional on-site observations were made by our architect. In September additional testing was performed to identify lead-based paint and PCBs. Our traffic engineers performed the traffic study counts in October, after school reopened. Inaccessible areas such as crawlspaces and attic spaces were not entered. Representative observations were made at accessible locations. Our field-team coordinated with Mr. John Londa, Director of Facilities for the Town of Lunenburg.

3 Limitations

a) The DiGiorgio team made representative visual observations of accessible and exposed areas of the building for this assessment on the dates of the site visits. Crawlspaces and attics were not accessible. Other than taking samples for the asbestos and PCB testing, no destructive or non-destructive testing was performed.

4 Existing Conditions Assessment Summary

4.1 Overview of building history and usage

The TC Passios Elementary School was constructed circa 1952. The building is single story, 55,000 square feet in area, with a partial second floor adjacent to the gymnasium. Drawings for the original school building are dated 1951 and a drawing for a north classroom addition is dated 1952. There was an addition to the original building circa 1975 that added classrooms. In addition, two small CMU structures are attached to the original building, one for the boiler room/garage the other for the additional 1975 classroom space.

4.2 Civil Engineering

(i) Overview:
1. The Passios Elementary School was constructed circa 1952. The parcel is approximately 506,390 square feet in area (approximately 11.6 acres), with a partial second floor adjacent to the gymnasium. The grounds are generally in fair condition with some areas that are in need of repair or upgrade.

(ii) Building Exterior:
1. The main entrance to the site is off of Massachusetts Avenue with additional access from the West via Memorial Drive (access is controlled by a swing gate) and from the North via a driveway past the Middle/High School from Oak Street.
2. Bituminous Concrete Sidewalks
   a. The bituminous concrete sidewalks adjacent to the building are generally in poor condition and are in need of major maintenance or replacement with some minor sections that are in fair condition with some crack maintenance required.
   b. The bituminous concrete sidewalk on the north side of the driveway from the front of the building out to Memorial Drive is in poor condition and in need of major maintenance or replacement.

   c. The bituminous concrete sidewalk adjacent to the rear of the Library and the Brooks house is in fair condition with some crack maintenance required.
   d. The bituminous concrete sidewalk from Massachusetts Avenue to the Lunenburg Middle/High School is in fair condition with some crack maintenance required.
3. Cement Concrete Sidewalks
   a. The cement concrete sidewalk in the front of the building is in poor condition and is in need of major maintenance or replacement. One section to the East seems to be newer and in fair condition with no major maintenance required.
4. Bituminous Driveways and Parking Lots
   a. The bituminous concrete driveway from Massachusetts Avenue to the Lunenburg Middle/High School is in fair condition with some crack maintenance required.
   b. The bituminous driveway in the front of the building is in poor condition and in need of major maintenance or replacement. There is no curb on the South side of this driveway and the adjacent lawn is being damaged from apparent vehicular traffic and migration of material from the adjacent paved surface.
   c. The bituminous concrete driveway adjacent to the rear of the Library and the Brooks house is in fair condition with some crack maintenance required.
   d. The bituminous concrete parking lot behind the Brooks House has linear cracking that is need of maintenance and sealing.
   e. The bituminous concrete parking lot the East of the building has a portion that is in fair condition with some crack maintenance required and a section that is in need of major maintenance measures or replacement. (Subsequent discussions with the TCP Building Committee indicated that the East parking lot would remain as-is for cost savings as shown on the 1/29/21 site drawings. See Appendix)
5. Gravel Parking area on the North side of the building is in fair condition. It is advised that this area have a barrier installed to better define the parking area and suspend the migration of the gravel material onto the lawn and landscaping.
6. Parking – Demolition of the North addition to the building would allow for the reconfiguration of parking and the addition of landscape and hardscape features. Integration of the area with the existing gravel parking lot could enhance parking and vehicle circulation throughout the campus.
7. Handicap Ramps at Building Entrances – Some of the ramps that are to remain, around the building are to be removed and replaced to be in ADA compliance.
8. Handicap Ramps at Sidewalk Transitions – Some of the ramps that are to remain, within the sidewalks are to be removed and replaced to be in ADA compliance.
9. Site Lighting – Site lighting is recommended in the areas of the new parking lots via the use of free-standing light poles.
10. Traffic – A traffic impact study was performed at (5) five intersections in the area of the TC Passios building as part of this project. In addition to analyzing these five intersections, associated curb ramps, sidewalks, crosswalks, and the three parking areas around the TCP building were analyzed. Current and future traffic demands were included in this study. The results of this study are included in the attached Traffic Impact Study Report, which is included as an appendix to this report. Please

also refer to the *Recommendations for Building Reuse* (Section 6) for additional comments.

11. Subsurface Drainage System – Plans of the existing subsurface drainage system that was installed as a part of the new high school project. There appears to be adequate capacity, with some minor modifications, in this system to handle the increased runoff from any proposed pavement.
12. Surface Drainage – There were intermittent showers on one day of the site visit. The parcel seemed to handle the surface water fairly well with minimal localized puddling in low areas. These depressions would be eliminated if the maintenance and or replacement of poor pavements was performed as suggested.
13. Sewer – Two sewer laterals exit the building on the West side of the building. These were deemed to be adequate for the proposed remodel.
14. Water – There are three (3) water connections to the south side of the building. Two six (6) inch lines are for fire suppression while the other is for domestic use.
15. Gas – Natural gas service is provided to the East side of the building. The natural gas line is a six-inch PVC gas line.
16. Electric – The building appears to be serviced by Overhead Electrical wires with a connection on the east side of the building.
17. Telecommunications - The building appears to be serviced by Overhead Communication wires with a connection on the east side of the building.
18. Landscaping – The site has many large mature trees (mostly maple, spruce, and cherry). Further analysis is required to confirm species and native/invasive status. The front of the building has foundations plantings consisting of Yews, Lilac, Hosta, and daylilies as well as burning bush (invasive). The addition on the west has no foundation plantings with maintained lawn up to the edge of the building envelope. A few large mature trees provide canopy in the north west lawn area. Large maples line the western edge of the gravel parking area to the north of the site. A large white pine is located at the south east corner of the gravel parking area adjacent to the access road. The “courtyard” on the eastern side of the building consists mostly of lawn with (3) large Yews. The western edge of the property transitions sharply from maintained lawn area to dense woodland. The edge of the woodland consists of invasive shrubs and vines commonly found at such transitions. Overall, the lawn areas on the site appear to be in average condition with occasional bare spots and areas adjacent to vehicular traffic in lesser condition.

4.3 Architecture

(i) Narrative:

1. Architecturally, the building overall is in good condition, but there are areas that require remedial repair and maintenance. The building is a steel frame and wood plank structure. The exterior envelop is a mix of rubber roof membrane and metal roofing with brick veneer walls and aluminum insulated windows.
2. Previous reports completed by Tappe Architects and Vertex Architecture, Inc. have been reviewed and were found to be generally consistent with current observations.

(ii) Code and Accessibility Overview:

1. Overview - The Town of Lunenburg is proposing to use the existing TC Passios Elementary School for Town Offices. This Architectural Building Code Review is in support of a Feasibility Study to define a scope of work for the reuse and is based upon a proposed layout plan dated January 2021.
2. The proposed plan encompasses the following:
    a. Demolition of the CMU classroom addition at the plan Northwest.
    b. The West and North wings (over 60% of the building area) are envisioned to have a significant reconfiguration of interior spaces.
    c. The South wing houses large assembly spaces and the configuration is planned to be unchanged but will have upgraded finishes.
3. Existing Building - The TC Passios Elementary School was built circa 1951 as a school for students grades one through five. An addition was constructed circa 1952, to accommodate additional classrooms for 355 total students. In 2013, the town voted to no longer use the building as a school. Since then, the building has been maintained by the town and used for business uses.
    a. The Feasibility Study proposed use of the building is Town offices (Business, Educational and Assembly uses) and will not be a change in use, as verified by the Lunenburg Building Department.
4. Applicable Codes - Mass Building Code 780 CMR Ninth Edition - The Ninth Edition of the Massachusetts State Building Code Chapter 34: Existing Building Code adopts the International Existing Building Code - 2015 (IEBC) with Massachusetts amendments.
5. IEBC Review
    a. Classification of Work
        i. Section 505, Alteration - Level 3
        ii. The project Work Area is classified as Alteration Level 3; where the work area exceeds 50 percent of the building area.
        iii. Section 505.2, Application states Level 3 alterations shall comply with the provisions of Chapter 7 and Chapter 8 for Level 1 and 2 alterations respectively, as well as the provisions of Chapter 9.
    b. Building Elements and Materials
        i. Section 803.4, Interior Finish
        ii. Interior finish of walls and ceilings of the Work Area shall comply with the requirements of the International Building code for Business occupancy classification.
    c. Fire Protection
        i. Section 804.2.1.1, Supplemental Automatic Sprinkler System Requirements
        ii. Where the work area on any floor exceeds 50 percent of that floor area, sprinklers must be installed throughout the floor.
    d. Means of Egress
        i. Section 805
        ii. The provisions of this section are applicable only when the alteration work area includes exits or corridors shared by more than one tenant.
        iii. It is the intent of the design for newly configured means of egress within the Work Area shall comply with the requirements the IBC.
    e. Section 705 – Accessibility

i. The Work area alterations shall comply with applicable provisions in IEBC Sections 705.1.1, 705.1.10, 705.1.12, 705.1.13, Chapter 11 of the IBC and CMR 521; Architectural Access Board.

f. Section 807 – Structural
   i. Refer to the Structural portion of the Study.
g. Section 808 – Electrical
   i. Refer to the Electrical portion of the Study.
h. Section 809 – Mechanical
   i. Refer to the Mechanical portion of the Study.
i. Section 810 – Plumbing
   i. Refer to the Plumbing portion of the Study.
j. Section 811 – Energy Conservation
   i. Any new elements, within the work area, or systems that are extended, are required to meet the applicable energy provisions of the International Energy Conservation Code.

(iii) Exterior Envelope:

1. Roofing
   a. Low-Slope Roofing – The low-slope roofing is a fully adhered rubber membrane over rigid insulation on wood plank construction. The condition of the roofing including the roofing penetrations is fair to poor and should be replaced in its entirety, including all new roof penetrations, roof insulation, roof drains, domed skylights, and perimeter edge flashing. Active water leaks were observed in the 1975 addition and many patches were observed in the overall roof membrane. Roof ponding was observed at several locations. The locations of roof drains and proper roof pitch to roof drains needs to be considered in the roof replacement project. Other considerations; internal roof ladders with roof hatches should be provided for maintenance and roof security such as cameras.
   b. Steep-Pitched Roofing – The steep-pitched roofing is standing seam metal roofing that is in good to fair condition. The metal roofing system requires maintenance and repair. The roof windows were removed from the classrooms and replaced with sheet metal. This is inadequate and should be replaced.
2. Façade
   a. Fascia and Soffit – The fascia and soffits are constructed of painted finish wood and are in disrepair. Replace 33% of the finish wood, refinish, and paint the remainder.
   b. Brick Veneer – the exterior brick veneer is in good condition. The mortar is worn and cracked in about 17% of the wall area and requires the joints to be repointed and cracked bricks replaced. Masonry lintels are in poor condition and should be repaired and replaced. (Refer to structural section of this report for additional information).

c. Concrete Masonry Units – Many areas show deteriorated and cracked blocks and mortar. (Refer to structural section of this report for additional information).
d. Masonry Chimney – the brick masonry chimney at the boiler room shows cracking and spalled bricks. The chimney needs significant repair, repointing, and partial rebuilding. Depending on the HVAC solution (since the boilers are over capacity), the chimney should be considered to be razed. (Refer to structural section of this report for additional information).
e. Fenestrations
    i. Classroom Windows – The classroom aluminum window is a combination of fixed and mostly double hung. The windows are in fair usable condition. There are aluminum panels between and above the double hung window that need to be replaced. The insect screens on all windows need to be replaced.
    ii. Clerestory windows that were not de-glazed and covered are in poor condition and need to be replaced/reglazed.
    iii. Lobby Windows – Wood windows at front entrance lobby are in fair condition. They need to be refinished and re-glazed.
    iv. Insulated Translucent Panels – KallWall panels are in fair usable condition.
    v. Exterior Louvers – Exterior steel louvers are in poor condition and need replacement.
    vi. Exterior Doors and Frames and Sidelights – The main entrance doors are in good usable condition.
    vii. Sealant – The sealant at the perimeter of all exterior fenestrations have failed. All sealants need to be removed and re-sealed.
f. Exposed Foundation wall – the exposed foundation wall is in good condition with minor cracking.
g. Exterior Concrete Platforms, Stairs, and railings – are in poor condition and need to be repaired and rebuilt.
h. Entry Canopies – are in fair condition and need repair and maintenance.

(iv) Interior Conditions:
1. Floors
    a. Floor slabs on grade appear to be in good condition. Flooring is mostly VAT and is in aged condition and needs to be replaced. Some flooring was observed to be water damaged likely from past roof leaks.
    b. Gym flooring and wood framing is in good workable condition.
    c. The partial second floor wood framing adjacent to the gymnasium is out of level and requires repair and replacement.
2. Walls and ceiling
    a. Wall and ceiling finishes are aged and should be replaced as part of any renovation. Water damage from roof leaks was observed on ceiling and wall finishes at numerous locations. Several cracked glazed block walls were observed that require repairs.

4.4 Structural System

(i) Narrative: The existing primary structural system consists of isolated concrete spread footings for interior columns and continuous concrete strip footings below the exterior walls. The roof framing consists of full steel framing in some areas and a mix of steel framing with brick or CMU bearing walls in others. Secondary structural systems observed were typically wood framed. The secondary structural roof framing and ceiling framing is wood dimensional lumber (see photos). The 1975 addition is constructed using load-bearing CMU block walls, steel roof framing and metal roof decking. There are crawlspaces under many areas of the building. Overall, the exposed structural components appear to be in good condition. Areas of observed deterioration are noted herein.

Photo 1 Wood framed partition above ceiling.

Photo 2 Wood framed ceiling hung from structural steel above corridor.

Photo 3 Wood planking roof purlins.

(ii) Building Code Assessment: Governing Building Code is Massachusetts State Building Code 9th Edition (IBC 2015 and IEBC 2015 with MA Amendments): Given the extents of the proposed renovations and alterations to the existing TC Passios building, this project will be required to comply with Alterations – Level 3 in the IEBC Code. Level 3 alterations, as identified through the Work Area Method of the IEBC, need to comply with Chapter 9 of the IEBC. Per IEBC Section 907.4.1, an engineering evaluation and analysis of the lateral force-resisting system with all of its elements is required for the structure. It needs to be prepared by a registered design professional and submitted to the code official. The evaluation and analysis "establishes the structural adequacy"

of the altered structure. The proposed building alterations do not rise to the level of a substantial structural alteration per Section 907.4.2. Therefore, per 907.4.4, the existing lateral load-resisting system shall comply with Section 807.5. Based on the new renovation floor plan, an existing cmu wall, which may be acting as a shear wall, is being reduced in size. In addition, the lateral load–resisting system in the walls could not be identified based on field observations nor review of limited available original building design drawings. The full height cmu walls may have been designed as shear walls, but these walls are not located on both major axis of each building wing. Therefore, the existing building will need to be analyzed for the code required wind and seismic loads and it is recommended to add vertical bracing in walls that currently do not have a lateral load resisting system. Additional horizontal roof bracing may also be required. Additionally, Section 907.4.5 requires installation of wall anchors on masonry walls at the roofline and floor level for seismic loads, unless an evaluation demonstrates compliance of existing wall anchorage. Wall anchors will need to be installed on the existing masonry walls per this code requirement.

Chapter 9 also specifies that buildings must comply with the requirements of Level 1 and 2 alterations in Chapters 7 and 8, respectively. For new structural elements, section 807.2 requires that new structural elements, including connections and anchorages, shall comply with the International Building Code. For existing structural elements carrying gravity loads, section 807.4 specifies that alterations shall not reduce capacity of gravity load carrying elements unless it is demonstrated that said elements have capacity to meet design gravity loads of current International Building Code. It also specifies that existing structural elements supporting any additional gravity loads as a result of the alteration, shall comply with the International Building Code except for elements whose stress is not increased by more than 5%. For replacement of equipment on roofs or the addition or replacement of roofing, Section 707.2, specifies that if alteration results in additional dead load, structural components supporting work shall comply with gravity load requirements of the IBC. This is not required if the additional dead load does not increase force in load carrying members by more than 5% or when the addition of a second layer of roof covering over the existing single layer weighs 3 psf or less.

(iii) Conditions noted in Primary and Secondary Structural Systems:

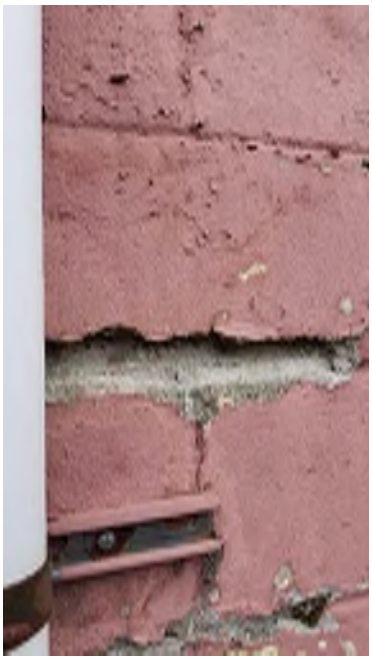
1. The exterior walls consist of either full width CMU block or brick veneer with CMU or wood framed back up wall.
2. Exposed concrete foundation walls: Several spalls and cracks were observed on the exterior of the exposed concrete foundation walls, which appear to be caused by past freeze-thaw damage to the concrete.
3. Front Entry: It was observed that the stonework at the front entry has worn mortar joints and cracked stones. This includes the stairs, landing, walls, and columns.
4. Boiler Room: Several cracks were observed thru the interior surface of the concrete foundation wall with evidence of water infiltration. Several interior cracks were also observed in the cmu bearing walls. The interior portion of the brick and block masonry at the chimney location shows significant water

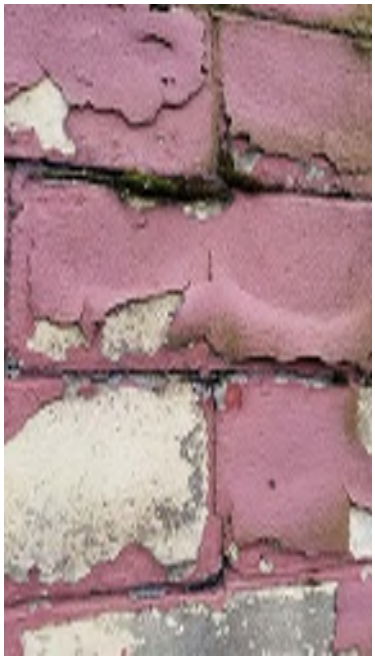
infiltration, damaged masonry, peeling paint, mildew growth and water-damaged wood roof framing.

5. The brick veneer is in relatively good condition with localized areas showing signs of efflorescence, cracked bricks, and deterioration of the mortar. The mortar is worn and cracked in about 17% of the wall area and requires the joints to be repointed and cracked bricks replaced. Exposed steel window and door lintels should have rust removed and be repainted with an epoxy paint or galvanizing coating system.

Photo 4 Efflorescence on brick veneer.

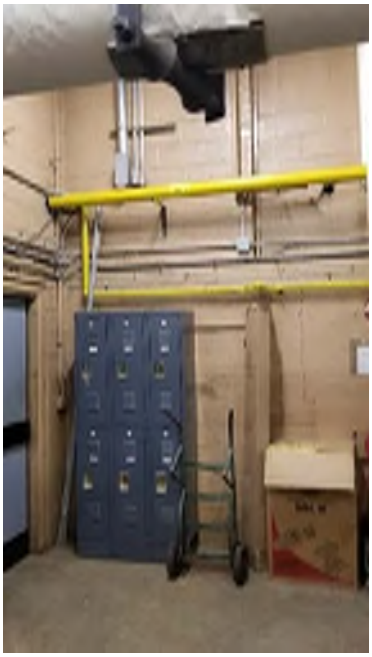
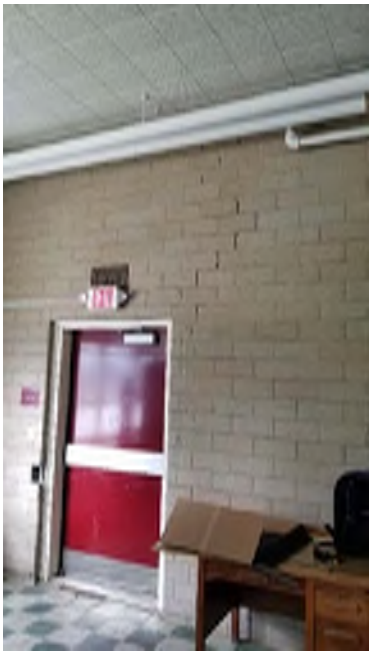
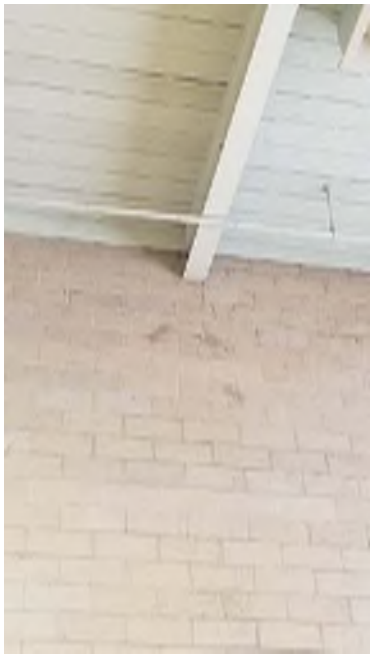
6. The CMU block is in poor condition as seen in numerous areas (boiler room, garage, 1975 addition). Deterioration was observed at mortar joints, as well as compromised face shells. Lastly, algae growth and paint peeling were observed in some areas. It is believed a non-breathable paint was used which would have sealed moisture in the CMU block walls and cause accelerated deterioration and freeze-thaw damage (See Photos No. 05-07).





From left to right: **Photo 5, Photo 6, and Photo 7** Paint peeling, algae growth, mortar joint and CMU block deterioration on maintenance garage. Similar conditions exist on the 1975 addition.

7. Various localized areas contained cracking in the brick and CMU, which is believed to be due to shrinkage from temperature changes and loss of moisture. The locations of cracking were at window/ door openings, beam bearing locations, and other miscellaneous locations (See Photos No. 08-10).

From left to right: **Photo 8** CMU block cracking below existing window opening; **Photo 9** Cracks in mortar joint around door in Cafeteria; **Photo 10** Cracks in mortar joint and block at beam bearing locations at Gymnasium.

8. Some areas showed accelerated deterioration in the brick and CMU mortar. These areas include the brick chimney, the maintenance garage, and 1975 addition. The shared and/or adjacent walls to the chimney also showed paint spalling, mortar deterioration, brick and block deterioration, and efflorescence (See Photos No. 11-13).

Photo 11 Masonry chimney.

Photo 12 Maintenance garage.

Photo 13 Maintenance garage.

9. In addition, improper framing support was observed at a skylight in the "Tool Room" (adjacent to the Boiler Room), and signs of moisture on the framing was also observed in this area (See Photo No. 14).

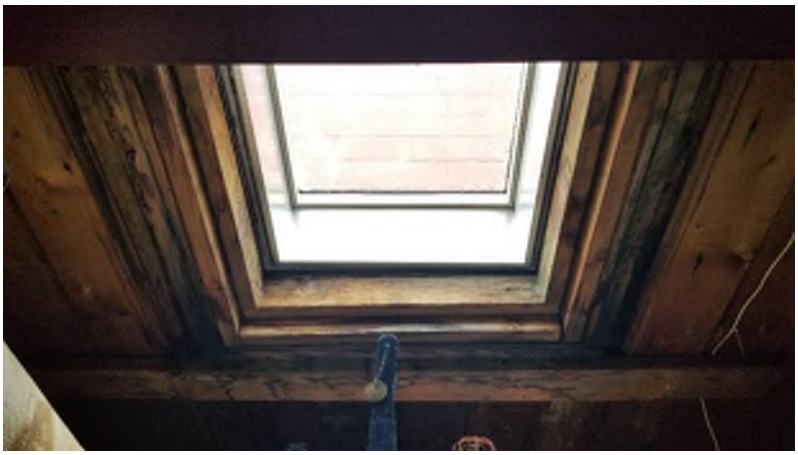


Photo 14 Moisture infiltration and improper framing at skylight in "Tool Room".

(iv) Repair Recommendations:

1. The primary recommendations pertain to the skylight framing and masonry chimney. These issues pose a life safety concern. The existing framing for the skylight is atypical and poses structural concern. The framing also shows signs of excessive moisture likely from skylight leaks. It is recommended that the opening be reframed with new wood framing members and a new skylight be installed. Refer to comments below pertaining to the chimney.
2. It is also recommended that a limited amount of exterior brick repointing be performed, to prevent accelerated deterioration and water infiltration. The mortar is worn and cracked in about 17% of the wall areas and requires the joints to be repointed and cracked bricks replaced. Exposed steel window and door lintels should have rust removed and be repainted with an epoxy paint or galvanizing coating system. All sealant joints associated with the masonry should be replaced.
3. Garage, boiler room, electrical room: For the CMU block deterioration, deteriorated and fractured block are recommended for replacement. The joints should be repointed and the block stripped of existing paint to be repainted with a breathable paint. It is estimated that 30% of the CMU block needs repairs and repointing. Note: Based on the planned new building design, the 1975 CMU wing will be completely demolished and is not included in the 30% quantity.
4. Boiler Room: the observed cracks in the concrete foundation wall and cmu block walls should be repaired. Further close-up inspection of the wood roof framing is required adjacent to the chimney due to observed water damage. These inspections and repairs should be included in a roof replacement project. The observed damages to the brick and CMU wall at the interior chimney location also requires repair for the full height of the wall for an approximate 10-foot width of wall surface. Assume 300 SF of interior brickwork repairs and 100 SF of wood roof framing and decking repairs.
5. Boiler Room Chimney: Based on the planned building renovations, the existing chimney will not be required for the new heating system. Due to the poor condition of the masonry chimney, it is recommended that it be demolished down to the ground and the interfacing wall and roof areas be repaired.

6. North-wing corridor: It was observed that an interior column that has a glazed block column cover, which is badly cracked and needs to be replaced. Replace 30 SF of glazed block column cover.
7. Front Entry: It was observed that the stonework at the front entry has worn mortar joints and cracked stones. This includes the stairs, landing, walls, and columns. The joints in the stonework require repointing and cracked stones should be repaired.
8. Exposed concrete foundation walls: Several spalls and cracks were observed on the exterior of the exposed concrete foundation walls, which appear to be caused by past freeze-thaw damage to the concrete. The spalls appear to be non-structural and should be patched as part of a brick-repointing project. Assume 100 SF of spall repair at various locations.
9. Structural building reinforcing: as noted in the building code section of this report, it is highly likely that new vertical bracing systems will need to be added to this building, new horizontal bracing added, and clip-angle connections installed at the top and bottoms of all masonry walls, to reinforce the structure for the proposed new uses and renovations. As a minimum, there should be one vertical brace in each exterior wall/orthogonal wall. The masonry wall clip-angles are typically spaced at 4-feet on-center maximum.
10. Refer to the hazardous materials reports in the Appendices for hazardous materials found in building paints, coatings, and sealants.

4.5 Mechanical System

(i) Narrative and energy assessment overview:
1. The existing HVAC air handlers are the original equipment installed when the building and corresponding additions were built in 1952 with an addition in circa 1975.
2. The equipment is for heating and ventilation only with no means of comfort cooling.
3. Some offices are currently cooled with window air conditioners.
4. In 2003, the steam coils in the HVAC units were replaced with heating hot water coils. This was corresponding with the removal of the steam boilers and the installation of hot water boilers.
5. The air handlers are well beyond their normal life cycle and it is recommended that they be replaced with new, more efficient equipment.
6. The installation of new air handling will allow for the addition of cooling utilizing a central cooling plant with chilled water coils in the air handlers.

(ii) Code assessment:
1. At the time of the initial assessment, the proper ventilation is unconfirmed
2. Ventilation rates have to be verified by calculation to ensure that code minimum ventilation is supplied to the spaces.
3. It is assumed based on the age of the HVAC equipment that it does not meet current state mechanical or energy codes.

(iii) Heating:
1. There are currently three boilers installed with a total capacity of 10,563 MBH output. One boiler was installed in 2002 and the other two boilers were installed

in 2003. These boilers are well within their expected life cycle and should last for 10-15 more years if maintenance is routinely completed.
2. This boiler plant originally served the elementary school and the high school. When the new high school was constructed, the connection to the elementary school boiler plant was discontinued.
3. As a result of the high school being disconnected, it was explained by the facility director that only one boiler typically operates and the other two remain idle.
4. For the renovated building program, it is anticipated that we will need approximately 2000 MBH output. This will only require that a single boiler operate at partial capacity on ASHRAE design day.
5. It is recommended that the Weil McLain boiler be removed as part of the renovation because it is not designed to operate as a condensing type boiler.
6. The boilers are currently not operating to maximize the full energy efficiency that they are able to achieve. This is in large part due to the finned tube radiation and coils that they serve not being sized appropriately to allow lower heating hot water supply and return temperatures.

(iv) Cooling:
1. Central cooling does not exist.
2. There are a few offices that are cooled with residential style window air conditioners.
3. It is recommended, based on the future building program that a centralized cooling plant be added.
4. The cooling plant could potentially be located in the boiler room with the removal of the Weil McLain cast iron boiler.

4.6 Electrical System:

(i) Narrative: Adequacy of the existing 800 Amp 208V/3 Phase electrical service will have to be assessed with any new designs. Addition of new HVAC cooling or large kitchen equipment could be a significant new electrical load that could require an upgrade to the existing electrical service.

(ii) Power: For the remaining circuit breaker panels, recommendation is to perform thermographic imaging of panels to verify proper connections and breaker loading.

(iii) Lighting: All existing lighting fixtures are fluorescent, with high output fluorescent fixtures in the existing Gym.

(iv) Fire Alarm System: Lunenburg appears to have a preferred fire alarm service provider. The existing panel would have to be assessed for expansion capability. The site visit revealed a very minimum number of smoke detectors and strobes throughout the building.

(v) Security System: There is an existing security panel present. It does a minimal amount of door contacts monitoring, and might have some cameras attached. It is monitored by the local Signet office.

(vi) There is an existing 70kW/87.5kVA diesel backup generator on-site. It appears to be in good condition and is exercised on a weekly basis. Re-use of this generator will have to be assessed, as it could be a viable source of emergency back-up power for Fire and Security panels, boilers, hot water pumps, some lighting and an IT Rack. This generator is not large enough to assume the full-building load.

(vii) Determination of PCB-based coolant in the existing power transformers in the transformer vault should be made, and if identified, its environmental impact should be assessed (see photo 16 herein). This assessment should be performed during the final design phase of this project.

Photo 16 Existing transformers located in vault.

4.7 Plumbing System

(i) Domestic water service into building does not have PRV. It is recommended to install PRV.
(ii) The Town reported that there is a high lead-content in the drinking water in this building. The future renovation project should replace all existing water piping with new piping.
(iii) Two domestic hot water heaters are currently fed by the boilers. It is recommended to replace these two water heaters with natural gas fired units.
(iv) Mixing valve already exists for 140°F hot water to kitchen. We have yet to receive new kitchen layout. Pending new kitchen layout may need to upsize system.
(v) The town has verified that the sanitary system, which is located under a slab, is tied into the municipal sewer.
(vi) Natural Gas piping adequate to add natural gas fired hot water heaters.
(vii) Roof drains are poorly installed allowing water to pool on the roof (see photo). There are no overflow drains for the roof. Several entrance vestibules do not have roof drains or scuppers. It is recommended to correct the poor installation of the roof drains, add roof drains at each of the entrance vestibules, and provide overflow drains or scuppers as required.

Photo 15 Poor installation of existing roof drains.

(viii) It is recommended that all existing plumbing fixtures be removed and replaced with low-flow type fixtures.

4.8 Fire Protection System:

(i) Narrative:

1. There are currently two separate sprinkler entrances to the facility.
2. The rooms that are currently classrooms do not have sprinkler coverage. It appeared that all the sprinkler coverage was in the corridors and in the larger high-density occupancy areas, which included the gymnasium and cafeteria.
3. The fire protection system will require analysis and upgrading as necessary to meet the current life safety and fire codes for the renovated building program. This will include occupancy type and classification.
4. The renovated program may require that the fire service size may increase.

4.9 Hazardous Materials:

This project included the representative sampling and testing of accessible materials that could potentially contain asbestos, lead-based paint, and PCB's. A separate report for each of these three types of materials are included in Appendix F of this report. In summary, asbestos containing materials were identified in the testing program as were lead-based and lead-containing paints.

The final design documents for the proposed building reuse will need to contain abatement requirements for the removal and handling of these materials during construction. Representative samples of caulking were sampled and tested for PCB content. Analytical results of the samples collected during the survey do not indicate the presence of PCB in the caulking materials sampled. As a result, special work practices or disposal requirements are not required to be performed during the renovation project.

4.10 Environmental Phase 1 Site Assessment:

(i) Narrative: This project included a Phase 1 Environmental Assessment of the building and property. Please refer to the full report in Appendix F of this report. This Phase I ESA was prepared in accordance with ASTM International's Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process - E1527-13 (ASTM E1527-13). The purpose of this assessment is to identify recognized environmental conditions (REC), historic RECs (HREC), and/or controlled RECs (CREC) associated with the Site.

(ii) Summary and Conclusions:

(a) Recognized Environmental Condition (REC) - Based on the information evaluated during this Phase I ESA, DiGiorgio/LiRo identified the following REC associated with the Site:

- Site Reconnaissance – Dark surface staining was observed directly under both sets of old oil-filled switchgear equipment in the electric/transformer room on the east side of the building. A floor drain is located approximately 4 feet away from the electrical equipment, near the blue transformers. Since the PCB content of the oil filled switchgear/surface staining and terminus of subsurface floor drain piping are unknown, potential exists for spills to reach the environment, thus it is considered a REC. We recommend that during the final design phase of this project that the surface staining be investigated and sampled to identify the content of the liquid stain and at that time a determination be made to inspect the floor drain.

(b) Controlled Recognized Environmental Condition (CREC) - Based on the information gathered during the Phase I ESA, no CRECs were identified in association with the Site.

(c) Historical Recognized Environmental Condition (HREC) - Based on the information gathered during this Phase I ESA, DiGiorgio/LiRo identified the following HRECs associated with the Site:

- Historical Spills – Two separate but related #4 fuel oil spills resulting from overflow of 10,000 gallon and 20,000 gallon USTs occurred on-Site on March 5, 1987. Per interviews with Mr. John Londa, Director of Facilities, Captain James Ricci, Captain of Lunenburg Fire Department (Fire Prevention), a 2013 Phase I ESA prepared by Lord Associates, Inc., and information provided by MassDEP, the 10,000 gallon UST was removed on April 24, 1987 by Zecco, Inc and the 20,000 gallon was removed on July 3, 2007 by D B Environmental. According to data provided to DiGiorgio/LiRo by MassDEP, both historic oil spills were reported as closed in the agency's regulatory database, and are thus considered an HREC.

Although technically not defined as a REC, the following may pose potential environmental considerations to the Site:

- Records obtained from the Town of Lunenburg regarding asbestos abatements performed at the Site, as well as the Site's presence in the ASBESTOS database in the EDR, indicate that the likeliness of asbestos-containing materials on-Site presents an environmental consideration for any demolition or renovation plans for the property. Please refer to the Hazardous Materials section of this report for additional information about asbestos-containing materials.

DiGiorgio/LiRo identified the following data gaps that might affect the evaluation of RECs associated with the Site:

- Responses to the FOIL requests are pending from the Town of Lunenburg School Department and Massachusetts Department of Public Health (Bureau of Environmental Health). If any pertinent information is provided in these responses, DiGiorgio/LiRo will prepare an addendum summarizing these findings. As of the date of this report, there have been no pertinent responses.

5 Space Needs Analysis

Our design team began this project by reviewing the previous space needs assessments, then we had multiple meetings with the proposed user groups to determine their space requirements, in addition to multiple meetings with the TCP Building Committee to discuss space needs. For details on the program space needs and the resulting final space allocations for the building users, please refer to Appendix A for user group meeting notes and Appendix B for the final approved space allocations.

6 Recommendations for Building Reuse

6.1 Selected Design Development Options

6.1.1 Civil/Site/Parking

Throughout this project, multiple site designs were presented to the TCP Building Committee and user groups. For details on the final civil, site, and parking designs approved by the TCP Building Committee, refer to the Site Plans dated 1/29/21 included in Appendix C in this report. In addition, our team performed a formal land survey of the 12 acre site. In Appendix C are the signed and sealed Land Survey drawings.

6.1.2 Traffic

As part of this project, our team performed a traffic study of this site, including five surrounding intersections, to determine the effects of reopening this building for the proposed new uses. Refer to the Traffic Impact Study Report, which is included in Appendix F in this report for the details pertaining to the traffic impact study.

Summary Conclusion of the Traffic Impact Study Report: The existing conditions analysis shows that the current sidewalks or curb ramps needs lots of improvement to meet ADA compliance. These

facilities need to be fixed or even re-built to improve the pedestrian safety. In addition, pavement markings such as faded crosswalk markings need to be re-striped to increase the visibility and therefore improve the safety issues. Existing traffic conditions are good at unsignalized intersections and the signalized intersection is also acceptable. If the building is renovated into the proposed new uses, significant traffic impacts are not expected since the traffic demand is not extraordinarily increased. The traffic pattern will be very similar to existing conditions. The capacity of each intersection is capable to carry projected traffic demand. Meanwhile, significant impacts on parking are not expected either. Although parking demand may increase, there are sufficient parking stalls to meet the Town's By-Laws after building renovation.

In conclusion, roadway facilities like sidewalks, curb ramps and crosswalk pavement markings need to be updated with the renovation of the building. The traffic controls at either signalized or unsignalized intersections are acceptable and no further improvements are needed at Estimated Completion Time (ETC). For the conditions 10 years after the project is completed, traffic signal optimization is recommended for the signalized intersection.

Several questions were asked by the TCP Building Committee with regards to the traffic impact study. The questions and our responses are below:

Question: What is the traffic engineer's opinion if the gate was opened to Memorial Drive with traffic driving from the high school towards Memorial Drive (Senior Center/Library areas)?
Response: It is our opinion that if the gate were to be left open the driveway directly in front of TCP building would be used as a cut-through from the high school to the Memorial Drive structures, such as the library. This would create additional traffic directly in front of the TCP building and may invite accidental two-way traffic coming from Memorial Drive to the front of the TCP building creating a hazard for people using the crosswalk and walking in the area of the flag pole island. It would be unsafe to allow two-way traffic.

Question: Is the proposed traffic circulation in front of the TCP building, at the flagpole island, one-way?
Response: The current design that we recommend and show with the new diagonal parking around the flagpole island is one-way counter-clockwise driving circulation.

The building committee also raised concerns about vehicles queuing up along the roadway running between the TC Passios Building and the Middle/High School during morning and afternoon school drop-off and pick-up hours. DiGiorgio recommends additional signage be installed as well as having school staff out along the sidewalk to keep traffic moving so cars do not sit idle longer than necessary. The signage may state strict time periods when school drop-off and pick-ups will be allowed.

6.1.3 Architectural

Throughout this project, our architectural team developed many floor plan layouts, met multiple times with the proposed user groups, and had 14 formal meetings with the TCP Building Committee to present a variety of building reuse plans. The final design development floor plans, which were approved by the TCP Building Committee are included in Appendix D in this report,

along with enlarged department floor plans. In addition, Appendix E contains recommendations for building materials, door and room finish schedules, and FF&E requests from the various user groups. These final approved documents were used to develop the final construction cost estimate prepared on 2/12/21.

6.1.4 Structural

Refer to the Existing Conditions Assessment section of this report for repairs that are required to this building even if the building is not renovated for the proposed reuses.

Structural repairs and modifications required due to the proposed reuse of the building include:

1. Boiler Room Chimney – as previously noted, the existing brick masonry chimney is in poor condition. If the building reuse project does not move forward, the chimney requires significant restorations, which could include a partial rebuild of the chimney. If the proposed building reuse design is constructed, this chimney will not be required for the heating system. It would then be recommended that the entire chimney be demolished and the interfacing walls and roof areas repaired.
2. Structural building reinforcing – As previously noted in the structural section of the Existing Conditions Assessment, the Massachusetts State Building Code requires the building be analyzed for wind and seismic loads. Based on our observations of the existing structure, it is highly likely that new vertical bracing systems will need to be added to this building, new horizontal bracing will need to be added, and clip-angle connections will need to be installed at the top and bottoms of all masonry walls, to reinforce the structure for the proposed new uses and renovations. As a minimum, there should be one vertical brace in each exterior wall/orthogonal wall. These new vertical braces may require a new foundation element if an existing foundation doesn't exist at a brace location. The masonry wall clip-angles are typically spaced at 4-feet on-center maximum and are anchored into the wall, floor and roof structures. In addition, new roof top equipment will require supplemental framing to be added to support that loads of the new equipment. Also, if new roof suspended systems are added as part of the new design, additional supplemental framing may be required to support the new systems.

6.1.5 Mechanical, Electrical, Plumbing, & Fire Suppression

6.1.5.1 Mechanical

Mechanical systems for this project will be designed consistent with the following documents and other requirements:

1. International Building Code, 2015 Edition with Massachusetts Amendments
2. International Energy Conservation Code, 2015 Edition with Massachusetts Amendments.
3. International Mechanical Code, 2015 Edition with Massachusetts Amendments.
4. Commonwealth of Massachusetts Plumbing Code (248 CMR).

The following space design criteria were used:

- 72°F for cooling
- 70°F for heating
- Ventilation rates as specified in ASHRAE 62.1.

Ambient design conditions to be selected for Worcester, MA. as outlined in ASHRAE Fundamentals 2009, as follows:

- 95°F dry-bulb and 76°F wet-bulb for summer
- -10°F dry-bulb for winter

Insulation systems for building shall be for building shall be for "Zone 5" in accordance with International Energy Code, Table 301.1.

Heating and cooling load calculations will be prepared in accordance with International Energy Code Paragraph 503.2. DiGiorgio Associates will prepare HVAC load calculations using Trane Trace 700 Building Energy and Economic Analysis.

6.1.5.1.1 HVAC Systems

Primary Heating System

There are currently three boilers installed with a total capacity of 10,563 MBH output. One boiler was installed in 2002 and the other two boilers were installed in 2003. These boilers are well within their expected life cycle and should last for 10-15 more years if maintain is routinely completed. This boiler plant originally served the elementary school and the high school. When the new high school was constructed, the connection to the elementary school boiler plant was discontinued. As a result of the high school being disconnected, it was explained by the facility director that only one boiler typically operates and the other two remain idle.

For the renovated building program it is anticipated that we will need approximately 2,000 MBH output. This will only require that a single boiler operate at partial capacity on ASHRAE design day.

It is recommended that the Weil McLain boiler be removed as part of the renovation because it is not designed to operate as a condensing type boiler.

The boilers are currently not operating to maximize the full energy efficiency that they are able to achieve. This is in large part due to the finned tube radiation and coils that they serve not being sized appropriately to allow lower heating hot water supply and return temperatures.

The boiler plant will be controlled by the BAS.

Hydronic hot water piping of Schedule 40 steel pipe, joined using threaded fittings, welded fittings or with grooved mechanical couplings/grooved pipe fittings. Hydronic hot water piping may be constructed of Type "L" copper with soldered joints or press-type joints.

Chemical treatment of existing hydronic hot water system will be through existing chemical treatment systems. Mechanical Contractor will be responsible for maintaining proper chemical treatment in new/existing piping systems.

- All hydronic hot water piping to be labeled.
- All hydronic hot water valves to be identified with valve tags.
- All new hydronic heating systems shall be pressure tested.
- All new hydronic hot water heating systems will be insulated.
- Hydronic hot water systems shall in insulated as follows:
  - Pipe sizes 1-1/2" and smaller = 1" insulation
  - Pipe sizes 1-1/2" and larger = 2" insulation
  - Thermal conductivity of insulation shall be between 0.27 and 0.30 BTU*in/(h*ft^2*°F)
- Hot water pumps, heating hot water air separators and compression tanks.
  - Operating Temperature: 100 to 200°F.
  - Insulation Material: Mineral fiber.
  - Insulation Thickness: 2"
  - Field-Applied Jacket: Glass cloth.
  - Field-Applied Jacket: Foil and paper.
  - Vapor Retarder Required: Yes.

Cooling Systems

Central cooling does not exist.

There are a few offices that are cooled with residential style window air conditioners.

It is recommended, based on the future building program that a centralized cooling plant be added.

The cooling plant could potentially be located in the boiler room with the removal of the Weil McLain cast iron boiler.

Duct Systems

All ductwork will be constructed in accordance with SMACNA Standards and Construction Documents, whichever is more stringent.

New supply and return air ducts shall be insulated with a minimum of R=5 insulation. Ductwork on roof will be insulated with two layers of 2" thick polyisocyanurate insulation covered with weather proof jacket.

All exhaust ductwork within 10'-0" of penetration of wall or roof assemblies will be insulated.

Air systems shall be balanced by an independent testing agency.

All new duct systems will be pressure tested.

All new duct systems will be labeled.

Miscellaneous HVAC Systems

IT/IS rooms will be cooled utilizing air handling units in project area to maintain temperature of room between 64 and 75 degrees. Air handling units serving IT/IS rooms will be on emergency power.

Main electrical switch gear rooms will be cooled in summer using split system air conditioning units.

All miscellaneous HVAC systems shall be controlled by the BAS.

Control System

The renovated project will utilize a new building automation system (BAS) for building control.

6.1.5.1.2 Plumbing Systems

Domestic Water Systems

The building contains two separate domestic water entrances. These entrances should be re-piped with new backflow preventers and pressure reducing valves. The water entrances do not currently contain pressure reducing valves.

The existing domestic water piping will be removed and replaced due to the presence of lead in the piping.

Domestic cold water will insulated with 1/2" of insulation having a thermal conductivity not exceeding 0.27 BTU*in/(h*ft^2*°F).

All domestic water piping will be disinfected in accordance with requirements of municipal water supply and Commonwealth of Massachusetts Plumbing Code requirements.

All domestic cold water piping will be pressure tested.

All domestic cold water piping will be labeled.

All domestic cold water valves will be tagged.

Domestic hot water is currently generated with indirect fired water heaters that utilize hot water from the boiler plant. It is recommended to replace the two water heaters with natural gas fired units so the system is decoupled from the building heat.

Domestic hot water system will be recirculated. Recirculation pumps will be controlled and monitored by Building Automation System.

All domestic hot water piping will be pressure tested.

All domestic hot water piping will be labeled.

All domestic hot water valves will be tagged.

All domestic hot water recirculation systems will be balanced.

All domestic hot water piping will be insulated as follows:

- Domestic hot and recirculated hot water.
  - Operating Temperature: 60 to 140°F.
  - Insulation Material: Mineral fiber.
  - Copper Pipe, all pipe sizes = 1”
  - Thermal conductivity between 0.22 and 0.28 BTU per inch/(h*ft^2*°F). Exception: All domestic hot water piping mains operating at 140°F shall have 2” thick insulation.
  - Field-Applied Jacket: Foil and paper.
  - Vapor Retarder Required: Yes.

<u>Sanitary and Storm Piping Systems</u>

The existing below slab sanitary piping locations could not be verified. It is recommended to hire a company to video the lines to determine the location, invert, and condition prior to construction.

The roof drainage system is not currently draining correctly due to roof sloping issues and a lack of overflow drains. The roof drainage system issues will be corrected and new overflow drainage piping will be installed.

All new sanitary, waste, vent and storm systems located below grade shall be service weight, hub and spigot, cast iron pipe and fittings.

Sanitary, waste, vent and storm systems located above grade shall be no-hub cast iron or copper. All no-hub couplings will be 4-band, heavy duty, Anaco or equal.

Where required, overflow drains will be installed on roof drainage systems. Overflow drains will be piped independently to building exterior and will discharge through a downspout nozzle located at 12" above grade.

Roof drain bodies, overflow drains and storm piping systems shall be insulated with 1/2" of insulation to prevent condensation.

Sanitary, vent and storm piping shall be tested.

Sanitary, vent and storm piping will be labeled.

Natural Gas System

Natural gas systems will be extended as necessary to serve new gas fired equipment such as domestic water heaters.

Plumbing Fixtures

The existing plumbing fixtures will be removed and commercial grade, low-flow plumbing fixtures will be installed.

6.1.5.1.3 Fire Suppression Systems

Sprinkler Systems

The proposed building renovation will be protected by a hydraulically designed fire suppression system designed in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems.

The building currently contains two separate sprinkler entrances. Both entrances will be re-piped with new alarm valves and devices. The two systems will be looped together if possible, in order to provide system redundancy.

The current sprinkler system only provides coverage for the corridors and the gymnasium and cafeteria/kitchen area. All other spaces are currently not sprinklered.

The sprinkler system will be extended to serve the entire building.

Due to the presence of combustible wood construction above the ceiling, upright sprinkler heads will be required above suspended ceilings.

A new fire pump is not anticipated for project.

General Requirements of Fire Suppression Systems

Fire suppression system will be a vendor designed system.

Fire suppression piping systems 2" and smaller to be constructed of Schedule 40 steel pipe with cast/malleable iron threaded fittings.

Fire suppression piping systems 2-1/2" and larger to be constructed of Schedule 10 steel pipe with grooved couplings and fittings.

All dry fire suppression systems will be constructed of galvanized steel pipe and galvanized fittings.

All new fire suppression piping to be tested.

All fire suppression piping will be labeled.

All fire suppression valves will be tagged.

6.1.5.1.4 Electrical Systems

Electrical System

Adequacy of the existing 800 Amp 208V/3 Phase electrical service will have to be assessed with any new designs. Addition of new HVAC cooling or large kitchen equipment could be a significant new electrical load that could require an upgrade to the existing electrical service.

IEBC Building Code assessment- Newly-installed electrical equipment, predominantly lighting and controls, will be designed to be consistent with the International Energy Conservation Code, 2015 Edition with Massachusetts Amendments. All newly installed electrical equipment and wiring will comply with NFPA 70 National Electrical Code. For Chapter 34 Amendments for Massachusetts, building investigation and evaluation for lighting, will be per 780 CMR 34.00 Section 104.2.2.1

Power: For the remaining circuit breaker panels, recommendation is to perform thermographic imaging of panels to verify proper connections and breaker loading.

Lighting: All existing lighting fixtures are fluorescent, with high output fluorescent fixtures in the existing Gym.

Fire Alarm System: Lunenburg appears to have a preferred fire alarm service provider. The existing fire alarm system will be replaced in its entirety. There are currently a very minimum number of smoke detectors and strobes throughout the building. An addressable multi-zone digital fire alarm system will be installed in the building. All fire alarm devices (smoke detectors, smoke dampers, heat detectors, horn/strobes, pull stations, sprinkler flow/tamper switches, etc.) will be addressable. There will be a new fire alarm annunciator panel located at the entrance for fire department use.

There is an existing 70kW/87.5kVA diesel backup generator on-site. It appears to be in good condition and is exercised on a weekly basis. Re-use of this generator will have to be assessed, as it could be a viable source of emergency back-up power for Fire and Security panels, boilers, hot water pumps, egress and limited lighting and an IT Rack. This generator is not large enough to assume the full-building load.

6.1.6 Security

The building contains an existing security panel. It does a minimal amount of door contact monitoring and video monitoring. It is monitored by the local Signet office.

A building security system will be designed and installed by a security system contractor. The system will include:

Card access readers at secure access doors.
Magnetic locks or electric strikes at all secure access doors.
Security cameras at locations required by the Owner.
Interconnection and communication with the fire alarm system to unlock all doors in the path of egress as required by code.

6.1.7 Low voltage

Near the electrical equipment, there is a telephone system with punch down blocks for the telephone wiring, and incoming service devices from the Tele/Data service provider, and what appears to be a computer server with a standalone UPS unit. Cat 6 plugs in the spaces were not apparent, nor were wireless routers.

IT (Tel/Data) System Infrastructure:
The tel/data (IT) room will house floor mounted racks, the security system panel, fire alarm panel and PA system control panel/amplifier. A ground bar will be installed in the room and connected to the telecommunications grounding system. An 8” wide by 4” deep basket style cable tray will be installed above the ceilings in the main corridors. Hilti “Speed Sleeves” or equal will be installed in all fire-rated walls. Back boxes and raised rings and conduits, cables, jacks, cover plates, equipment racks and patch panels will be installed as required. Each Tel/Data location shall have a 4" sq box with a raised plaster ring and a 1" conduit to above an accessible ceiling. All Cabling shall be Cat 6, Blue for data and White for voice, unless owner requires a different color scheme, routed from the jack to the rack without splices. Cables shall be supported with "J" hooks spaced no more than 4' apart and secured to the hooks with Velcro type ties. Provide User jacks per the Owner’s requirements and in different colors as determined by the cable color. Provide a floor mounted equipment rack with cable management on each side. Provide Cat 6 patch panels for all the cables installed plus 25% spare.

Public Address System:
The building will contain a PA system and will include:

Control panel/amplifier
Ceiling mounted speakers in corridors and assembly areas.
Corridor mounted speakers shall be no more than 30-ft apart.

6.1.8 Hazardous Material Mitigation

This project included the representative sampling and testing of accessible materials that could potentially contain asbestos, lead-based paint, and PCB's. A separate report for each of these three types of materials are included in the appendix of this report. In summary, asbestos containing materials were identified in the testing program as were lead-based and lead-containing paints. The final design documents for the proposed building reuse will need to contain abatement requirements for the removal and handling of these materials during construction. Representative samples of caulking were sampled and tested for PCB content. Analytical results of the samples collected during the survey do not indicate the presence of PCB in the caulking materials sampled. As a result, special work practices or disposal requirements are not required to be performed during the renovation project.

The TCP Building Committee has requested that all identified asbestos containing materials be removed from the building as part of the renovation project for the reuse of the TCP building. DiGiorgio recommends as a minimum the removal of lead-based and lead-containing paints from areas occupied by children. The proposed reuse of the TCP building results in a major gut-renovation. It is anticipated that when this project goes into final design that the materials identified as containing asbestos and lead-paint will be removed as part of the building renovation design.

6.1.9 Environmental Engineering Recommendation

This project included a Phase 1 Environmental Assessment of the building and property. Please refer to the full report in the Appendix section of this report. This Phase I ESA was prepared in accordance with ASTM International's Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process - E1527-13 (ASTME1527-13). The purpose of this assessment is to identify recognized environmental conditions (REC), historic RECs (HREC), and/or controlled RECs (CREC) associated with the Site. Relevant to the final design of this project for the reuse of the TCP building, dark surface staining was observed directly under both sets of old oil-filled switchgear equipment in the electric/transformer room on the east side of the building. A floor drain is located approximately 4 feet away from the electrical equipment, near the blue transformers. Since the PCB content of the oil filled switchgear/surface staining and terminus of subsurface floor drain piping are unknown, potential exists for spills to reach the environment, thus it is considered a REC. We recommend that during the final design phase of this project that the surface staining be investigated and sampled to identify the content of the liquid stain and at that time a determination be made to inspect the floor drain.

6.2 Project Construction Cost Estimate Summary

During the course of this project, several construction cost estimates were developed. The final cost estimate is based on the enclosed final design development drawings, which were approved by the TCP Building Committee. Please refer to the Final Construction Cost Estimate, developed on 2/12/2021, included in Appendix E of this report. This Construction Cost Estimate is based on the building programming, design development floor plans and sites plans, which were approved by the TCP Building Committee. The construction estimate for the approved building design is $18,380,000, excluding soft-costs. Adding soft-costs brings the total estimated project cost to $23,570,000. Included in the Cost Analysis Appendix are additional cost-related documents, including comparisons between the three major estimates, recommended materials and finishes, FF&E requested by the User Groups, and door and room finish schedules, all of which were used to develop the cost estimates.

7 Appendices

Appendix A- User Meeting Programming Notes from Town Departments, includes Space Programming Meetings and Design Development Meetings for FF&E

Appendix B- Space Needs Assessments, includes Final Space Needs Comparison Spread Sheet, User Group Area Breakdown, and Area Summary Floor Plan

Appendix C- Site Survey and Site Plan

a. Land Survey Drawings –Signed and Sealed
b. Final Approved Site Design Plan, including parking, dated 1/29/21

Appendix D- Final Design Development Architectural Floor Plans, includes Existing Floor Plan, Approved Final Floor Plan, and Final Enlarged Departmental Floor Plans

Appendix E- Cost Analysis and Supporting Information

a. Final cost estimate from 2/12/21 (document dated 3/19/21) based on approved design documents
b. Cost estimate comparison for the three major estimates (document dated 3/19/21)
c. Preliminary Cost Estimate Basis for first estimate of 1/26/21
d. Design Development Project Summary by CSI Specification Divisions
e. Design Development Door Schedule
f. Design Development Room Finish Schedule
g. Design Development FF&E Request List from Town Departments
h. WB Mason FF&E Budgetary Numbers

Appendix F- Other Reports

a. Traffic Study Report
b. Environmental Phase 1 Assessment Report
c. Hazardous Materials (Lead Based Paint, Asbestos Containing Materials, and PCB) Reports

-End of Report-

Appendix A

DAI DiGIORGIO ASSOCIATES INCORPORATED
529 MAIN STREET · SUITE 3303 · BOSTON , MA 02129 · TEL (617) 723-7100 · FAX (617) 723-9113
A LiRo Group Company

Town of Lunenburg
Reuse of TC Passios Building
SPACE PROGRAMMING MEETINGS
DAI #: 20-138-2329
Updated 09/24/20 ***Revised items in blue***

Date: July 14, 2020
Time: 9:00 a.m.
Department: Building Commissioner and Zoning (BC/ZBA)
Attendees: Casey Burlingame, Building Commissioner; Tom Lam, DAI/LiRo

Summary of Discussion:

a) Program Needs:
   i) Offices should be square shape
   ii) Admin Assist /clerk office should be bigger
   iii) Assistant inspector office should be big enough for 2 desks
   iv) Shared conference room
   v) File room to roll-out plan
   vi) Share conference room for 6.
   vii) Electrical and plumbing inspectors do not have office time. Office space is not needed.
   viii) No need to be closed to other town departments
   ix) Planning office, Conservation and Board of Health should be close to each other
b) Vision: centralized public services, (wheelchair) accessible
c) Priorities: functionality and layout, clear wayfinding, internal layout to minimize disruption of senior staff, building code compliant
d) Challenges and Barriers:
   i) Current townhall in bad shape, need infrastructure upgrade and repair
   ii) Mixed town office and school traffic
e) Post-Meeting update:
   i) Re-mailed Casey on 8/4/20 for comments and clarifications on draft meeting notes
   ii) Confirm office space for electrical and plumbing inspectors are not needed.

Date: July 14, 2020
Time: 9:40 a.m.
Department: Board of Health (BOH)
Attendees: Andrea Schnepf, BOH Administrative Assistant; Tom Lam, DAI/LiRo

Summary of Discussion:

a) Program Needs
   i) Current office is too small, need space to store files in office. Files include [property, history of property, regulations and general filing. Office should be locked.
   ii) No electronic filing in the foreseeable future
   iii) Works ***4 days*** a week
   iv) Part of Nashoba Association Board of Health
   v) Should be close to Conservation Commission, planning department and building department

b) Vision: One-stop-shop
c) Priorities: not sure. Amended- Clear wayfinding to minimize disruption by public (who got lost)
d) Challenges and Barriers:
   i) Potential problem to work in an older building.
   ii) Cost of project
f) Post-Meeting update- Await Response:
   i) E-mailed Andrea on 8/4/20 for comments and clarifications on draft meeting notes
   ii) Confirmed- One large open office for Andrea and space for 2 desks and 2 phones for health agents Room for Andrea's files. Offices should be lockable. 09/24/20

Date: July 14, 2020
Time: 10:20 a.m.
Department: Conservation Committee (CONS)
Attendees: Matt Marro, Conservation Administrator; Tom Lam, DAI/LiRo

Summary of Discussion:
a) Program Needs:
   i) Current size acceptable
   ii) Need to be close to BOH, Building Department, Planning and BOH
   iii) Big enough to meet with residents
   iv) Meeting room for staff
b) Vision:
   i) Look updated, per current building code
   ii) looks professional
   iii) Value economic
   iv) User friendly- ease to use
   v) Efficient, look like admin building not a school
c) Priorities:
   i) There are too many entrances- need to have separate employee entrance
   ii) ADA access
d) Challenges and Barriers:
   i) Financial budgetary. Need to demonstrate need
   ii) Deal with political opinion about what TCP should be used for
e) Post-Meeting Follow-up: Please confirm only a private office is needed, there is no need for an additional space for conservation agent. Await comments.

Date: July 14, 2020
Time: 11:00 a.m.
Department: Planning (PLN)
Attendees: Adam Burney, Land use Director. *Marjorie Boggio, Planning Board Administrative Assistant*; Tom Lam, DAI/LiRo

Summary of Discussion:
a) Program Needs:
   i) Sound privacy for Land Use Director's office is needed. Current office is too narrow.
   ii) Assistant's work area does not have enough storage

iii) Records storage can be part of open work area, need plan table, storage for large format plans, centralized files
iv) Access to shared conference for 4 to 5 people
v) Need space to interact with public

b) Vision: Efficient and functional, contemporary and (wheelchair) accessible, project an image of transparency, wayfinding- easy for public to find places
c) Challenges and Barriers:
i) Hard to change perception that TCP is a school not a town office building
ii) Flexibility to use TCP for offices
iii) Mixed population in school campus
iv) Traffic volume and parking
v) Funding
d) Post-Meeting Follow-up: Please confirm the following:
i) Director office area (not shape) is enough. Confirmed
ii) Assistants work area is 313 SF and should be 30% bigger *for the additional space needed for office supplies (currently kept out of the office in an existing closet), the storage of day to day files and other odds and ends that are currently in other parts of the building.*
iii) ***Existing Records and Plan Storage, Conference/Plan Review and Zoning Board of Appeals are in three separate rooms. They can be consolidated if the combined areas are not changed. Confirmed;*** *as long as the total existing designated areas are unchanged.*

Date: July 15, 2020
Time: 9:00 a.m.
Department: Town Clerk (CLK)
Attendees: Kathy Herrick, Town Clerk; Ellen Griffin, Assistant Town Clerk; Ruth Anderson, *Voter* Registration; Tom Lam, DAI/LiRo

Summary of Discussion:
a) Program Needs
i) Need Gymnasium during elections
ii) Clerk and Registrar work area needs to work before and after election.
(1) It needs space of an existing classroom at T.C. Passios Building (TCP).
(2) Research table about 6' x 3'
(3) 4 desks; 2 placed on each side of the room. Do not anticipate more staff, even if one more station is needed, it does not need to increase area.
iii) Transaction window
iv) Need a shared small conference room for 6 people.
v) Vault to store records, files, ballots, filled and unused ballots. Current vault has a 6-hour fire door, a moveable shelving system. The dimension is 8'-4" by 12'-0" or about 100SF. Future needs another 50% or 150SF.
vi) Departmental Adjacency: Assessors/Treasurer-Tax Collector
b) Vision: One-stop-shop, handicapped accessible
c) Priorities: More file space
d) Challenges and Barriers:
i) More traffic and pedestrian on campus
ii) Not enough parking
iii) Even more traffic on voting days

e) Other questions: Where will Early Daycare and Teen Center go?

f) Post-Meeting Follow-up: The vault at TCP is too small for this office. The total workspace needed for this department is roughly size of two classrooms.

Time: 9:40 a.m.
Department: Finance Director/Assessors/Treasurer-Tax Collector (FIN)
Attendees: Myleen Mallari, Treasurer/tax collector; Karen Brochu, Finance Director/Accountant; *Sheila Craigen*, Administrative Assessor; Tom Lam, DAI/LiRo

Summary of Discussion:

a) Program Needs
   i) Treasurer/Tax Collector
      (1) One private office for director with view window to work area. Current size adequate.
      (2) One work area for assistant treasurer (principal) and clerk (assistant). Each has a desk and cabinet space. Add 20% more than current space to accommodate files.
      (3) Transaction counter wide enough for 2-persons. Need transparent screen and pass-through
      (4) Post-Meeting Follow-up: is a separate records storage space required? If possible, it's the same room as our office for easy access of records and easy disposing stuff when it's no longer needed.
   ii) Accounting/Finance Department
      (1) Finance Director office. Private office has enough area
      (2) Payroll coordinator office. Private office has enough area
      (3) Accounts Payable Clerk office. Private office has enough area
      (4) Need additional storage about 120SF
      (5) Transaction window is not required.
      (6) Post-Meeting Follow-up: please confirm there are three private offices needed, and storage is in a separate room. Confirmed.
   iii) Assessor
      (1) Transaction window. ***Needs to be bigger than current one***
      (2) Private office for Principal Assessor. Current space is about 98SF. Big enough to have 2 visitors.
      (3) Work area for assistant and clerk. Current space is about 230SF. ***This is currently a little crowded. Suggested increase to 280 SF***
      (4) Storage is currently located in a cabinet and an "L" shape closet at about 90 SF. It should be about 180 SF. Confirmed.
      (5) Access to a 5 to 8-person shared conference room. Confirmed
      (6) *Post-Meeting* Follow-up: Is the work area designated for another assistant and a clerk? Are we designing space for 3 staff? Confirmed. One in a private office, the other two in an open work area? Confirmed.
b) Priorities:
   i) One-stop shop for residents
   ii) Adequate storage- there is additional storage in cellar.
   iii) Transaction counter has enough space
c) Challenges and Barriers:
   i) Financial support
   ii) Resistance to move town offices away from town hall, and future of a vacated town hall

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Time: 10:20 a.m.
Department: Information Technology (IT)
Attendees: Steve Malandrinos, IT Director; Dan Nadareski, Network Administrator; Tom Lam, DAI/LiRo

Summary of Discussion:

a) Program Needs
   i) Current IT Director office is about 200 SF and it's enough
   ii) Current Network Administrator office is about 130 SF and needs to be 40-50% bigger, or about 200 SF.
   iii) Current server room has 1 rack and storage. Anticipate growth of 50% capacity. Current room has space for a second rack
   iv) Need access to a shared conference room for 4 to 5 people
   v) Confirm project addresses security system, low voltage, alarm, card readers
b) Vision:
   i) Shows it is a public building
   ii) Welcoming
   iii) One-stop shop
c) Priorities
   i) Limit access to roof
   ii) Capacity for generator
   iii) Infrastructure to include cabling, WIFI for whole building, new phone system, security camera for entire building, security alarm, intercom, enough power outlets. CAT 5 maybe CAT e, UPS capacity- large or multiple of smaller units, UPS on computers
   iv) Masterplan- comprehensive approach for IT equipment purchasing.
d) Challenges and Barriers
   i) Public desire to have town offices located in Town Hall.
   ii) Noted finances and vacant buildings are not issues
e) Post-Meeting Follow-up: Please confirm no additional storage is required. CONFIRMED 500SF total

Time: 11:00 a.m.
Department: Town Manager's Office (MGR)
Attendees: Heather Lemieux, Town Manager; Julie Belliveau, Assistant Town Manager/HR Director; Elaine Peterson, Executive Assistant; Tom Lam, DAI/LiRo

Summary of Discussion:

a) Program Needs:
   i) It would be nice to have a sub-waiting (1-2 seats) by the transaction window. Transaction window should have a shelf for paperwork. Executive Assistant's office need space for a worktable. ***Her space needs to be 20% bigger.***
   ii) Currently there are two separate areas for filing and supplies, and a record storage space. ***The total new area needs to be 50% bigger than the two separate areas combined.***
   iii) Dedicated conference room to meet with staff and public. Room to be sized for 6-person.
b) Vision/Priorities:
   i) Consolidate town offices in one location for convenience and improved communications.
   ii) Energy efficient design
   iii) Wheelchair accessible and user friendly. The town hall lift breaks down frequently
c) Challenges and Barriers:
   i) Project financing by town

ii) Purpose of a vacant existing building
iii) Separate school and town office functions
iv) Site: Mixed users on school grounds and traffic volume
~~v) HVAC issue of existing TCP building~~

d) ***Post-Meeting Follow-up: Please clarify if there is storage in the attic as it was not discussed. If there is, please confirm the current amount of storage space is adequate.***

Time: 1:30 PM and 7/28/20
Organization: Boys and Girls Club of Lunenburg (BGCL)
Attendees: Michelle Belleza, Executive Director; Tom Lam, DAI/LiRo

Summary of Discussion:

a) Program Needs
   i) For ages 6th grade and up. BGCL after-school program accommodates activities (in BCCL building), sports program (in TCP Gymnasium) and homework (in Library).
   ii) In addition to access to gymnasium, three to four classrooms, estimated 3,000 SF to 4,000 SF will accommodate programs.
   iii) Cooking Club is year-round it has less than 15 participants. Serves lunch (for 80) during school vacation week and in summertime.
   iv) No indoor recreation spaces
   v) Access to cafeteria for cooking club. Requires 12' wide counter, 3' to 4' between counter and sink
   vi) Kitchen will be an additional resource
   vii) If both BGCL and Extended School Program are in TCP, there might be opportunities or flexibility to accept students in the next age group.
   viii) Suggested use Teachers' Lounge (current stage) as video game room or homework room
   ix) It would be nice to have dedicated activity rooms for music and science
b) Vision- This building is for the Community.
   i) Functional and efficient.
   ii) There are many small organizations that offers different services for the town, it would be nice if they have access to meeting rooms.
c) Priorities:
   i) Safety of Children, currently the staff must watch them using three different buildings
   ii) Security of the Club when used by children. The current building entry is used very often and will not be practical to have it locked.
d) Challenges and Barriers:
   i) Finances to pay for this project, especially if the BGCL has to pay for it
   ii) Difficulty to find advocates to fund children's programs
   iii) Concern BGCL will have to pay for utilities if it is moved to TCP

Time: 2:30 p.m. July 16, 2020
Department: Veterans Affairs (VA)
Attendees: TJ Blauser, Veterans Affairs Agent; Tom Lam, DAI/LiRo

Summary of Discussion:

a) Program Needs
   i) Program is mandated by state.

ii) Need a bit more space needs than current office. Estimated 120 SF office
iii) Room needs to be lockable, have access fax, desk and 2 to 3 visitor chairs
iv) Small storage about 50 SF
v) Has emergency visits after hours. Happens once to twice a year
vi) Adjacent to sub-waiting with 4-5 chairs.60-80 SF
vii) Access to small conference room
viii) The phone, fax and computer need to have self-supported lines for security of information sent and received

b) Vision/Priorities
i) Ease of access and clear wayfinding especially after-hours
ii) Wayfinding

Time: 10:00 a.m. July 22, 2020
Department: Council on Aging (COA)
Attendees: Sue Doherty, Director of COA; Tom Lam, DAI/LiRo

Summary of Discussion:

a) Program Needs: Access to gymnasium and additional meeting space
i) Gymnasium is used for pickle ball and wellness classes (Zumba), as well as by Boys and Girls Club
ii) COA needs access to big space for flu clinic, ***and Health Fair space***
iii) Suggested kitchen at TCP could be used for farmers market
iv) Either COA or gymnasium to be used a cooling station and shelter during ice storm. Electrical generator is needed. Cafeteria can be used as conference or multi-purpose room
v) Consider generating rental income for to outside groups such as Boy Scouts (Eagle Scout ceremonies) Lion Clubs, Farmers Market

b) Vision & Priorities
i) Wheelchair access
ii) Multi-purpose and functional
iii) One-stop shop for residents. Inconvenient to residents to go to multiple buildings for town services, dangerous to cross R2A

c) Challenges and Barriers
i) Site- traffic cut-through, Parking capacity
ii) Security- mixed population between students and contractors applying for building permits
iii) Purpose of vacated Town Hall and Ritter Building.
(1) Suggested functions for Town Hall include Arts & Culture/Play House, Lunenburg Cultural Council, and small activities can be held on stage such as dance recitals, plays, movies; arts and crafts space downstairs
(2) Suggested functions for Ritter Building include:
(a) Chamber of Commerce
(b) building could be a stopping point for tourists travelling R2A; it can include kiosks and information booth, Lunenburg Snow Rider information
(c) Lunenburg Business Association & Lions Club
(d) Gift shop selling Lunenburg T-shirts or signs; items to fund non-profits such as Eagle House Supporters, B&G Club
(e) Lunenburg Park Department

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Time: 9:00 a.m. July 22, 2020
Department: Office of the School Superintendent (OSS)
Attendees: Dr Kathleen Burnham, Superintendent of Schools; John Londa, Director of Facilities; Tom Lam, DAI/LiRo

Summary of Discussion:

a) Program Needs: We discussed the updated space program John Londa prepared. New areas that were not included in the previous study are:
   (1) Director of (Curriculum) and Professional Development office. This is a new position that is anticipated to be filled.
   (2) Breakroom for school staff. A separate instead of a shared breakroom with town staff will avoid cross traffic between OSS and other town departments. During summer vacation and school vacation weeks, this is a full-time program between 7:30 and 5:30.
   (3) Extended Daycare, program space, Director Office, Nurse Office and storage. ***During summer vacation and school vacation weeks, this is a full-time program between 7:30 and 5:30.***
   (4) School maintenance space- to remain in garage off boiler room.
b) Vision and Priorities
   i) Functional
   ii) Comprehensive address of needs and consideration of future growth with built-in redundancy as safety net building.
c) Challenges and Barriers:
   i) Phasing- places for staff to work to stay during construction
   ii) Project financing
   iii) Security-
      (1) limited access
      (2) site lighting
      (3) roof access
      (4) Site safety for students- currently extended stay students walk from TCP to playground

NEW MEETING NOTES BELOW- 08/17/20

Date: 8/11/2020
Time: 11:00 a.m. Department: Public Cable Access (PACC) ***notes dated 09/10/20 shown in blue***
Attendees: Steve Walker, PACC Chair; Jo McLaughlin, Cable Manager; Tom Lam, DAI/LiRo

Summary of Discussion:

a) Program Needs:
   i) Background:
      (1) Currently, the studio is located at TCP and the Control room is located at Town Hall
      (2) There are cameras set up in town hall, staff may have to cameras to different events in town for taping **from the TCP studio**.
      (3) PACC received funding **from Comcast** for equipment replacement.
      (4) (2) to (3) full time staff; authorized to hire (1) new part-time staff and likely to hire a second part-time staff in the near future.
      (5) There would be (2) to (3) staff using the studio simultaneously.
      (6) Permanent cameras should be placed in meeting rooms. **Do all meeting rooms need camera access?**

ii) Assumptions:
  (1) Space must be ADA compliant, handicapped accessible
  (2) Space should be free of asbestos or other hazardous materials
  (3) Space should have proper A/C and be sprinklered
  (4) Reception can be shared with Town Hall during office hours
  (5) Need direct, secured public access afterhours (7PM or later)
  (6) Space has cable access and connections
  (7) Can use co-located shared conference rooms
  (8) Flexibility with cable connections between partitions
  (9) Secured parking areas since PACC trucks may have equipment stored in them

iii) Program Needs- total request 2,600SF:
  (1) Main/Principal Studio- 1,000 SF
    (a) Need power, A/C
    (b) High ceiling for lights, sound systems and frame
    (c) Sound-proof and "quiet" neighbors both indoors and outdoors. Away from parking and traffic.
    (d) Prefers south facing windows for lighting
    (e) Each wall with different color/purpose. Green screen will be used.
  (2) Specialty Studio- 250 SF
    (a) Sound-proof Kitchen studio for cooking show, **as well as meetings and community gatherings**, needs electric and gas for appliances
    (b) High-end kitchen appliances including stoves and exhaust fans
    (c) It will be commercial kitchen by code
  (3) Studio for Interviews- 100 SF
    (a) Sized for couple of chairs, artificial fireplace
    (b) Interviews **and announcements** with politicians and town leaders
  (4) Studio for voice over on video- 50 SF
    (a) Sound-proof and high-quality microphones
  (5) Master Control Room- 250 SF
    (a) Direct view or via cameras with studios and conference rooms (that require meetings to be recorded)
    (b) Significant heat build-up by equipment, additional cooling is needed.
    (c) Requires back-up power and UPS (uninterrupted power source) to run 30 minutes before emergency power kicks-in. Need continuous power to run equipment to get information to town.
  (6) Two "Green" (Changing) rooms- 100 SF each
    (a) Has handwash sink
  (7) Equipment room storage- 200 SF
    (a) Store handheld cameras
    (b) Space for equipment repair
    (c) Power for charging stations
    (d) Space for equipment sign-in and sign-out
  (8) Editing and training room- 100 SF
  (9) Archive Room- 100 SF
    (a) Humidity and climate control
    (b) Hard drive storage
  (10) Two private staff offices at 100 SF each. Part-time employees will use second office.

b) Vision & Priorities:
   i) To consolidate all the PACC functions under one-roof and enable community to have access to equipment and to use studio space.
   ii) To have adequate space for **recording of** presentations and conferences.
   iii) To have properly sized studio space and functional.

c) Challenges and Barriers: Steve don't see barriers but opportunities to have a consolidated and proper sized PACC to serve the community.

Additional notes:

1. The space needs to be contiguous, not divided by a corridor
2. We need to be secure both during normal business hours and in the evenings
3. We are not replacing equipment, but creating a new studio
4. Permanent cameras and microphones will be set up in the principle town meeting room (relocated from the Bilotta room). Other meeting rooms that have public access will be wired for video and sound
5. No south-facing windows - either north-facing or no windows
6. The mobile unit will contain up to $20,000 of permanently installed equipment, so needs secure parking

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Town of Lunenburg
Reuse of TC Passios Building
DESIGN DEVELOPMENT MEETINGS
DAI #: 20-138-2329
REVISED DRAFT 02/12/21

General Notes:

Based on discussions of town departments and the TCP Building Committee, the following materials, finishes and systems will be used. Details of specific departmental requirements are listed under notes section of individual meetings stated below.

1) Walls:
   a) New partitions will consist of 5/8" GWB on both sides, extend to deck above, filled with sound insulation.
   b) Partitions surrounding PACC studios will have staggered studs with Sound Break XP 5/8" GWB.
2) Doors:
   a) All interior doors are wood.
   b) All departmental entry doors are half-glazed and either have locks or card readers.
   c) All office doors to have locks and have no glazing.
   d) All meeting and conference room doors to have locks or card readers and with peek (12" wide window)
   e) All utility room doors will have locks
   f) All existing exterior doors to remain (unless it is blocked by new construction)
3) Ceiling:
   a) Ceilings are 2X2 acoustical ceilings.
   b) Areas in front of department entries have painted GWB
4) Flooring:
   a) All corridor flooring to be Luxury Floor Tiles (LVT) with accent GWB
   b) All toilets have ceramic file flooring (CT)
   c) Remaining spaces have VCT (LVT as Add alternate)
5) Equipment and furnishings:
   a) Furniture to be brought to TCP building
   b) Each workstation or office has connections for (1) computer, (1) phone and (1) printer
   c) Town Manager's office and Accounting/Treasurer's transaction counters have panic devices
   d) Accounting/Treasurer's transaction window has recessed rolled down security grille
   e) School supervisor's office, conference and meeting rooms have connections and wall support for new flat screen monitors
   f) All meeting and conference rooms have connections for taping, ceiling projectors and recessed screens
   g) Staff to let DAI/LiRo know new furniture or equipment needs
6) Built-in casework and glazing:
   a) 8' wide fixed counters at transaction windows, includes 36" wide low return for wheelchair access.
   b) All private offices have 2 rows of 4' wide adjustable shelves
   c) Built in bench, wood rails along corridors
7) Lighting:
   a) Typical 2X2 recessed LEDs
   b) Track lighting in selected rooms in PACC
   c) Dimmable lights in all meeting and conference rooms, Town manager's & School Supervisors offices

DAI DiGIORGIO ASSOCIATES INCORPORATED
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MEETING NOTES

Date: Tuesday, December 8, 2020
Time: 10:00 a.m.
Department: Building Commissioner and Zoning (BC/ZBA)
Attendees: Casey Burlingame, Building Commissioner; Gloria Aguilar and Tom Lam, DAI/LiRo

Summary of Discussion:
- 2 desks/office partition separating desks
- Currently same person as ZBA & building commissioner assistant
- Prefers hard surface for flooring.
- All doors should be lockable
- Computer, phone, per person. 5 groups needed.
- Nice to have a conference table in commissioner's office.
- 1 printer for comm office and 1 for admin area.
- Rolled plans flat files for 36"X42" drawings.
- New (4) shelf units at 18"d X 48" l

Date Tuesday, December 8, 2020
Time: 9:00 a.m.
Department: Board of Health (BOH)
Attendees: Andrea Schnepf, BOH Administrative Assistant; Gloria Aguilar and Tom Lam, DAI/LiRo

Summary of Discussion:
- 2 stations within office. Need desks no partitions.
- Flooring- prefer carpet but **no strong feelings. (TCP Committee noted no carpet in building 1/13/21)**
- 2 computers plus laptop. WIFI access. printer countertop.
- Transaction counter- no window if no more COVID. sliding window. transaction.
- Expects visitors in the offices. Non-COVID may vary. 2 hrs. M/W.
- Waiting time for visitors from 5 – 15 minutes. Suggest having a cord in corridor for visitors waiting to meet with staff
- No need for panic device.
- (14) letter file cabinets + 2 legal vertical files.

Date: Tuesday, December 15, 2020
Time: 2:00 p.m.
Department: Conservation Committee (CONS)
Attendees: Matt Marro, Conservation Administrator; Gloria Aguilar and Tom Lam, DAI/LiRo

Summary of Discussion:
- Fixed counter at transaction window
- (1) set of printer, computer, phone. (6) vertical letter size cabinets
- (1) desk; round conference table by door, 6 shelf bookcases; need (1) **new** file cabinet.
- Added storage space- need plan storage and archive storage. DAI to confirm if general building storage area can accommodate archives for Conservation Committee

DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company

Date: Tuesday, December 8, 2020
Time: 11:00 AM
Department: Planning (PLN)
Attendees: Adam Burney, Land use Director. Marjorie Boggio, Planning Board Administrative Assistant; Gloria Aguilar and Tom Lam, DAI/LiRo

Summary of Discussion:
- Computer, phones and printers for 2 workstations. Allow (1) drop for future printer/ computer.
- All doors have locks. phone, computer, shared copier
- Mat table.
- Flat files location to be determined.
- 8LF Transaction counter (storage shelving on side): large submission, plans, paper box size; **sliding window- desirable but not absolute. 12/28 (TCP Committee confirmed sliding window will be included 1/13/21)**
- Bench in hallway.
- No office partitions
- Flooring:
    - LVT office
    - **Carpet desirable** in admin area
    - Records: LVT
- Suggested CARD READER (CR) for all offices
- **NEW File rack system 12/28**

Date: Wednesday, December 9, 2020 and Tuesday, December 15, 2020
Time: 2:30 p.m.
Department: Finance Director/Treasurer-Tax Collector (FIN)
Attendees: Myleen Mallari, Treasurer/tax collector; Karen Brochu, Finance Director/Accountant; Gloria Aguilar and Tom Lam, DAI/LiRo

Summary of Discussion:
- All doors in treasurers have door closers and push button locks (entry).
- 3' x 3’ under counter vault.
- Town account and treasurer half glazed
- Principle accountant and asst. treasurer. tables. separate by partition. phone, computer, printer. needs to communicate.
- No carpet.
- Transaction counter with **roll-down window**. It should have 2 computers, 2 printers and 2 phones.
- It would be nice to have panic device- connect to PD and security cameras connected to server room.
- Typical office setup per person: phone, computer, (2) printers payroll/office. no carpet

DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company

Date: Wednesday, December 9, 2020
Time: 1:00 p.m.
Department: Information Technology (IT)
Attendees: Steve Malandrinos, IT Director; Tom Lam, DAI/LiRo

Summary of Discussion:
- No preference on flooring.
- 2 adjustable shelves per offices.
- Computer/phone/2 data drops per office.
- IT storage is the server & Wi-Fi room. It should have adjustable shelving. cooling and power.
- Separate circuit for servers.
- **NEW For each office: 12/21**
    - **1 desk approximately 3'x5' and desk chair**
    - **2 guest chairs**
    - **1 2-drawer filing cabinet**
    - **Small table?**
- **NEW For server room: 12/21**
    - **1 worktable approximately 4'x6'**
    - **2 guest chairs**

Date: Wednesday, December 9, 2020
Time: 1:30 p.m.
Department: Town Manager's Office (MGR)
Attendees: Heather Lemieux, Town Manager; Julie Belliveau, Assistant Town Manager/HR Director; Elaine Peterson, Executive Assistant; Tom Lam, DAI/LiRo; Gloria Aguilar DAI/LiRo

Summary of Discussion:
- CARD READER (CR) in dept doors needs further discussions
- Locks in offices and records. phone/printer/ computer per.
- Carpet in offices
- office partition
- **sliding window required**; no computer @ trans. window. **(TCP Committee confirmed sliding window be included- 1/13/21)**
- Conference room should have white boards, phone, outlet for computer and flat screen monitor
- Dimmable lights in conference rooms and offices.
- 15 vertical file cabinets. Adjustable shelving- 2 rows
- **NEW: for assist. L-shaped desk that has drawers on both sides that lock, preferably one side that holds hanging file folders. 12/22**
- **Wall to be added between reception area. 12/28**

PUBLIC ACCESS ROOMS:
- Mailbox/ Copier Room: (3) hi volume meter (B/W & color) copiers for town offices, confirm to IT on copier w/ shelving above. custom made wall-mounted mailboxes. one copy has fax. counter. door has lock. phone.
- Shared Staff Lounge: phone, computer jack, refrigerator, microwave, counter and wall cabinets, HW sink

- Meeting Rooms:
  - confirm with PACC about co-ax cables.
  - 4 network drops in meeting rooms- phone, PACC
  - add ceiling mounted projector

Date: Wednesday, December 9, 2020
Time: 11:00 a.m.
Department: Public Cable Access (PACC)
Attendees: Steve Walker, PACC Chair; Jo McLaughlin, Cable Manager; Gloria Aguilar and Tom Lam, DAI/LiRo

Summary of Discussion:
- Easy access ducts- Connections to all meeting and conference rooms.
- Equipment access to control room.
- Need for loading dock. Double doors.
- **Secured storage for vehicle** (garage?). **(TCP Committee deferred this request- 1/13/21)**
- Sprinklers- dry system? equipment room- studio, master control, equipment storage.
- Specialty rooms- Studios:
  - Sound insulated egress door. Emergency egress only
  - Walls- soundproof
  - Floor- smooth, flat and dark
  - General lumination lights plus specialty
  - Exposed structures, no ceiling & walls black.
  - Off-set studs; include dark-out shades in all studios.
  - LED lights.
- Server, Master Control room:
  - Track lighting
  - Office door is half glazed
  - Need additional exhaust and power need addition.
- Master Studio lighting surface mounted deck.
  - VW= double glazed view windows in studio
  - (3) 4' wide x 4' high. work counter.
  - Locks for equipment room.
- Reception/Waiting Area:
  - Down lights in rec/area.
- Training Room:
  - Dimmable lights.
  - Office cubicles
  - Track lighting

- Flex Space:
  - 4' wall opening/ with sliding door- keep sound insulation.
  - Open counter.
  - Data/ elec. for monitors in flex space and office
  - Security access to remaining building.
  - Meeting rooms and other dept. locks. Double doors
- OTHER OFFICES-SPECIAL SERVICES
  - PRINTER/PHONE/ COMPUTER.LVT OR VCT. NOISE CANCELING

- HIGH VOLUME PRINTER/FAX/SCANNER. POWER/DATA- PHONE. WALL PHONE
- 2 SETS PHONE/COMPUTER.
- ADD BELL @ COUNTER W/ SHELVING; HAS 2 HEIGHTS. FLIP CORR. DOOR
- Equipment all new and paid for

Date: Thursday, December 10, 2020
Time: 12:00 pm
Department: Office of the School Superintendent (OSS)- OFFICES
Attendees: Dr Kathleen Burnham, Michael Cassidy, Julie Hanscom, Liz Petersen, Town of Lunenburg; Gloria Aguilar and Tom Lam, DAI/LiRo

Summary of Discussion:
- TYPICAL OFFICES; PHONE, COMPUTER, PRINTER, (2) 4LF SHELVING, WHITEBOARD
- DOOR LOCKS. Superintendent Office only.
- Superintendent office: CABLE TV JACK. WALL-MTD MONITOR FOR PRESENTATION. CONN TO LAP-TOP.
- RECEPTION: HALF WALL W/ GLASS PROTECTION.
- 2 CHAIRS FOR SUB-WAIT.
- SHELVING FILE SYSTEMS; TEST # OF FILES; INCL. (1) DATA/PHONE.
- HI-VOLUME PRINTER/FAX/SCANNER. POSTAGE MACHINE. COUNTER W. SHELVING. (2) DATA/PHONE. RELOCATE MAILBOXES
- **Discuss after school programs. To be scheduled**

Date: Tuesday, January 5, 2021
Time: 10:00 am
Department: Office of the School Superintendent (OSS)- ACE, EXTENDED DAY
Attendees: Dr Kathleen Burnham, Michael Cassidy, Julie Hanscom, Liz Petersen, Town of Lunenburg; Tom Lam, DAI/LiRo

Summary of Discussion:
- Move Director and Nurse offices from ACE to Extended Day rooms next to entrance on the east side.
- Keep existing exterior classroom doors.
- Learning and Community Link rooms do not share with Extended Day programs, they should be moved to the north side of the corridor.
- ACE to have new stove, kitchen sink, refrigerator, W/D, microwave, wall phone, 8' white board, 4' bulletin board, ceiling projector. “Kitchen/work area” to have accent flooring to distinguish space use.
- School storage to have floor unit copier and phone line for fax. **NEW (2) 6' long NEW tables & (1) 3 shelf shelving units.** *Post meeting email update 1/5/21- relocate 3 feet wide X 16 feet long. Each shelf (there are 3 from bottom to top, can hold 3 normal file boxes high, and many boxes going the full length across. John Londa can assist with pricing)*
- Extended Day rooms: keep exist HW sinks. wall phone and computer outlets. exist furniture. NEW: 4' bulletin board, 8' white board. Corridor doors have peek with film & office locks; no side lights
- Early Learning and Community Link rooms. Same as Extended Day rooms, add ceiling mounted projectors
- Building entry: card reader, buzzer, security camera

DAI DiGIORGIO ASSOCIATES INCORPORATED
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Date: Friday, December 11, 2020
Time: 2:00 a.m.
Department: Police Department
- Attendees: Tom Gammel, Town of Lunenburg Police Chief; Tom Lam, DAI/LiRo

Summary of Discussion:
- The town has to resolve where the panic devices should be either Lunenburg Police Department or the regional dispatch in Devens.
- Town offices that deal with cash or money such as Town Manager's, Town Clerk, Treasurer/Finance offices should have panic devices mounted to the transaction counters.
- It is recommended to have card readers for exterior and departmental entry doors.
- Police Department issued two portable radios, one to the Town Manager's office and the second one to the Treasurer's office.
- There should be cameras facing all entries and exits, both on the inside and outside. Public corridors should also have security camera access.

Date: Tuesday, December 29, 2020
Time: 10:00 am
Department: Town Clerk
Attendees: Kathy Herrick, Tom Lam, DAI/LiRo

Summary of Discussion:
- New 8' wide bulletin board with glass doors located in corridor near entrance.
- Town clerk's office to have standard office set-up: (1) phone, (1) computer, (1) printer. **NEW desk and chair**
- Assistant town clerk's office to have standard office set-up: (1) phone, (1) computer, (1) printer. Transaction window and counter.
- Registrar of Voters open area to have new conference table, two sets of office furniture systems each has (1) phone, (1) computer, (1) printer.
- Prefer to have existing door accessible for emergency egress
- Vault to have new safe door and CMU wall on three sides. Existing moveable shelving to be relocated to current location.

Date: Wednesday, February 2, 2021
Time: 12:30 p.m.
Department: Lion's Club
Attendees: Corinne Scouten- Lions Club, Tom Lam- DAI/LiRo

Summary of Discussion:
- Food Pantry room: preferred access to outside door for delivery and potential customer, and off-hour access. It needs power outlets, sink, refrigerator, counter, base and wall cabinets (located off corridor wall).
- Workroom: needs power outlets, sink, water access, refrigerator, counter, base and wall cabinets.
- The connecting door between these two rooms shall remain.
- Existing toilet adjacent these rooms can remain.

Appendix B

	EXISTING AREAS *				PROPOSED 2016*		8/17/2020		10/2/2020			AREA DIFF	NOTES	Items in Red TEXT are additional notes. Blue text from 3/11/20 meeting. Green Text 7/29 notes. Brown Text for 8/17/20 NOTES. PURPLE TEXT for 8/27/20.
	ROOM NAME	STAFF	AREA	UNIT	STAFF	AREA	STAFF	NSF	STAFF	NSF	actual			
	TREASURER/COLLECTOR (public access- near Accounting)													NO CHANGE FROM 2016 PROGRAM
	Tax Collector/Treasurer	1	130		1	175	1	175	1	175	175	0		private office w/desk & table
	Acct & Asst. trasurer **w/ transition window**	1	109		1	100	1	100	1	100	200	100		open office
	Accounting Clerk	1	109		1	100	1	100	1	100	0	-100		open office
	Record Storage	-	0		-	175		175		175	175	0	MOVE INTO BUILDING DEPT. RECORDS STORAGE & COMMISSIONERS OFFICE	row of filing cabinets, 10 lateral files. 20% of work space
	Transaction Counter	-			-	35		35		0	**0**	0	COMBINED W ACCT CLERK	two-person wide
	Subtotal	**3**	**348**		**3**	**585**	**3**	**585**	**3**	**550**	**550**		DEPT. ALL SET	
	ASSESSORS OFFICE (public access - near Accounting)													MINOR INCREASE
	Administrative Assistant and Clerk w/ Transaction counter	2	346		2	180	2	280	2	280	298	18	INCLUDES TRANSACTION COUNTER	open office
	Principal Assessor Office	1			1	175	1	120	1	120	179	59	INCLUDES FILES	private office w/desk & table
	Contracted Assessor for Inspections	1			1	100	1	100	1	0	0	0	NO CONTRACT ASSESSOR	
	Conference Room				8	0	0	0	0	0	0	0	USE SHARED CONFERENCE ROOM	Verify shared conference room
	Record Storage	-	29		-	100	-	180	-	180	169	-11	MOVE SOME FILES TO PRINC. ASSESSORS OFFICE	file cabinets
	Transaction Counter	-			-	35	-	35	-	35	0	-35	BECOMES PART OF OPEN WORK A	Trans counter is included in admin assit and clerk
	Subtotal	**4**	**375**		**12**	**590**	**4**	**715**	**4**	**615**	**646**		DEPT. ALL SET	630. Didn't account for Contracted Assessors
	TOWN MANAGER (public access)											0		IN TOWN HALL
	Town Manager	1	180		1	175	1	190	1	190	217	27		private office w/desk & table/chairs/filing cabinets
	Asst. Town Manager	0	120		1	120	1	160	1	160	160	0		Desk and cabinets + small table
	Executive Assistant	1	100		1	100	1	140	1	140	140	0		Desk and cabinets + work table
	Conference Room	6	120		8	180	0	180	0	180	180	0		within department
	Supply/File Closet & Record Storage		108			35		140		200	136	-64	MOVE INTO ACCOUNTING AREA	supplies and storage
	Subwaiting									20	20	0	SUBWAITING	
	Transaction Counter	-	0		-	35	-	35	-	35	42	7	ABSORB INTO EXEC ASST. AREA	
	Subtotal	**8**	**628**		**11**	**645**	**3**	**845**	**11**	**925**	**895**		DEPT. ALL SET	750
	BUILDING DEPARTMENT (public access)													
	Building Commissioner/Zoning Officer	1	188		1	175	1	160	1	160	160	0		private office w/ desk & table. Prefers square shape room.
	Admin Assistant/ZBA Administrator/Clerk	1	170		1	100	1	140	1	140	140	0		open office
	Assistant Building Inspector	1	119		1	100	1	140	1	140	140	0	REDUCE TO ACCOMMODATE TOWN MANAGER'S AREA SHORTAGE	private office w/ desk & table. 2 desks
	Conference Room	6	0		6	180	6	0	0	0	0	0		shared w/ BOH, Conservation, Planning
	Record Storage	-	107		-	195	-	195	-	195	195	0	REDUCE TO ACCOMMODATE TOWN MANAGER'S AREA SHORTAGE	flat files/files
	Electrical/Plumbing/Gasl Inspectors Office	3	0		3	100	3	**0**	3	**0**	0	0		no need for office. Shared desk in Asst Bldg Insp
	Transaction Counter	-			-	35	-	35	-	35	51	16	ABSORB INTO ADMIN ASST	
	Subtotal	**11**	584		**11**	**885**	**11**	**670**	**6**	**670**	**686**		DEPT. ALL SET	1085
	BOARD OF HEALTH (public access- with Building)													IN TOWN HALL
	~~Administrative Assistant.~~ Director & health agent	1	170		1	100	1	250	1	250	313	63	CHANGE ROOM NAME, NOT SPACE	open office. Files locked. Includes file storage. Window
	Record Storage	-	0		-		-		-		0	0		file cabinets
	~~Health Agent~~. Files	0	0		1	175	1	100	1	100	105	5	CHANGE ROOM NAME, NOT SPACE	private office with lock

A	B	C	D	E	F	G	I	J	L	M	N	P	Q	R
	EXISTING AREAS *				**PROPOSED 2016***		**8/17/2020**		**10/2/2020**			**AREA DIFF**	**NOTES**	**Items in Red TEXT are additional notes. Blue text from 3/11/20 meeting. Green Text 7/29 notes. Brown Text for 8/17/20 NOTES. PURPLE TEXT for 8/27/20.**
	ROOM NAME	STAFF	AREA	UNIT	STAFF	AREA	STAFF	NSF	STAFF	NSF	actual			
	Transaction Counter	-			-	35	-	35	-	35	40	5		
	Subtotal	**1**	170		**2**	**310**	**2**	**385**	**2**	**385**	**458**		**DEPT. ALL SET**	310
	RITTER BLDG BASEMENT CONFERENCE ROOM	**15**	**402**		**15**	**402**	**15**	**400**	**0**	**400**			SEE CONFERENCE #3	**25'x 16'. See Conference Room Request below**
	CONSERVATION													**pending on clarifications**
	Conservation Administrator	1	205		1	175	1	200	1	240	161	-79	ABSORB AREA FROM 46 SF REC STORAGE ABOVE	private office
	Record Storage	-	0		-		-		-		0	0		
	Conservation Agent		0			100		100	1	0	100	100		need to verify
	Historical Commission Office	0	0		1	175	0	175	1	0	140	140	AREA CAN BE REDUCED PER CALL W/ TOWN MGR.	have not met historic commissioner
	Transaction Counter	-	0		-	35	-	35	-	35	35	0		
	Subtotal	**1**	**205**		**2**	**485**	**2**	**510**	**3**	**275**	**436**		**DEPT. ALL SET**	410. Private office instead of open
	ACCOUNTING (minimal public access- adjacent to Tax Collector/Assessor)											**0**		**NO CHANGE FROM 2016 PROGRAM**
	Town Accountant	1	150		1	175	1	175	1	175	228	53		private office
	Accounts Payable Clerk	1	108		1	100	1	100	1	100	153	53		open office
	Payroll Clerk/Benefits	1	143		1	175	1	175	1	175	154	-21		private office w/ table
	Records Storage	-	108		-	100	0	100	0	100	0	-100	TAKE SPACE FROM BLDG DEPT. AND TOWN CLERK'S AREA	lateral files
	Subtotal	**3**	**509**		**3**	**550**	**3**	**550**	**3**	**550**	**535**		**PENDING MEETING W/ STAFF**	450. Didn't include records.
	INFORMATION TECHNOLOGY (no public access)													IN TOWN HALL
	IT Director	1	121		1	100	1	200	1	200	251	51	TO BE REDUCED	private office
	IT Staff	1	130		2	200	1	200	1	200	286	86	CHANGE TO GENERAL STORAGE	desks/storage
	Equipment Storage Area	1	100			200	0	100	0	100	100	0		**SAME AS SERVER ROOM**
	Subtotal	**3**	**251**		**3**	**500**	**2**	**500**	**2**	**500**	**637**	**0**		**NO NET CHANGE FROM 2016 PROGRAM**
	CABLE ACCESS (PACC)											**HOLD OFF PLAN CHANGES**		**soundproof rooms**
	Master_Principal Studio	1	900		2	2600	2	1000	2	1000	1048	48		high ceilings
	Specialty (Kitchen) Studio							250		250	225	-25		natural gas, commerial kitchen, hood
	Studio for Interviews							100		100	101	1		
	Studio for Voiceover							50		50	72	22		
	Master control room	1	110				1	250	1	250	242	-8		cooling, emergency power, UPS
	(2) Green rooms							200		200	190	-10		sinks
	Sub-waiting							50		50	116	66		
	Equipment storage							200		200	200	0		
	Editing and Training					0	0	100	0	100	70	-30		
	Archive							100		100	98	-2		humidity and climate control
	(2) Private offices							200		200	184	-16		
	Subtotal	**2**	**1010**		**3**	**2600**	**3**	**2300**	**3**	**2300**	**2362**		**PENDING PLAN CHANGE**	
	PLANNING DEPARTMENT (Public Access- near Bldg, ConComm, BOH)													
	Land Use Director	1	141		1	175	1	**140**	1	**140**	150	10		private office. **More privacy**. Square shape
	Administrative Assistant	1	313		1	100	1	**415**	1	**415**	400	-15		open office
	Record and Plan Storage	0			0	135	0	135	0	135	156	21		file cabinets and flat files; could design this to include plan review as well.
	Zoning Board of Appeals	0			0	175	0	175	0	175	175	0	**SAME AS ZBA ADMINISTRATOR?**	
	Conference/Plan Review Room		305			180		**0**		**0**	0	0		Need space for plan review; could expand transaction counter area
	Transaction Counter	-			-	35	-	35	-	35	40	5		
	Subtotal	**2**	**759**		**2**	**800**	**2**	**900**	**2**	**900**	**921**			600. Added conference room

	EXISTING AREAS *				PROPOSED 2016*		8/17/2020		10/2/2020			AREA DIFF	NOTES	Items in Red TEXT are additional notes. Blue text from 3/11/20 meeting. Green Text 7/29 notes. Brown Text for 8/17/20 NOTES. PURPLE TEXT for 8/27/20.
	ROOM NAME	STAFF	AREA	UNIT	STAFF	AREA	STAFF	NSF	STAFF	NSF	actual			
	TOWN CLERK													IN TOWN HALL
	Town Clerk	1	274		1	175	1	175	1	175	175	0	GIVE AREA TO ACCOUNTING	private office
	Assistant Town Clerk	1	185		1	100	1	100	1	100	104	4		open office
	Registrar of Voters	1			1	100	1	400	1	400	400	0	TAKE AREA FROM RECORD STORAGE & VAULT	Need conference room space around elections
	Record Storage	-			-	100	-	100	-	100	108	8	GIVE TO REGISTRAR	lateral files, election materials, voter booths, etc.
	Vault	-	129		-	165	-	165	-	165	165	0	GIVE TO REGISTRAR	
	Subtotal	**3**	**588**		**3**	**640**	**3**	**940**	**3**	**940**	**952**		**PENDING MEETING W/ STAFF**	**need access to another 900 SF space**
	OTHER OFFICES													MISC LOCATIONS
	Selectmen Offices	1	0		1	175	1	175	1	175	120	-55	BEING ELIMINATED	private office
	Veterans Affairs (at Eagle House currently) + sub-waiting	1	162		1	130	1	250	1	170	184	14	INCL STORAGE	120 private office, 50SF stor. 80SF Sub-waiting
	State Representative (at Ritter currently)	1	176		1	175	1	175	1	175	120	-55	BEING ELIMINATED	private office. Shared w closet
	sub-waiting- VETERANS									80	128	48		
	"Friends of the Seniors" (at Ritter currently)	2	176		2	0	2	0	2	0	0	0		Move to space where Veterans Agent is at COA
	Subtotal	**7**	**514**		**7**	**480**	**7**	**600**	**7**	**600**	**552**			
	SCHOOL DISTRICT-CENTRAL OFFICES													
	Superintendent Office	1	275		1	150	1	150	1	150	169	19		Currently at TCP,
	Executive Assistant	2	225		1	100	1	100	1	100	90	-10		Currently at TCP, Shares a space with Data Base Manager
	Conference Room	0	0		0	180	0	180	0	0	0	0		No dedicated conference room currently
	Special Service Director or at THES	1	302		1	120	1	120	1	150	165	15		Currently at TCP
	Special Service Executive Assistants	2	465		2	200	2	200	2	200	220	20		Currently at TCP
	Special Service Record Storage(Student)		750			200		200		200	180	-20		Currently at TCP, Records stored in vault room and Classroom 14
	HR Business Manager	1	272		1	120	1	120	1		118	118		Currently at TCP
	Data Base Manager	0	225		1	100	1	100	1	100	107	7	RIGHT SIZE	Currently at TCP, Shares a space with Administrative Assistant
	Food Service	1	154		1	100	1	100	1	100	103	3	RIGHT SIZE	Currently at TCP
	TITLE 1 OFFICE						**0**	**100**	**1**	**100**	107	7	RIGHT SIZE	**1 DESK, 2 DRAWER FILE CAB, BOOKSHELF**
	Interim Director of Teaching & learning						**0**	**120**	**1**	**120**	107	-13		**1 DESK, CABINET, BOOKSHELF**
	Director of Facilities	1	140		1	100	1	100	1	100	107	7	RIGHT SIZE	Currently at Brooks House
	BREAKROOM- FOR OSS STAFF ONLY						**0**	**150**	**0**	**0**		0	COMBINED W/ SHARED STAFF LOUNGE	**FOR 6, MICROWAVE**
	school record storage		650			200		200		200	143	-57	WILL BE RESOLVED W/ ELIMINATION OF STATE REP AND SELECTMAN OFFICE	Classroom 14, TCP
											0	0		
	Sub-waiting										83	83	ADDED ON 9/21/20	
	Receptionist & supplies								1		132	132	ADDED ON 9/21/20	includes storage
	ACE (Program for 18-22 year olds-approx 9 students)	6	1955		6	1000	0	1000	9	1000	810			Current has 2 classroom rooms, Proposed two smaller rooms with a kitchen
	ACE Kitchen										139		PART OF OVERALL ACE SPACE	
	ACE Office										88		PART OF OVERALL ACE SPACE	
	School Linked Services Director	1	1000		1	0	1	0	1	0				Currently in Room 3 as a smaller office isn't available and Clasroom 2
	School Linked Services "Community Link Program"	1	1800		1	1100	1	1100	1	1100	1054	-46		Classroom 2 at TCP--Possibly relocate to THES?
	EXTENDED DAYCARE		**5000**				**0**	**3000**	**0**	**3000**	3084	84		**PREFER 4,000 SF**

	EXISTING AREAS *				PROPOSED 2016*		8/17/2020		10/2/2020			AREA DIFF	NOTES	Items in Red TEXT are additional notes. Blue text from 3/11/20 meeting. Green Text 7/29 notes. Brown Text for 8/17/20 NOTES. PURPLE TEXT for 8/27/20.
	ROOM NAME	STAFF	AREA	UNIT	STAFF	AREA	STAFF	NSF	STAFF	NSF	actual			
	EXTENDED DAYCARE- PROGRAM ADDED AT 9/21/20 MTG									2000	0	-2000	ADDED ON 9/21/20	
	COMMUNITY LINK- 2 CLASSROOMS. PROGRAM ADDED AT 9/21/20 MTG									2000	0	-2000	ADDED ON 9/21/20	
	EARLY LEARNING- 1 CLASSROOM. PROGRAM ADDED AT 9/21/20 MTG									1000	680	-320	ADDED ON 9/21/20	
	EXTENDED DAYCARE DIRECTOR						0	100	1	100	139	39	GIVE TO EARLY LEARNING	DESK
	EXTENDED DAYCARE NURSE						0	120	1	120	138	18	GIVE TO EARLY LEARNING	DAYCARE NURSE, RESTING BED
	EXTENDED DAYCARE STORAGE						0	80	0	80	110	30	GIVE TO EARLY LEARNING	10' LONG STORAGE SHELVING
	SCHOOL MAINTENANCE													RETAIN USE OF GARAGE
	Subtotal- STAFF ONLY	**17**	**8213**		**17**	**3670**	**11**	**7340**	**16**	**11920**	**8073**			655. Only included Supt, Admin, HR Business Manger, Admin and Conference Room
	TOILETS													
	Staff Toilet- Female					150		150		150			TO BE FINALIZED PER PLUMBING COUNT	
	Staff Toilet- Male					150		150		150			TO BE FINALIZED PER PLUMBING COUNT	
	~~Staff Toilet-Male/Female (Town Hall 1st floor)~~		48							0				
	Public Toilet (Town Hall 1st floor)		64							0			TO BE FINALIZED PER PLUMBING COUNT	
	Public Toilet (Town Hall 2nd floor)		34							0			TO BE FINALIZED PER PLUMBING COUNT	
	~~Public Toilets- Female (Ritter)~~ STUDENT TOILET		62			150		150		150			TO BE FINALIZED PER PLUMBING COUNT	
	~~Public Toilets- Male (Ritter)~~. STUDENT TOILET		48			150		150		150			TO BE FINALIZED PER PLUMBING COUNT	
	Subtotal- Toilets		0			600		600		**600**				
	Gym									**3753**	3753			
	MEETING ROOMS													
	Conference #1										319			20-25P -3/11/20 meeting. More than one room. #? **Replace Ritter Conference**
	Conference #2										620			same as selectmen's meeting room- 3/11/20 meeting?
	Conference #3										200		BECOMES TABLES/CHAIRS STOR	
	Conference #4										2000			small conference room for 8P. 120 to 160SF. **Building Department, Planning, Town Clerk**
	Conference #5										266			
	Conference #6										1046			
	TOWN CLERK DESIGNATED- INTERIM CONFERENCE RM.								30		871	871	INTERIM CONF.	
	Hearing Room (Town Hall)	100	1428		100	2000	100	2000	100	2000	2239	239	CONFERENCE #4	
	Subtotal- Meeting Rooms		1428			2000		2000	**130**	**2000**	**7561**			
	STAFF SUPPORT													
	Shared Staff Lounge / conference										0		SEE BELOW	
	Copy/ Mail Room Town Hall		90			90		90		90	88		UPDATE	
	Copy/Mail Room Ritter		90											
	Mechanical closet													
	Plumbing/Fire Protection Room													
	Main Electrical Room													
	Kitchen/Breakroom (Ritter)		85											
	Breakroom (Town Hall)		132											
	Kitchen/Breakroom- STAFF					200		200		200	374	174	SHARED BY SCHOOL STAFF AS WELL	
	Subtotal- Staff Support									**290**	**462**			
	Elevator					0		0		0			N/A	
	Elevator Machine Room					0		0		0			N/A	
	Entry Vestibule					0		0		0			NEXT TO GYM IN TCP	
	Network Server Room (Ritter)		90										IN IT AREA	

A	B	C	D	E	F	G	I	J	L	M	N	P	Q	R
	EXISTING AREAS *				**PROPOSED 2016***		**8/17/2020**			**10/2/2020**		**AREA DIFF**	**NOTES**	**Items in Red TEXT are additional notes. Blue text from 3/11/20 meeting. Green Text 7/29 notes. Brown Text for 8/17/20 NOTES. PURPLE TEXT for 8/27/20.**
	ROOM NAME	STAFF	AREA	UNIT	STAFF	AREA	STAFF	NSF	STAFF	NSF	actual			
	Network Server Room (Town Hall)		138			100		100		0			IN IT AREA	in IT Section
	Network Server/IT Room (Passios)		Incl. above										IN IT AREA	
	Custodian Closet					60		60		60	60	0		
	Records Retention Storage		2000			2000		2000		2000	2382	382	SHOWN IN 4 AREAS- NORTH WING, CENTER WING, WEST WING, STAGE	Currently using approx. 1000 SF in Town Hall Attic
														and 1000 SF in Ritter Attic
	Subtotal-other spaces		0			**2160**		**2,160**		**2,060**	**2,442**			4905. Largely due to long term records storage area
	Lions Club/ Food pantry										431		**added on 9/21/20**	
	BOYS & GIRLS CLUB							-		-	-	-		
	Executive Director's Office						1	**120**		120	144		**added on 9/21/20**	
	Program Director's Office						1	**120**		120	104		**added on 9/21/20**	
	Front Desk/Recption						2	**80**		80	100		**added on 9/21/20**	
	Game Room						1	**500**		500	514		**added on 9/21/20**	
	misc.Multi-use						1	**1,000**		1,000	1,007		**added on 9/21/20**	
	Homework, Computer, educational						1	**1,000**		1,000	560		**added on 9/21/20**	
	Storage							**80**		80	-		**added on 9/21/20**	
	Student bag storage							**80**		80	80		**added on 9/21/20**	
	Subtotal-BGCL						107	**2,980**		**2,980**	**2,509**			

Lunenburg TCP Building Reuse
Area Breakdown

School superintendent and Special Services	**TOTAL**	**12,043**	**35%**
a. School offices		2,149	
b. Special Services		849	
c. Extended Service, ACE, storage		9,045	
Town offices:	**TOTAL**	**8,245**	**24%**
a. Town Clerk		1,009	
b. Planning Department		823	
c. Conservation Committee		501	
d. Building Department		713	
e. Treasurer/Finance		1,196	
f. Town Manager		1,130	
g. Assessors		654	
h. Board of Health		461	
i. IT		983	
j. Shared support: copy room and staff lounge		698	
k. Town storage		77	
PACC	**TOTAL**	**3,003**	**9%**
Community Use	**TOTAL**	**10,831**	**32%**
a. Veteran's Affairs		219	
b. Meeting rooms and conference rooms		5,399	
c. Kitchen		875	
d. Lions Club/food pantry		738	
e.Gymnasium/Multi-purpose		3,600	
	TOTAL AREAS	**34,122**	**100%**

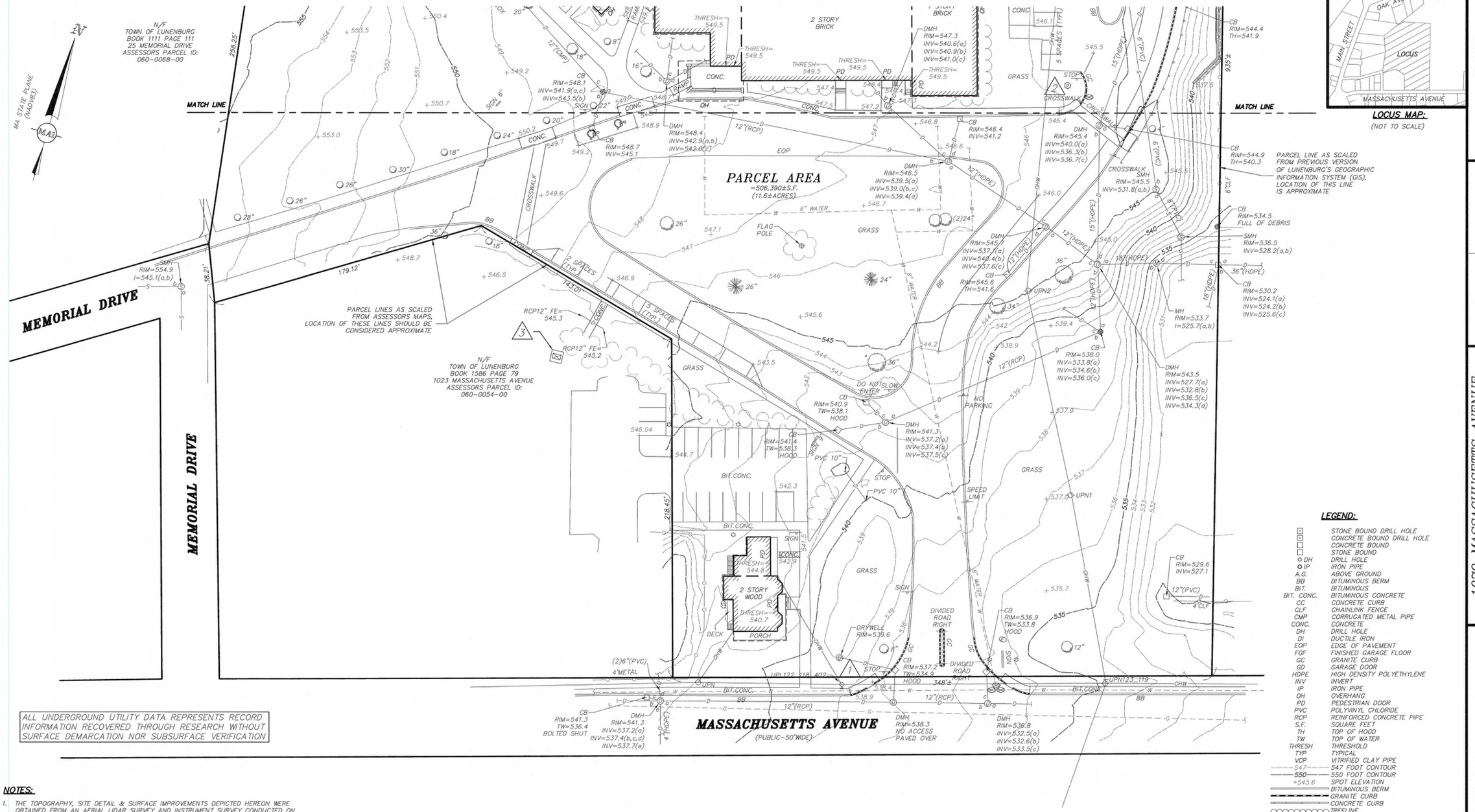
02/01/2021

TOWN OF LUNENBURG

OVERALL FLOOR PLAN

DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company
20-136-2329

Appendix C



ALL UNDERGROUND UTILITY DATA REPRESENTS RECORD INFORMATION RECOVERED THROUGH RESEARCH WITHOUT SURFACE DEMARCATION NOR SUBSURFACE VERIFICATION

NOTES:

1. THE TOPOGRAPHY, SITE DETAIL & SURFACE IMPROVEMENTS DEPICTED HEREON WERE OBTAINED FROM AN AERIAL LIDAR SURVEY AND INSTRUMENT SURVEY CONDUCTED ON THE GROUND BY MERIDIAN ASSOCIATES, INC. (MAI) BETWEEN JUNE 2 AND JUNE 10, 2020
2. THE SUBJECT PROPERTY IS LOCATED IN ZONE RESIDENCE E.
3. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED UPON A PARTIAL FIELD SURVEY AND COMPILATION OF PLANS OF RECORD. MERIDIAN ASSOCIATES, INC. DOES NOT WARRANTY NOR GUARANTEE THE LOCATION OF ALL UTILITIES DEPICTED OR NOT DEPICTED. THE CONTRACTOR, PRIOR TO COMMENCEMENT OF CONSTRUCTION, SHALL VERIFY THE LOCATION OF ALL UTILITIES AND CONTACT DIG SAFE AT 811.
4. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT, VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
5. THE ELEVATIONS DEPICTED HEREON WERE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), AS DERIVED FROM GPS OBSERVATIONS.
6. BOUNDARY LINES ALONG THE WESTERLY SIDE LINE ARE BASED ON RECORD DEEDS, PLANS, AND FOUND MONUMENTS. PARCEL LINES TO THE NORTH AND EAST ARE BASED ON HISTORIC GIS INFORMATION AND ARE APPROXIMATE. PARCEL LINES BETWEEN THE LOCUS PARCEL 1023 MASSACHUSETTS AVENUE ARE FROM THE TOWN'S ASSESSORS PLANS AND ARE APPROXIMATE.

RECORD OWNER:

TOWN OF LUNENBURG
1079 MASSACHUSETTS AVENUE
LUNENBURG, MA

- DEED BOOK 603 PAGE 391 (PORTION OF)

REFERENCES:

- PLAN BOOK 1946 PLAN 77
- PLAN BOOK 1957 PLAN 109
- PLAN BOOK 1971 PLAN 160
- PLAN BOOK 1973 PLAN 179
- PLAN BOOK 1987 PLAN 309
- PLAN BOOK 2010 PLAN 488
- PLAN No. 1301 OF 1910

DOCUMENTS ON RECORD AT THE WORCESTER COUNTY DISTRICT REGISTRY OF DEEDS.

UTILITY SUMMARY:

UTILITY	PROVIDER	NOTES
WATER	TOWN OF LUNENBURG	APPROXIMATELY SHOWN, CONNECTION IN MASS. AVE.
SEWER	TOWN OF LUNENBURG	CONNECTION IN MASS. AVE.
STORM DRAIN	TOWN OF LUNENBURG	RUNS TO THE EAST, FINAL OUTFALL UNKNOWN
GAS	NATIONAL GAS	APPROXIMATELY SHOWN, RUNS FROM THE NORTH, TERMINUS UNKNOWN
ELECTRIC	UNITIL	OVERHEAD, RUNS ON UTILITY POLES TO MASS. AVE.
CABLE	COMCAST	OVERHEAD, RUNS ON UTILITY POLES TO MASS. AVE.

GRAPHIC SCALE
SCALE: 1"= 30'
15 0 15 30 60 120

TEMPORARY BENCHMARK CHART:

T.B.M.#	DESCRIPTION	ELEVATION
1	SPIKE ON UTILITY POLE 118, 402 1.0' A.G.	540.81
2	X-CUT MARK ON HYDRANT BOLT	548.01
3	SQUARE CUT ON N.W. SIDE OF TRANSFORMER CONCRETE PAD	548.56

(SEE NOTE 5)

LEGEND:

⊙	STONE BOUND DRILL HOLE
⊡	CONCRETE BOUND DRILL HOLE
□	CONCRETE BOUND
■	STONE BOUND
o DH	DRILL HOLE
o IP	IRON PIPE
A.G.	ABOVE GROUND
BB	BITUMINOUS BERM
BIT.	BITUMINOUS
BIT. CONC.	BITUMINOUS CONCRETE
CC	CONCRETE CURB
CLF	CHAINLINK FENCE
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
DH	DRILL HOLE
DI	DUCTILE IRON
EOP	EDGE OF PAVEMENT
FGF	FINISHED GARAGE FLOOR
GC	GRANITE CURB
GD	GARAGE DOOR
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
IP	IRON PIPE
OH	OVERHANG
PD	PEDESTRIAN DOOR
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
S.F.	SQUARE FEET
TH	TOP OF HOOD
TW	TOP OF WATER
THRESH	THRESHOLD
TYP	TYPICAL
VCP	VITRIFIED CLAY PIPE
547	547 FOOT CONTOUR
550	550 FOOT CONTOUR
+545.6	SPOT ELEVATION
	BITUMINOUS BERM
	GRANITE CURB
	CONCRETE CURB
	TREELINE
	VEGETATION LINE
	CHAINLINK FENCE
	SIGN
	DECIDUOUS TREE
	CONIFEROUS TREE
	BUILDING OVERHANG
OHW	OVERHEAD WIRES
	UTILITY POLE
	UTILITY POLE WITH LIGHT
M	MANHOLE
D	OBSERVED DRAIN LINE
D	DRAIN MANHOLE
	CATCH BASIN
	ROUND CATCH BASIN
S	OBSERVED SEWER LINE
S	SEWER MANHOLE
	TERMINUS UNKNOWN
	TRANSFORMER
W	COMPILED WATER LINE
G	COMPILED GAS LINE

BK. #678, PG. #7
DWG. No. 6318_REC.DWG

REVISIONS

BY	DESCRIPTION	DATE

COMMONWEALTH OF MASSACHUSETTS
MATTHEW LOWELL
No. 49825
REGISTERED PROFESSIONAL LAND SURVEYOR
5-14-2020

1079 MASSACHUSETTS AVENUE
EXISTING CONDITIONS PLAN
LOCATED IN
LUNENBURG, MASSACHUSETTS
(WORCESTER COUNTY)
PREPARED FOR
DiGIORGIO ASSOCIATES, INC.

MERIDIAN ASSOCIATES
500 CUMMINGS CENTER, SUITE 5950
BEVERLY, MASSACHUSETTS 01915
TELEPHONE: (978) 299-0447
69 MILK STREET, SUITE 208
WESTBOROUGH, MASSACHUSETTS 01581
TELEPHONE: (508) 871-7030
WWW.MERIDIANASSOC.COM

DESIGNED BY:
CHECKED BY:

DATE: 9-16-2020
SCALE: 1"=30'
SHEET No. 1 OF 2
PROJECT No. 6318

N/F
DANIEL P. & JOANNE L CRAFFEY
BOOK 1067 PAGE 462
30 OAK AVENUE
ASSESSORS PARCEL ID:
060-0039-00

N/F
CULLEN M DWYER
BOOK 8153 PAGE 309
76 MAIN STREET
ASSESSORS PARCEL ID:
060-0043-00

N/F
METHODIST CHURCH OF LUNENBURG
BOOK 835 PAGE 397
64 MAIN STREET
ASSESSORS PARCEL ID:
060-0044-00

N/F
SACKSEN REALTY TRUST
BOOK 6815 PAGE 205
58 MAIN STREET
ASSESSORS PARCEL ID:
060-0045-00

N/F
TOWN OF LUNENBURG
BOOK 1111 PAGE 111
25 MEMORIAL DRIVE
ASSESSORS PARCEL ID:
060-0068-00

MA STATE PLANE (NAD83)

IRON PIPE FOUND
IRON PIPE FOUND (HELD)
DRILL HOLE FOUND (HELD)
STONE BOUND FOUND (HELD)
6"X6" SBDH FOUND (HELD)

402'±
52'±
263.72'
126.77'
97.63'
258.25'
935'±

PARCEL LINES AS SCALED FROM PREVIOUS VERSION OF LUNENBURG'S GEOGRAPHIC INFORMATION SYSTEM (GIS). LOCATION OF THESE LINES IS APPROXIMATE

PARCEL AREA
=506,390±S.F.
(11.6±ACRES)

PARCEL AREA
=11.6±ACRES

GRAVEL
GRASS
1 STORY BRICK
2 STORY BRICK
1/2 STORY BRICK
GENERATOR
HEDGES
3'WOOD GUARDRAIL
GARAGE DOOR FGF=545.4
PATH
CONC. PAD
SIGN
BENCHES
SAND BOX
GATE
6'CLF
BIT.CONC.
CONC.
PD
THRESH=549.5
THRESH=549.6
OH
SMH RIM=546.8 INV=543.1(a) INV=543.1(b)
DMH RIM=549.0 INV=544.3(a) INV=544.4(b)
DMH RIM=548.8 INV=542.7(a) INV=542.8(b) INV=543.4(c) SUMP=539.3
DMH RIM=549.0 INV=544.3(a) INV=544.1(b) INV=544.4(c) SUMP=540.8
DMH RIM=547.3 INV=540.6(a) INV=540.9(b) INV=541.0(c)
DMH RIM=548.4
DMH RIM=545.4
SMH RIM=545.6 INV=536.0(a,b,c)
CB RIM=548.1 INV=542.2(a,b)
CB RIM=548.4 INV=543.4(a) INV=543.3(b)
CB RIM=548.1 INV=541.9(a,c) INV=543.5(b)
CB RIM=544.6 INV=540.1(a) INV=540.4(b)
CB RIM=546.1 INV=543.1
CB RIM=545.0 INV=542.4
CB RIM=544.2 TH=540.7
DMH RIM=544.4 INV=540.2(a) INV=539.0(b,c)
DMH/45 RIM=544.8 NO ACCESS PAVED OVER
CB RIM=544.4 TH=541.9
CB RIM=546.4 INV=541.2
8"(CMP)
12"(CMP)
18"(CMP)
8"(PVC)
6"(PL.I.P.)
8"(VCP)
15"(HDPE)
12"(RCP)
24"(CMP)
UPN123_5
UPN123_4
UPN3
5 SPACES (TYP.)
16 SPACES (TYP.)
9 SPACES
8 SPACES
SPEED BUMP
STOP
CROSSWALK
CONC. WALK
MATCH LINE

GRAPHIC SCALE
SCALE: 1"= 30'
15 0 15 30 60 120

LOCUS MAP:
(NOT TO SCALE)
OAK AVENUE
MAIN STREET
LOCUS
MASSACHUSETTS AVENUE

NOTE:
SEE SHEET 1 OF 2 FOR NOTES AND LEGEND.

TEMPORARY BENCHMARK CHART:

T.B.M.#	DESCRIPTION	ELEVATION
1	SPIKE ON UTILITY POLE #16 #29 1.0' A.G.	540.81
2	X-CUT MARK ON HYDRANT BOLT	548.01
3	SQUARE CUT ON N.W. SIDE OF TRANSFORMER CONCRETE PAD	548.56

(SEE NOTE 5)

REVISIONS

DATE	DESCRIPTION	BY

COMMONWEALTH OF MASSACHUSETTS
MATTHEW LOWRY
No. 49626
REGISTERED PROFESSIONAL ENGINEER
9-16-2020

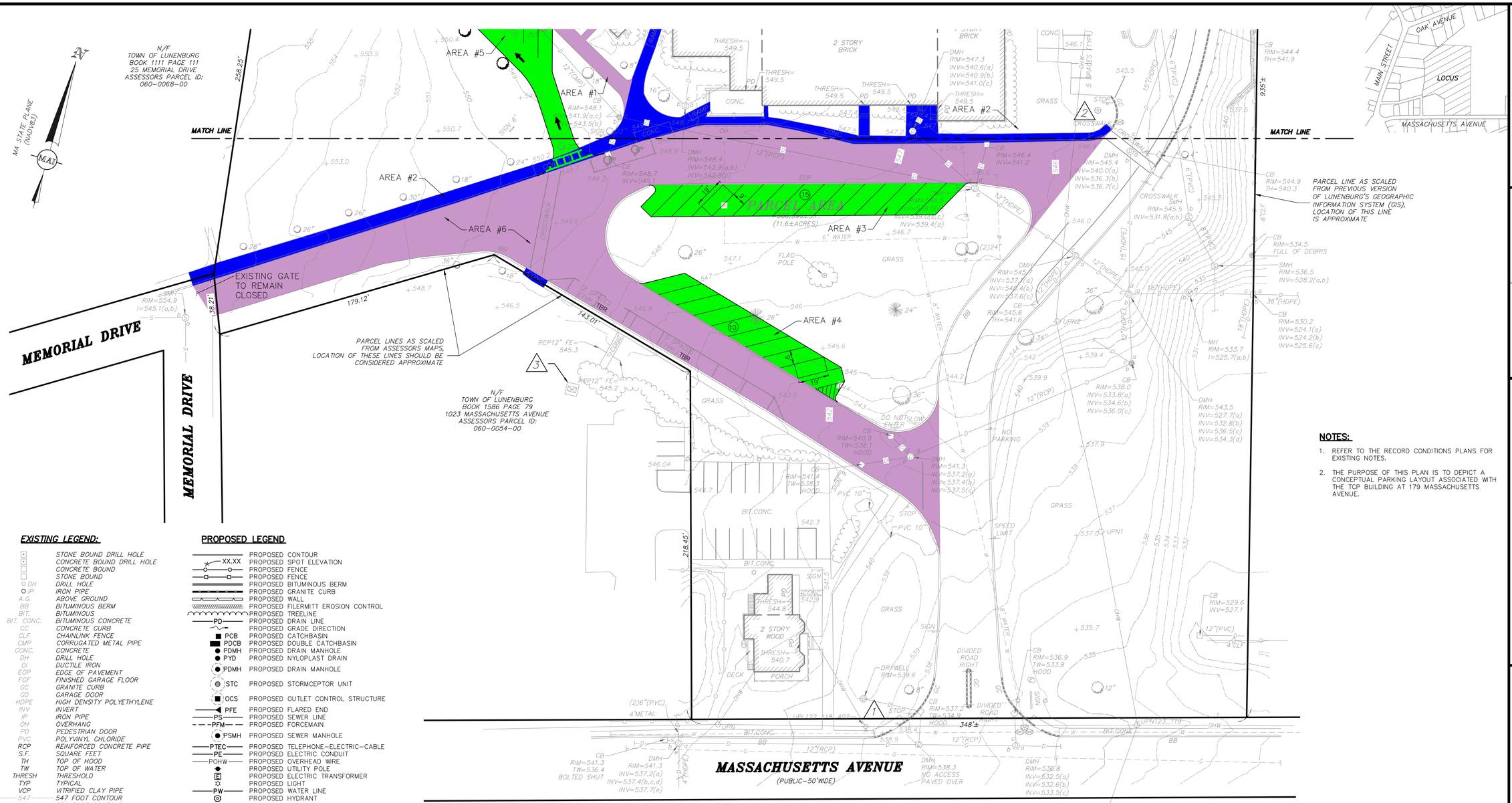
1079 MASSACHUSETTS AVENUE
EXISTING CONDITIONS PLAN
LOCATED IN
LUNENBURG, MASSACHUSETTS
(WORCESTER COUNTY)
PREPARED FOR
DiGIORGIO ASSOCIATES, INC.

MERIDIAN ASSOCIATES
500 CUMMINGS CENTER, SUITE 5950
BEVERLY, MASSACHUSETTS 01915
TELEPHONE: (978) 299-0447
69 MILK STREET, SUITE 208
WESTBOROUGH, MASSACHUSETTS 01581
TELEPHONE: (508) 871-7030
WWW.MERIDIANASSOC.COM

DESIGNED BY:
CHECKED BY:

DATE: 9-16-2020
SCALE: 1"=30'
SHEET No. 2 OF 2
PROJECT No. 6318

BK. #678, PG. #7
DWG. No. 6318_REC.DWG



EXISTING LEGEND:

- STONE BOUND DRILL HOLE
- CONCRETE BOUND DRILL HOLE
- CONCRETE BOUND
- STONE BOUND
- DH DRILL HOLE
- IP IRON PIPE
- A.G. ABOVE GROUND
- BB BITUMINOUS BERM
- BIT. BITUMINOUS
- BIT. CONC. BITUMINOUS CONCRETE
- CC CONCRETE CURB
- CLF CHAINLINK FENCE
- CMP CORRUGATED METAL PIPE
- CONC. CONCRETE
- DH DRILL HOLE
- DI DUCTILE IRON
- EOP EDGE OF PAVEMENT
- FGF FINISHED GARAGE FLOOR
- GC GRANITE CURB
- GD GARAGE DOOR
- HDPE HIGH DENSITY POLYETHYLENE
- INV INVERT
- IP IRON PIPE
- OH OVERHANG
- PD PEDESTRIAN DOOR
- PVC POLYVINYL CHLORIDE
- RCP REINFORCED CONCRETE PIPE
- S.F. SQUARE FEET
- TH TOP OF HOOD
- TW TOP OF WATER
- THRESH THRESHOLD
- TYP TYPICAL
- VCP VITRIFIED CLAY PIPE
- 547 547 FOOT CONTOUR
- 550 550 FOOT CONTOUR
- +545.6 SPOT ELEVATION
- BITUMINOUS BERM
- GRANITE CURB
- CONCRETE CURB
- TREELINE
- VEGETATION LINE
- CHAINLINK FENCE
- SIGN
- DECIDUOUS TREE
- CONIFEROUS TREE
- BUILDING OVERHANG
- OHW OVERHEAD WIRES
- UTILITY POLE
- UTILITY POLE WITH LIGHT
- M MANHOLE
- D OBSERVED DRAIN LINE
- D DRAIN MANHOLE
- CATCH BASIN
- ROUND CATCH BASIN
- S OBSERVED SEWER LINE
- S SEWER MANHOLE
- TERMINUS UNKNOWN
- TRANSFORMER
- W COMPILED WATER LINE
- G COMPILED GAS LINE

PROPOSED LEGEND

- PROPOSED CONTOUR
- XX.XX PROPOSED SPOT ELEVATION
- PROPOSED FENCE
- PROPOSED FENCE
- PROPOSED BITUMINOUS BERM
- PROPOSED GRANITE CURB
- PROPOSED WALL
- PROPOSED FILERMITT EROSION CONTROL
- PROPOSED TREELINE
- PD PROPOSED DRAIN LINE
- PROPOSED GRADE DIRECTION
- PCB PROPOSED CATCHBASIN
- PDCB PROPOSED DOUBLE CATCHBASIN
- PDMH PROPOSED DRAIN MANHOLE
- PYD PROPOSED NYLOPLAST DRAIN
- PDMH PROPOSED DRAIN MANHOLE
- STC PROPOSED STORMCEPTOR UNIT
- OCS PROPOSED OUTLET CONTROL STRUCTURE
- PFE PROPOSED FLARED END
- PS PROPOSED SEWER LINE
- PFM PROPOSED FORCEMAIN
- PSMH PROPOSED SEWER MANHOLE
- PTEC PROPOSED TELEPHONE–ELECTRIC–CABLE
- PE PROPOSED ELECTRIC CONDUIT
- POHW PROPOSED OVERHEAD WIRE
- PROPOSED UTILITY POLE
- PROPOSED ELECTRIC TRANSFORMER
- PROPOSED LIGHT
- PW PROPOSED WATER LINE
- PROPOSED HYDRANT
- PROPOSED WATER GATE
- PROPOSED WATER SERVICE
- PG PROPOSED GAS LINE
- PROPOSED GAS GATE
- PROPOSED PARKING SPACE COUNT
- SNOW STOCKPILE AREA
- PROPOSED TREE
- PROPOSED HAYBALES & SILT FENCE
- NEW ENGLAND CONSERVATION/WLDLIFE MIX PLANTING AREA
- RIPRAP AREA
- PROPOSED MONUMENT TO BE PLACED
- a=/b=/i= INVERT ELEVATIONS
- BC BOTTOM OF CURB
- BW BOTTOM OF WALL
- (DBO) DESIGNED BY OTHERS
- GEN PROPOSED GENERATOR
- HR PROPOSED HANDICAP RAMP
- L= PROPOSED PIPE LENGTH
- PBB PROPOSED BITUMINOUS BERM
- PEOP PROPOSED EDGE OF PAVEMENT
- PGC PROPOSED GRANITE CURB
- R= RIM ELEVATION
- S= PROPOSED PIPE SLOPE
- TC TOP OF CURB
- TW TOP OF WALL

FOR PERMITTING ONLY
NOT FOR CONSTRUCTION

PROPOSED CONSTRUCTION LEGEND

- PAVEMENT/CONCRETE/CURB/RAMP TO BE REMOVED
- PAVEMENT/CONCRETE/CURB/RAMP TO BE REMOVED & REPLACED
- PAVEMENT/CONCRETE/CURB/RAMP NEW CONSTRUCTION
- PAVEMENT/SIDEWALK OVERLAY

Area No.	Pavement (sf)	Pavement Overlay (sf)	Sidewalk (sf)	Concrete (sf)	Curbing (lf)	Ramps (Ea.)
Area #1		6,200				
Area #2			3,650	2,000	600	5
Area #3	3,750				240	
Area #4	2,575				170	
Area #5	34,000		2,150		2,200	4
Area #6		26,500				
Area #7		2,800				

GRAPHIC SCALE
SCALE: 1"= 30'
15 0 15 30 60 120

TEMPORARY BENCHMARK CHART:

T.B.M.#	DESCRIPTION	ELEVATION
1	SPIKE ON UTILITY POLE 118/402 1.0' A.G.	540.81
2	X–CUT MARK ON HYDRANT BOLT	548.01
3	SQUARE CUT ON N.W. SIDE OF TRANSFORMER CONCRETE PAD	548.56

(SEE NOTE 5)

NOTES:

1. REFER TO THE RECORD CONDITIONS PLANS FOR EXISTING NOTES.
2. THE PURPOSE OF THIS PLAN IS TO DEPICT A CONCEPTUAL PARKING LAYOUT ASSOCIATED WITH THE TCP BUILDING AT 179 MASSACHUSETTS AVENUE.

DRAFT RELEASE
1/29/2021

BK. #678, PG. #07
DWG. No. 6318_SITE.DWG

REVISIONS

BY	DSK	DESCRIPTION	DATE
		REVISIONS TO PAVEMENT TREATMENT	01/18/21

1079 MASSACHUSETTS AVENUE
PAVEMENT/SIDEWALK & CURB SKETCH
LOCATED IN
LUNENBURG, MASSACHUSETTS
(WORCESTER COUNTY)
PREPARED FOR
DiGIORGIO ASSOCIATES, INC.

MERIDIAN ASSOCIATES
500 CUMMINGS CENTER, SUITE 5950
BEVERLY, MASSACHUSETTS 01915
TELEPHONE: (978) 922-8449
69 MILK STREET, SUITE 208
WESTBOROUGH, MASSACHUSETTS 01581
TELEPHONE: (508) 871-7600
WWW.MERIDIANASSOC.COM

DESIGNED BY:
CHECKED BY:

DATE: DECEMBER 21, 2020
SCALE: 1"=30'
SHEET No. 1 OF 3
PROJECT No. 6318

MA STATE PLANE (NAD83)

N/F
DANIEL P & JOANNE L CRAFFEY
BOOK 1067 PAGE 462
30 OAK AVENUE
ASSESSORS PARCEL ID:
060-0039-00

N/F
CULLEN M DWYER
BOOK 8153 PAGE 309
76 MAIN STREET
ASSESSORS PARCEL ID:
060-0043-00

N/F
METHODIST CHURCH OF LUNENBURG
BOOK 835 PAGE 397
64 MAIN STREET
ASSESSORS PARCEL ID:
060-0044-00

N/F
SACKSEN REALTY TRUST
BOOK 6815 PAGE 205
58 MAIN STREET
ASSESSORS PARCEL ID:
060-0045-00

N/F
TOWN OF LUNENBURG
BOOK 1111 PAGE 111
25 MEMORIAL DRIVE
ASSESSORS PARCEL ID:
060-0068-00

IRON PIPE FOUND
IRON PIPE FOUND (HELD)
DRILL HOLE FOUND (HELD)
STONE BOUND FOUND (HELD)
6"X6" SBDH FOUND (HELD)

52'±
402'±
263.72'
126.77'
97.63'
258.25'

PARCEL LINES AS SCALED FROM PREVIOUS VERSION OF LUNENBURG'S GEOGRAPHIC INFORMATION SYSTEM (GIS), LOCATION OF THESE LINES IS APPROXIMATE

PARCEL AREA =11.6±ACRES

PORTION OF BUILDING TO BE REMOVED (REFER TO PLANS BY OTHERS)

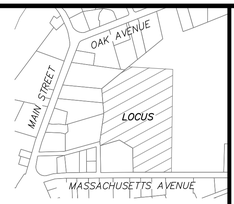
APPROXIMATE LIMIT OF WORK

PROPOSED RETAINING WALL

PROPOSED TREE (TYP.)

AREA #1
AREA #2
AREA #5
AREA #7

MATCH LINE



NOTES:

1. REFER TO THE RECORD CONDITIONS PLANS FOR EXISTING NOTES.
2. REFER TO SHEET 1 OF THIS PLAN SET FOR NOTES AND LEGEND.
3. THE PURPOSE OF THIS PLAN IS TO DEPICT A CONCEPTUAL PARKING LAYOUT ASSOCIATED WITH THE TCP BUILDING AT 179 MASSACHUSETTS AVENUE.

PROPOSED CONSTRUCTION LEGEND

- PAVEMENT/CONCRETE/CURB/RAMP TO BE REMOVED
- PAVEMENT/CONCRETE/CURB/RAMP TO BE REMOVED & REPLACED
- PAVEMENT/CONCRETE/CURB/RAMP NEW CONSTRUCTION
- PAVEMENT/SIDEWALK OVERLAY

Area No.	Pavement (sf)	Pavement Overlay (sf)	Sidewalk (sf)	Concrete (sf)	Curbing (lf)	Ramps (Ea.)
Area #1		6,200				
Area #2			3,650	2,000	600	5
Area #3	3,750				240	
Area #4	2,575				170	
Area #5	34,000		2,150		2,200	4
Area #6		26,500				
Area #7		2,800				

DRAFT RELEASE
1/29/2021

FOR PERMITTING ONLY
NOT FOR CONSTRUCTION

BK. #678, PG. #07
DWG. No. 6318_SITE.DWG

REVISIONS

BY	DSK	DESCRIPTION	DATE
		REVISIONS TO PAVEMENT TREATMENT	01/18/21

1079 MASSACHUSETTS AVENUE
PAVEMENT/SIDEWALK & CURB SKETCH
LOCATED IN
LUNENBURG, MASSACHUSETTS
(WORCESTER COUNTY)
PREPARED FOR
DiGIORGIO ASSOCIATES, INC.

MERIDIAN ASSOCIATES
500 CUMMINGS CENTER, SUITE 5950
BEVERLY, MASSACHUSETTS 01915
TELEPHONE: (978) 922-1245
69 MILK STREET, SUITE 208
WESTBOROUGH, MASSACHUSETTS 01581
TELEPHONE: (508) 871-7600
WWW.MERIDIANASSOC.COM

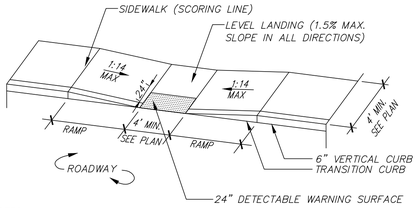
DESIGNED BY:
CHECKED BY:

DATE:
DECEMBER 21, 2020

SCALE:
1"=30'

SHEET No.
2 OF 3

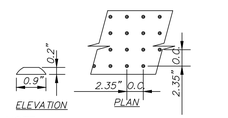
PROJECT No.
6318



NOTES:

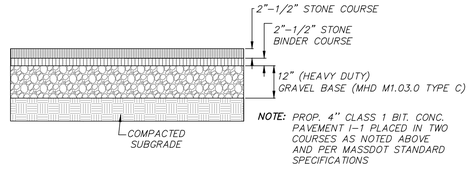
1. RAMP CROSS SECTION TO BE THE SAME AS ADJACENT SIDEWALK; I.E. DEPTH OF SURFACE AND FOUNDATION.
2. DIMENSIONS ARE SUBJECT TO CHANGE IN FIELD. ALL SLOPES AND DIMENSIONS TO COMPLY WITH A.D.A. AND MAAB REQUIREMENTS.
3. PROVIDE EXPANSION JOINT AT TOPS OF RAMP AND AT BACK OF WALK AT INTERFACE OF CURB.
4. PROVIDE HEAVY BROOM FINISH ON RAMP AND SIDE SLOPES PERPENDICULAR TO FLOW OF TRAFFIC.
5. MINIMUM WALK DIMENSIONS ARE FROM BACK OF CURB.
6. TRANSITION CURB LENGTH AS REQUIRED TO MEET CODE.
7. FIXED OBJECTS (i.e. UTILITY POLES, HYDRANTS ETC.) MUST NOT ENCROACH ON ANY PART OF A WHEELCHAIR RAMP, INCLUDING TRANSITION SLOPES.
8. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP, EXCLUDING CURB TRANSITIONS, TO BE LOCATED OUTSIDE OF THE CROSSWALK.

1 ACCESSIBLE CURB CUT WITH PARALLEL SIDES
NOT TO SCALE



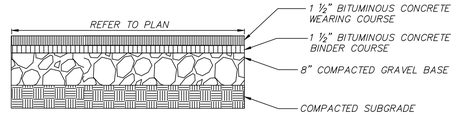
NOTE:
PREFABRICATED PANELS PER A.D.A. ACCESSIBILITY GUIDELINES SECTION 4.29.2 & A4.29.2 SHALL BE USED.

2 DETECTABLE WARNING DETAIL
NOT TO SCALE

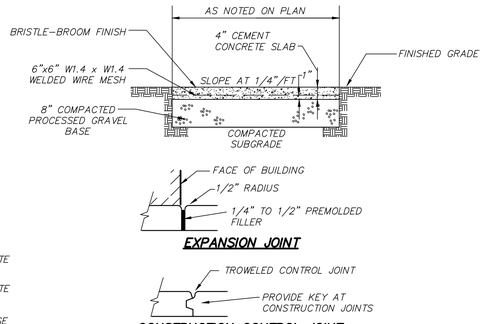


NOTE: PROP. 4" CLASS 1 BIT. CONC. PAVEMENT I-1 PLACED IN TWO COURSES AS NOTED ABOVE AND PER MASSDOT STANDARD SPECIFICATIONS

3 BITUMINOUS CONCRETE PAVEMENT SECTION
NOT TO SCALE

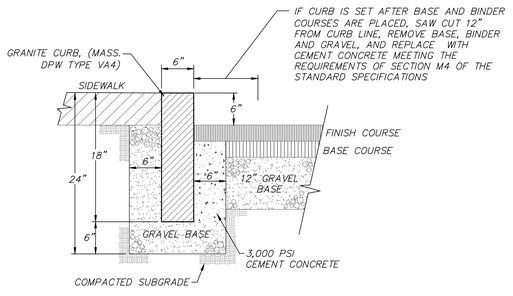


4 BITUMINOUS CONCRETE SIDEWALK DETAIL
NOT TO SCALE

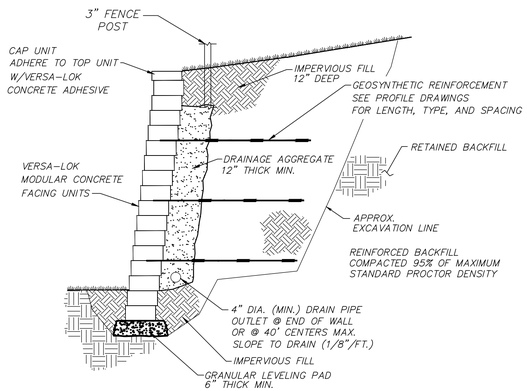


NOTE: TYPICAL EXPANSION JOINT SPACING EVERY 20' O.C.
TYPICAL CONTROL JOINT SPACING EVERY 5' O.C.

5 CONCRETE SIDEWALK DETAIL
NOT TO SCALE

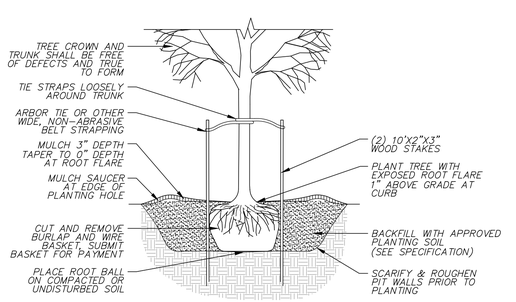


6 VERTICAL GRANITE CURB DETAIL
NOT TO SCALE



KEY ASSUMPTIONS AND NOTES:
1. FINAL WALL DESIGN TO BE PREPARED BY A STRUCTURAL ENGINEER.
2. MAXIMUM HEIGHT NON REINFORCED WALLS VARIES DEPENDING ON SOILS AND SITE CONDITIONS HIGHER WALLS BUILT USING GEO-GRID.
3. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
4. STANDARD FACE TEXTURE: NORTH SHORE GRANITE OR AVAILABLE BY SPECIAL ORDER: RUSTIC, LIMESTONE, OLD WORLD. 4. MINIMUM TURNING RADIUS 15 FEET.
5. 1" SETBACK PER ROW ON A STRAIGHT WALL (ANGLE OF BATTER 3.6°) CURVEDWALL 1-2.7" PER ROW.
6. THIS WALL CROSS SECTION IS FOR A SPECIFIC SET OF SITE CONDITIONS. EACH WALL SHOULD BE PROPERLY DESIGNED AND ENGINEERED FOR SITE CONDITIONS.

7 GRAVITY RETAINING WALL/FENCE DETAIL
NOT TO SCALE



8 TREE PLANTING DETAIL
NOT TO SCALE

DRAFT RELEASE
1/29/2021

FOR PERMITTING ONLY
NOT FOR CONSTRUCTION

BK. #678, PG. #07
DWG. No. 6318_SITE.DWG

REVISIONS

BY	DSK	DESCRIPTION	DATE
		REVISIONS TO PAVEMENT TREATMENT	01/18/21

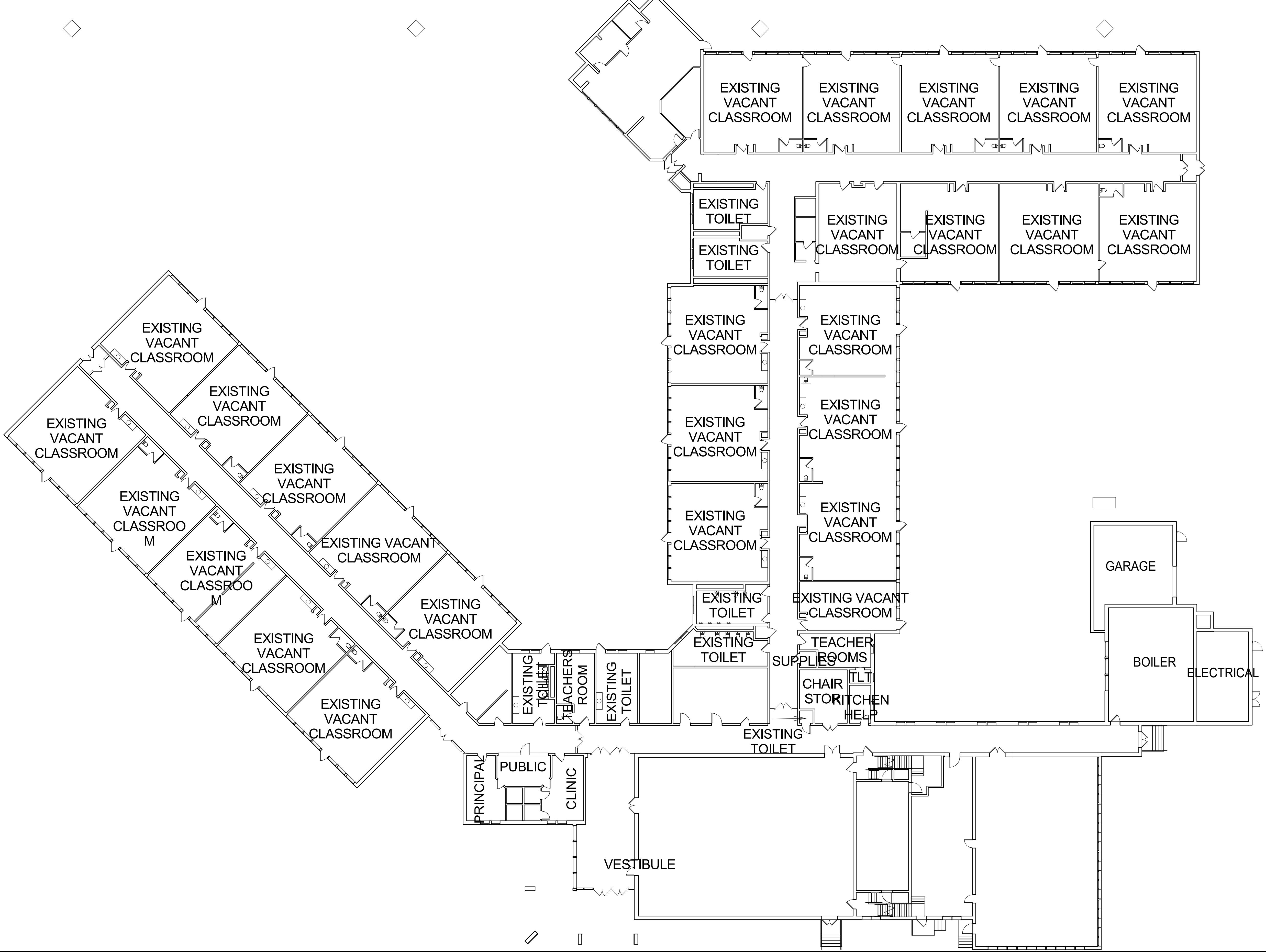
1079 MASSACHUSETTS AVENUE
SITE DETAILS
LOCATED IN
LUNENBURG, MASSACHUSETTS
(WORCESTER COUNTY)
PREPARED FOR
DiGIORGIO ASSOCIATES, INC.

MERIDIAN ASSOCIATES
500 CUMMINGS CENTER, SUITE 5950
BEVERLY, MASSACHUSETTS 01915
TELEPHONE: (978) 922-1441
69 MILK STREET, SUITE 208
WESTBOROUGH, MASSACHUSETTS 01581
TELEPHONE: (508) 871-7030
WWW.MERIDIANASSOC.COM

DESIGNED BY:
CHECKED BY:

DATE: DECEMBER 21, 2020
SCALE: AS NOTED
SHEET No. 3 OF 3
PROJECT No. 6318

Appendix D



03/19/2021

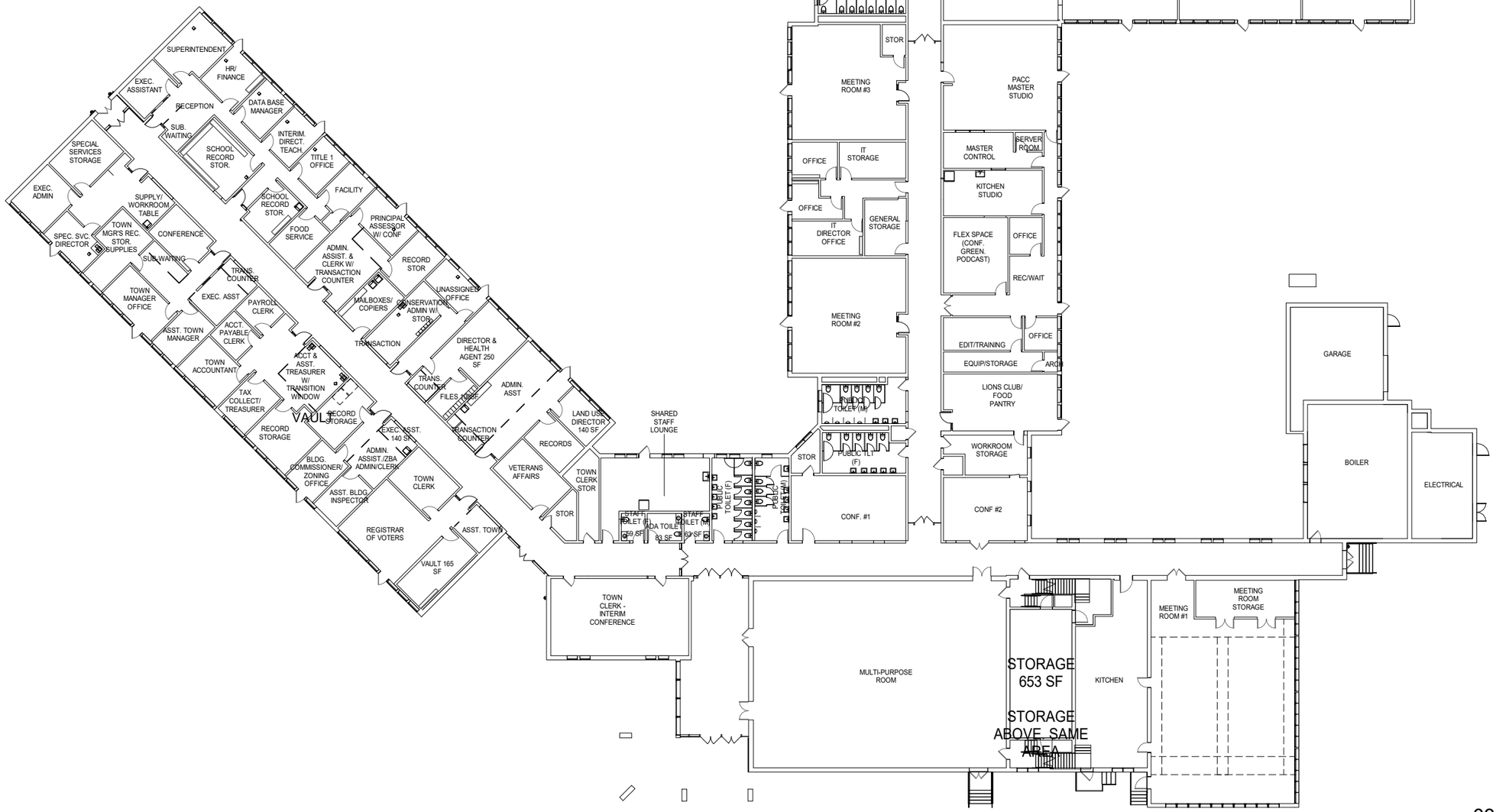
T.C PASSIOS
RE-USE PROJECT

EXISTING FLOOR PLAN

0 16 32 64
SCALE: 1/32" 1'-0"

DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company

20-138-2329



03/19/2021

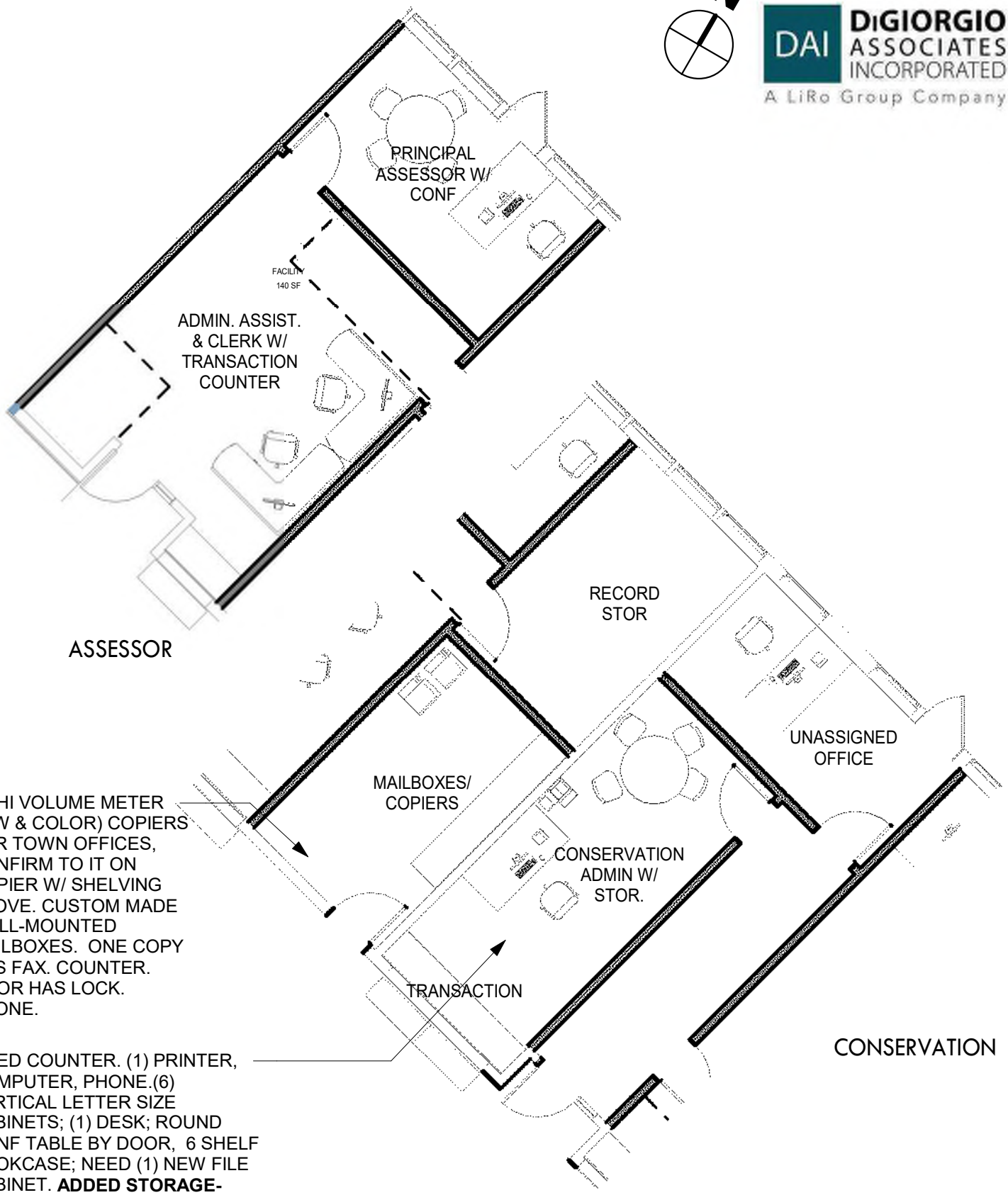
T.C PASSIOS
RE-USE PROJECT

OVERALL FLOOR PLAN

0 16 32 64
SCALE: 1/32" 1'-0"

DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company

20-138-2329



(3) HI VOLUME METER (B/W & COLOR) COPIERS FOR TOWN OFFICES, CONFIRM TO IT ON COPIER W/ SHELVING ABOVE. CUSTOM MADE WALL-MOUNTED MAILBOXES. ONE COPY HAS FAX. COUNTER. DOOR HAS LOCK. PHONE.

FIXED COUNTER. (1) PRINTER, COMPUTER, PHONE.(6) VERTICAL LETTER SIZE CABINETS; (1) DESK; ROUND CONF TABLE BY DOOR, 6 SHELF BOOKCASE; NEED (1) NEW FILE CABINET. **ADDED STORAGE- NEED PLAN STORAGE AND ARCHIVE STORAGE.**

WEST WING

ASSESSOR / CONSERVATION

T.C PASSIOS RE-USE PROJECT

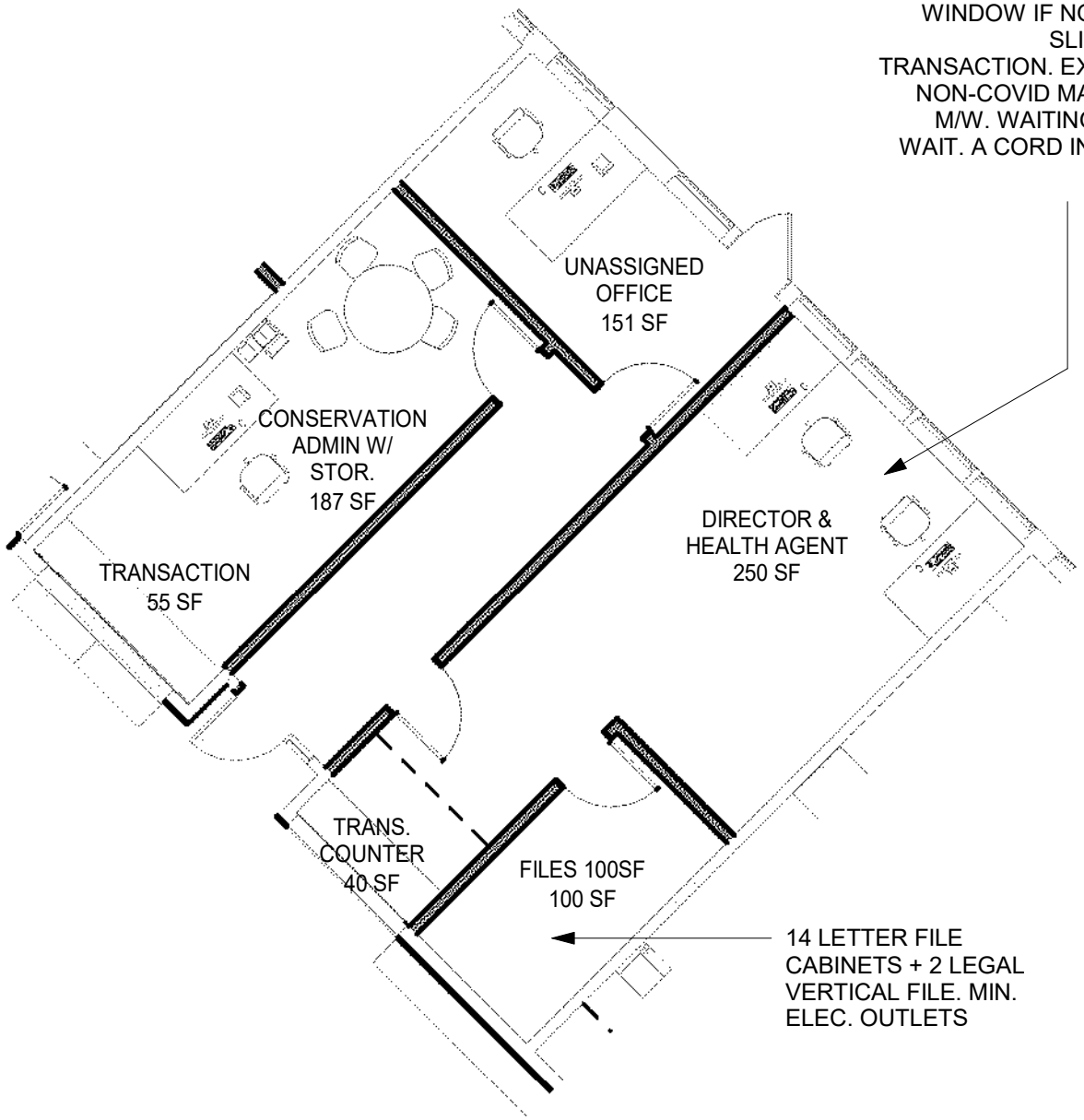
0' 10' 20' 40'

SCALE: 1/8" = 1'-0"

03/19/2021

DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company

2 OFFICES. DESKS NO PARTITIONS. 2 COMPUTERS PLUS LAPTOP. WIFI. PRINTER CT. TRANSACTION COUNTER- NO WINDOW IF NO MORE COVID. SLIDING WINDOW. TRANSACTION. EXPECT VISITOR. NON-COVID MAY VARY. 2 HRS M/W. WAITING 5 - 15 MINUTE WAIT. A CORD IN HALLWAY. NO PANIC DEVICE.



T.C PASSIOS RE-USE PROJECT

0' 10' 20' 40'

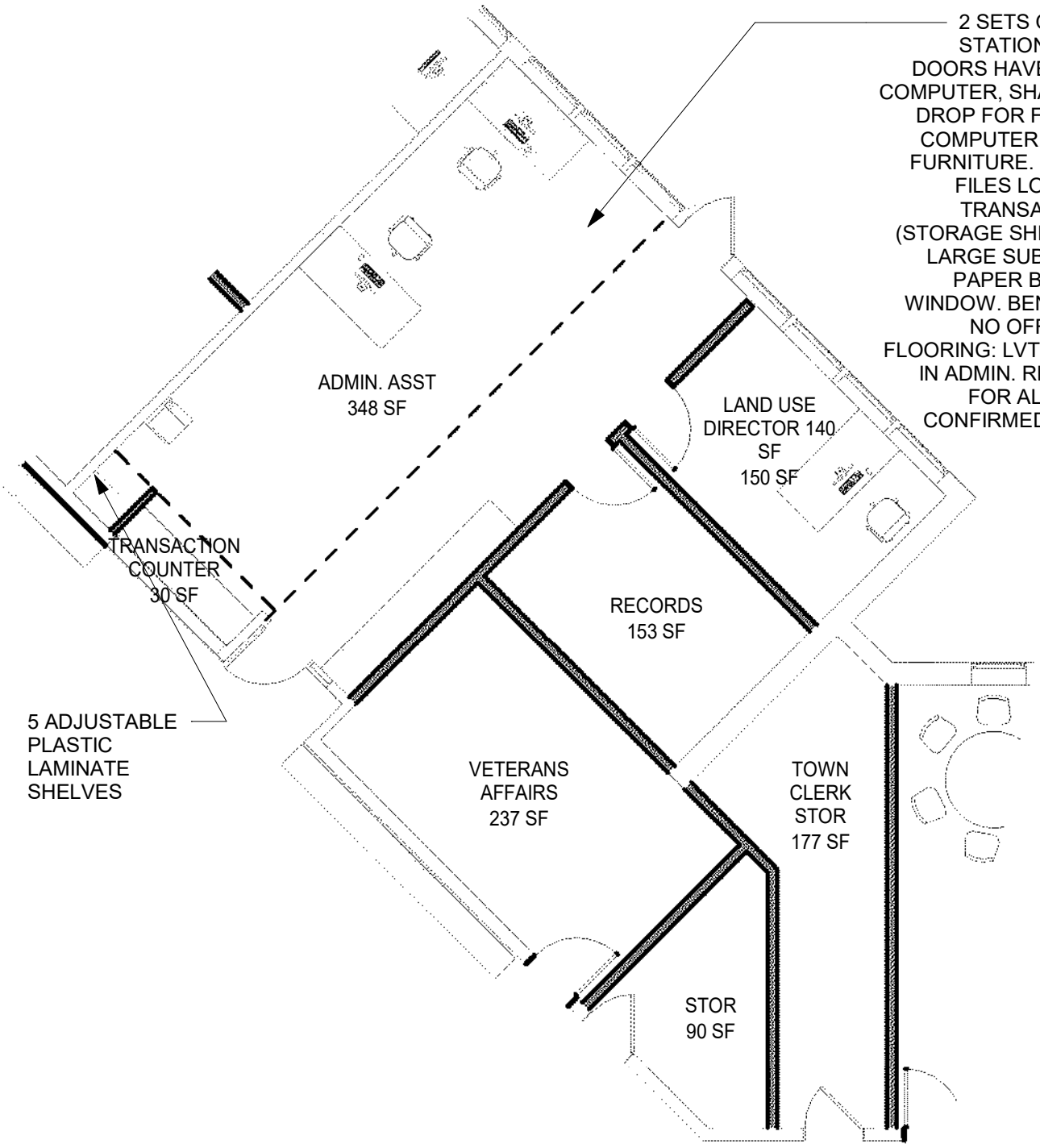
SCALE: 1/8" = 1'-0"

WEST WING

BOARD OF HEALTH

03/19/2021

DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company



T.C PASSIOS RE-USE PROJECT

0' 10' 20' 40'

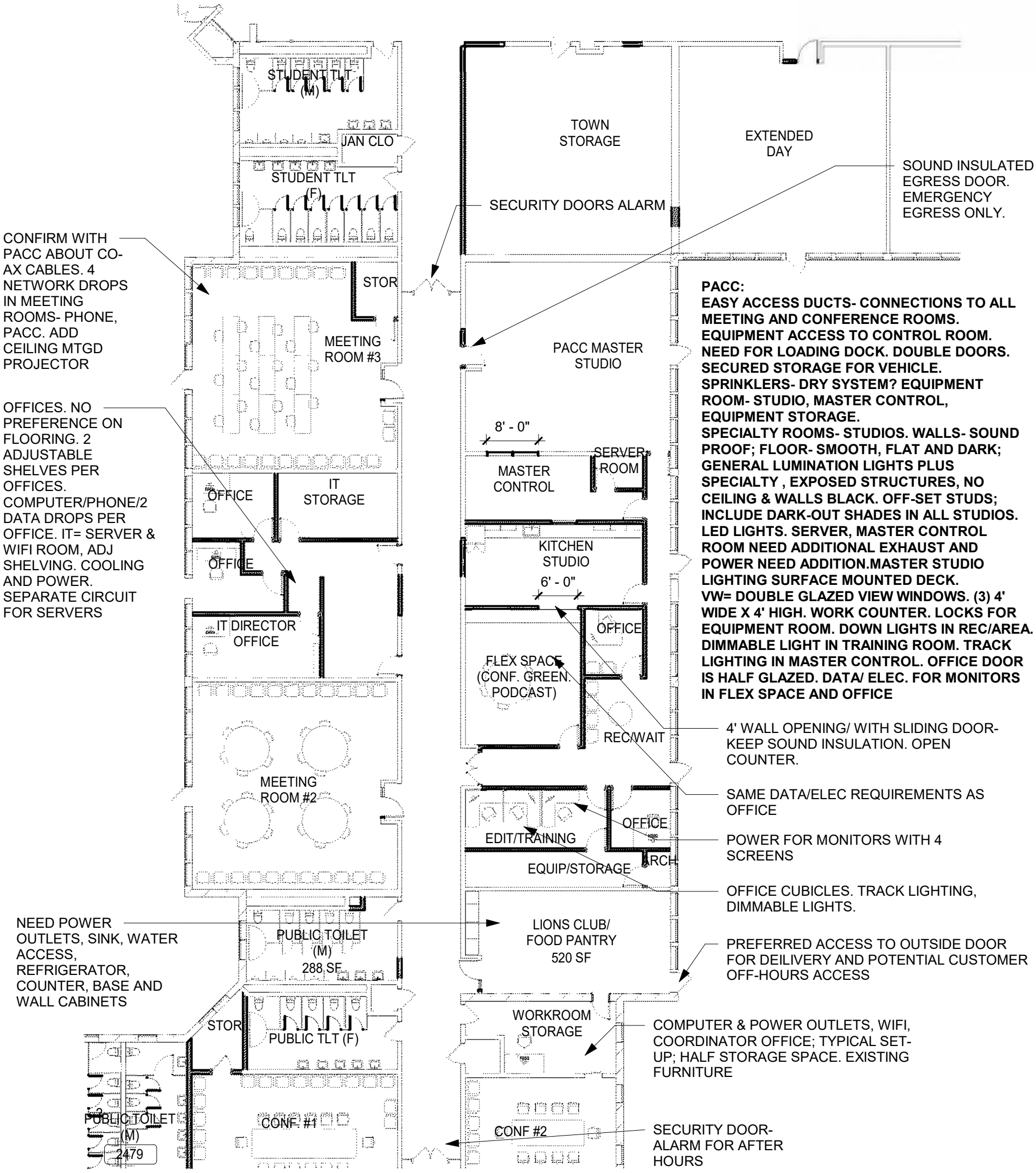
SCALE: 1/8" = 1'-0"

WEST WING

PLANNING

03/19/2021

DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company



1 ENLARGED FLOOR PLAN - PACC

1/16" = 1'-0"

CENTER WING:

PACC

T.C PASSIOS RE-USE PROJECT

0' 10' 20' 40'

SCALE: 1/8" = 1'-0"

03/19/2021

DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company

CR IN DEPT DOORS; LOCKS IN OFFICES AND RECORDS. PHONE/PRINTER/ COMPUTER PP. CPT IN OFFICES; OFFICE PARTITION; SLIDING WINDOW; NO COMPUTER @ TRANS. WINDOW. CONF ROOM- WHITE BOARDS, PHONE, OUTLET FOR COMPUTER AND FLAT SCREEN. DIMMABLE LIGHTS IN CONF AND OFFICE. 15 VERTICAL FILE CABINETS. ADJ SHELVING. 2 ROWS OF ADJ. SHELVING IN OFFICES

PANIC DEVICE UNDER COUNTER

T.C PASSIOS
RE-USE PROJECT

0' 15' 30' 60'

SCALE: 1'-0" = 1/8"

WEST WING

TOWN MANAGER

03/19/2021

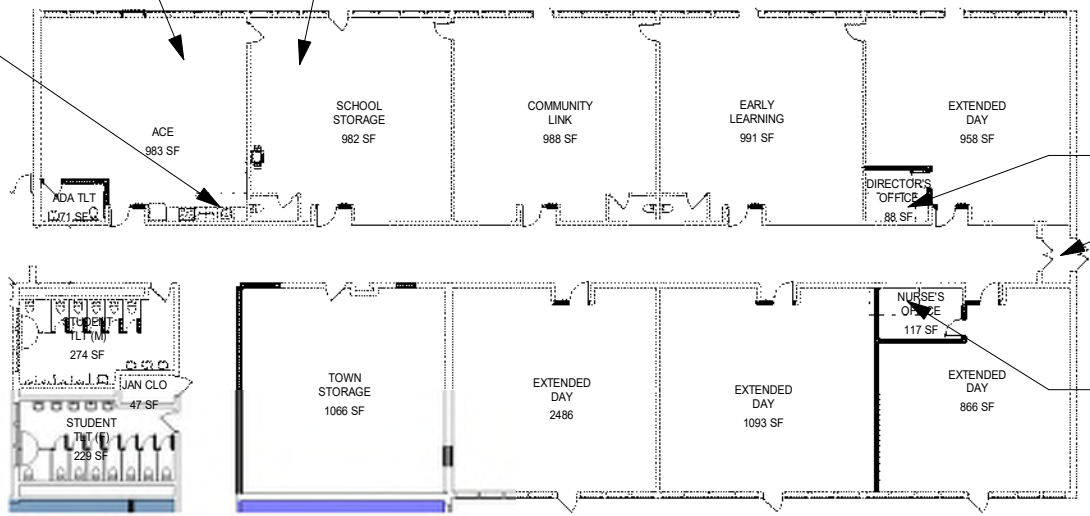
DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company

ACE- NEW: NEW STOVE, KITCHEN SINK, REFRIGERATOR, W/D, MICROWAVE, WALL PHONE, 8' WHITE BOARD, 4' BULLETIN BOARD
ACCENT FLOOR COLOr

TYPICAL:
KEEP EXIST HW SINKS. WALL PHONE AND COMPUTER OUTLETS. EXIST FURNITURE. NEW:
4' BULLETIN BOARD, 8' WHITE BOARD.
CORRIDOR
DOORS HAVE PEEK WITH FILM & OFFICE LOCKS; NO SIDE LIGHTS

FLOOR UNIT COPIER AND PHONE LINE FOR FAX. 2 6' L NEW TABLES & 1 3 SHELF SHELVING UNITS*

EXIST. TOILET DEMOLISHED



EXIST. TOILET DEMOLISHED

CARD READER, BUZZER, SECURITY CAMERA

EXIST. DEMOLISHED TOILET

NORTH WING

EXTENDED DAY, SCHOOL USE, COMMUNITY LINK, EARLY LEARNING, ACE

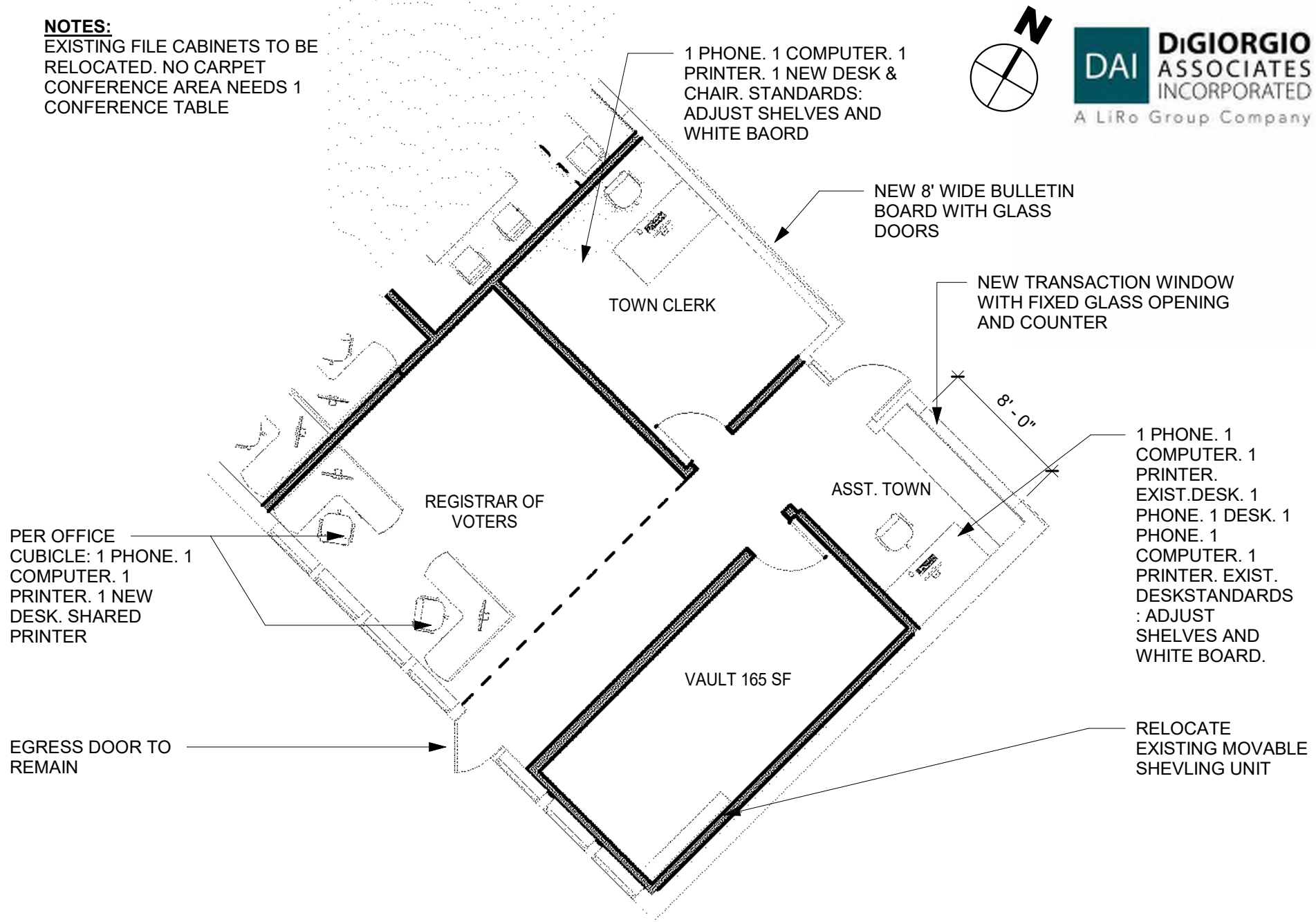
T.C PASSIOS
RE-USE PROJECT

0' 15' 30' 60'

SCALE: 1/8" = 1'-0"

NOTES:
EXISTING FILE CABINETS TO BE RELOCATED. NO CARPET CONFERENCE AREA NEEDS 1 CONFERENCE TABLE

DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company



T.C PASSIOS RE-USE PROJECT

0' 10' 20' 40'

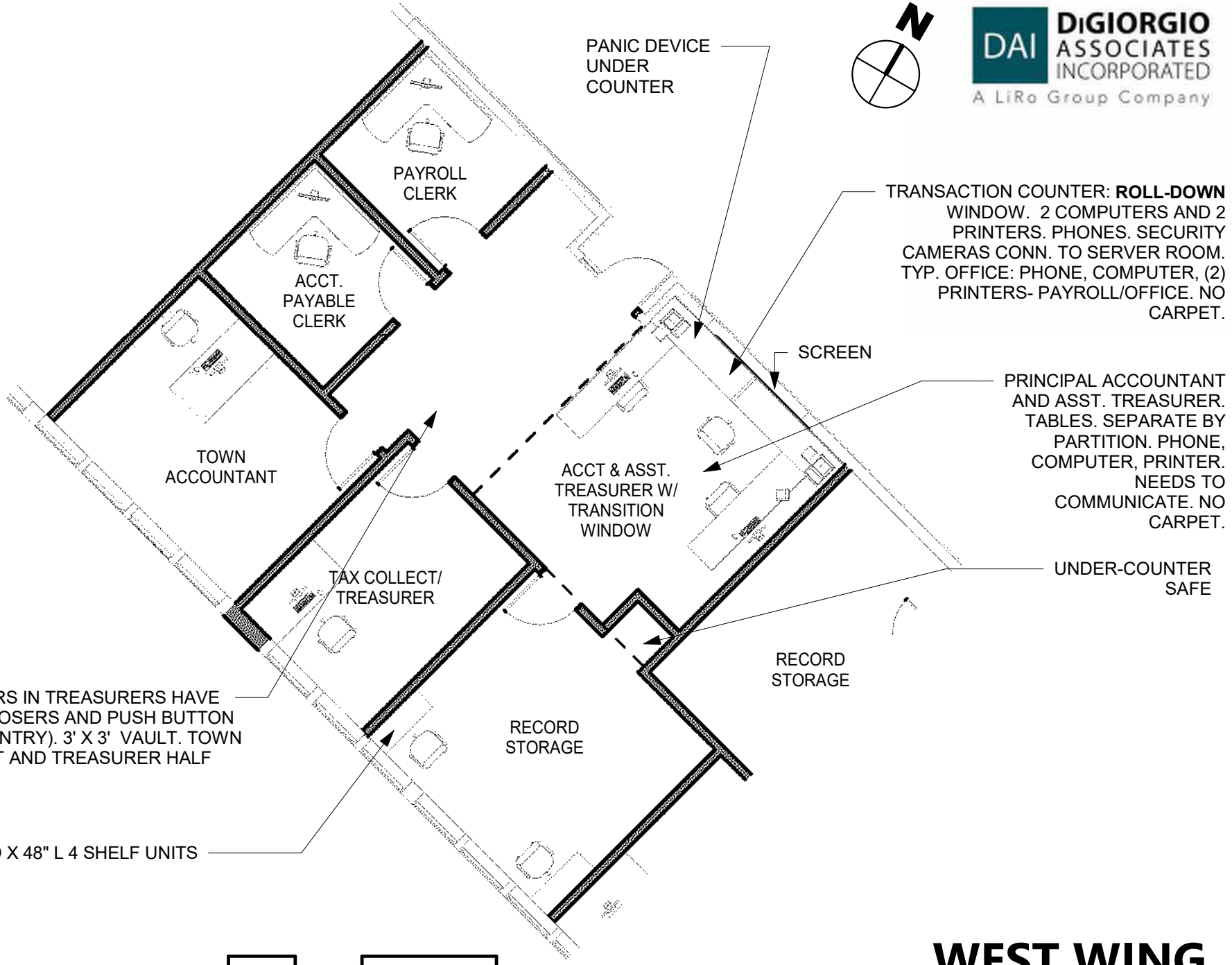
SCALE: 1/8" = 1'-0"

WEST WING

TOWN CLERK

03/19/2021

DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company



T.C PASSIOS
RE-USE PROJECT

0' 10' 20' 40'

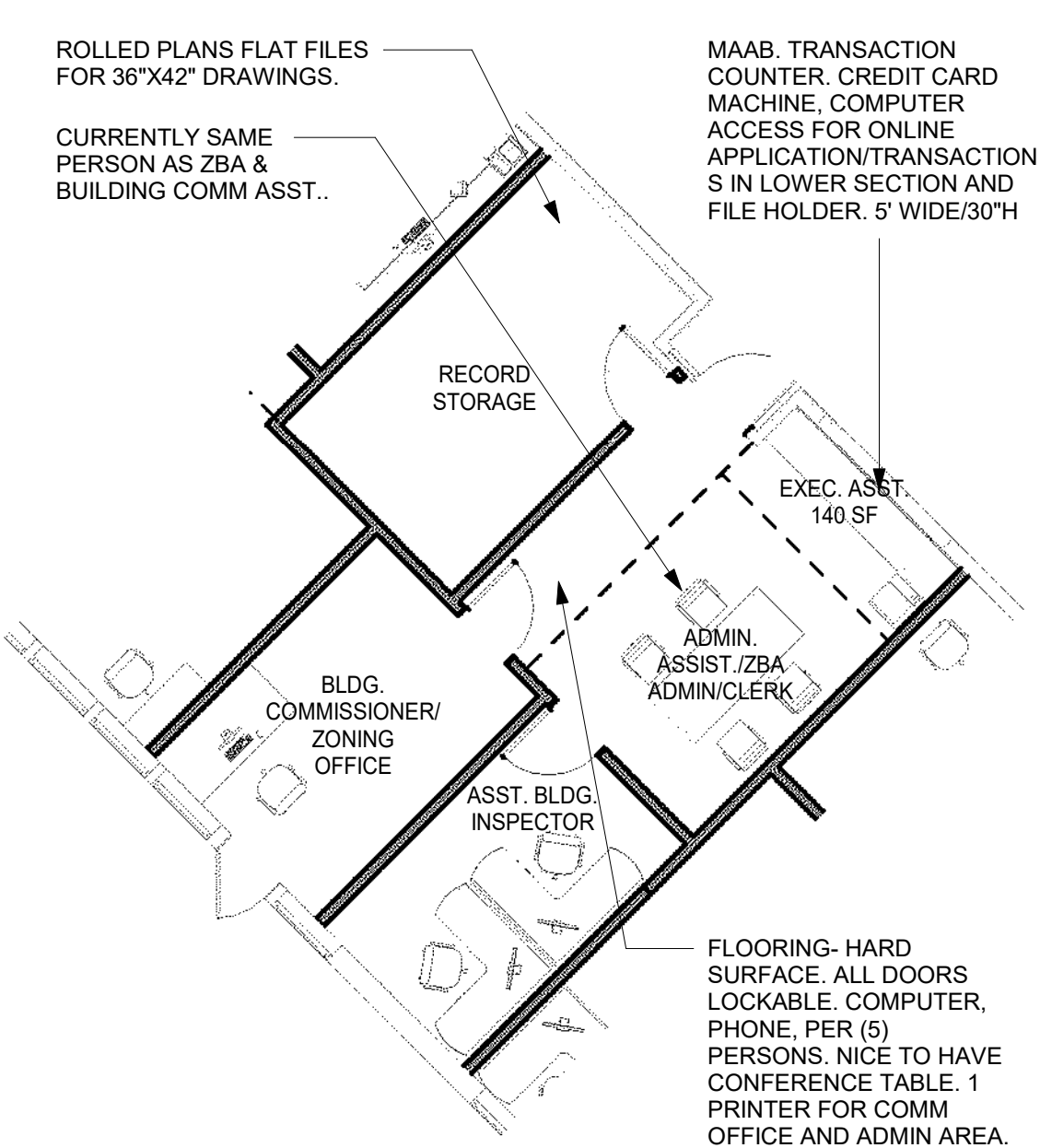
SCALE: 1/8" = 1'-0"

WEST WING

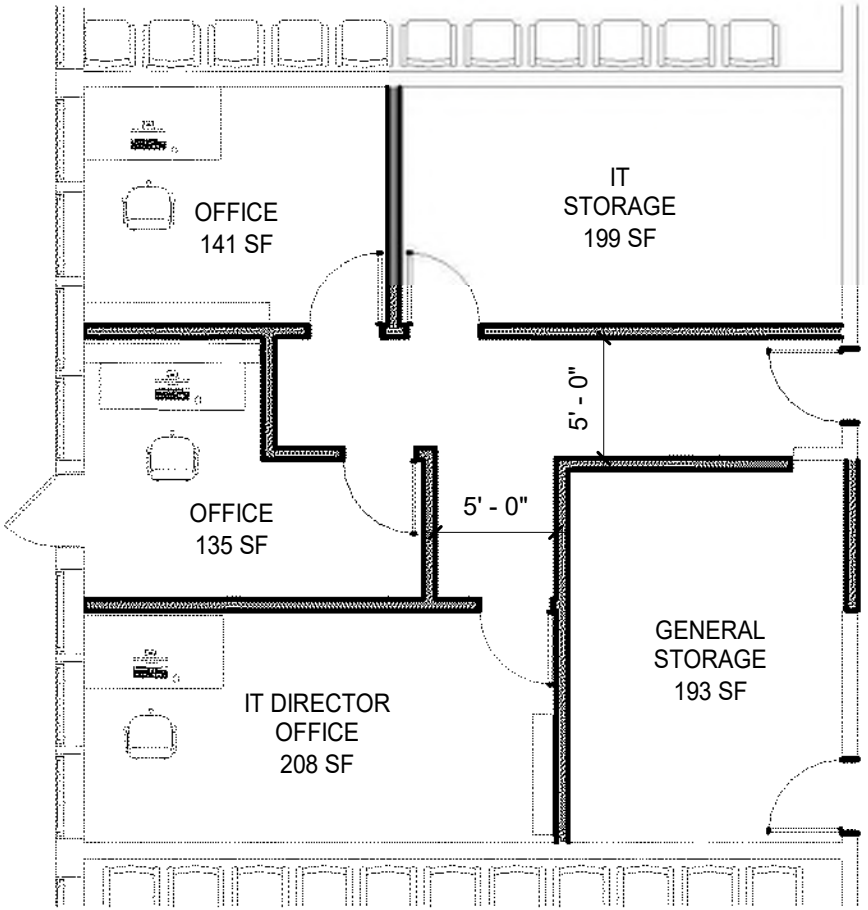
ACCOUNTING/ TREASURER

03/19/2021

DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company



WEST WING: BUILDING COMMISSIONER



CENTER WING: INFORMATION TECHNOLOGY

WEST WING & CENTER WINGS

BUILDING COMMISSIONER/ INFORMATION TECHNOLOGY

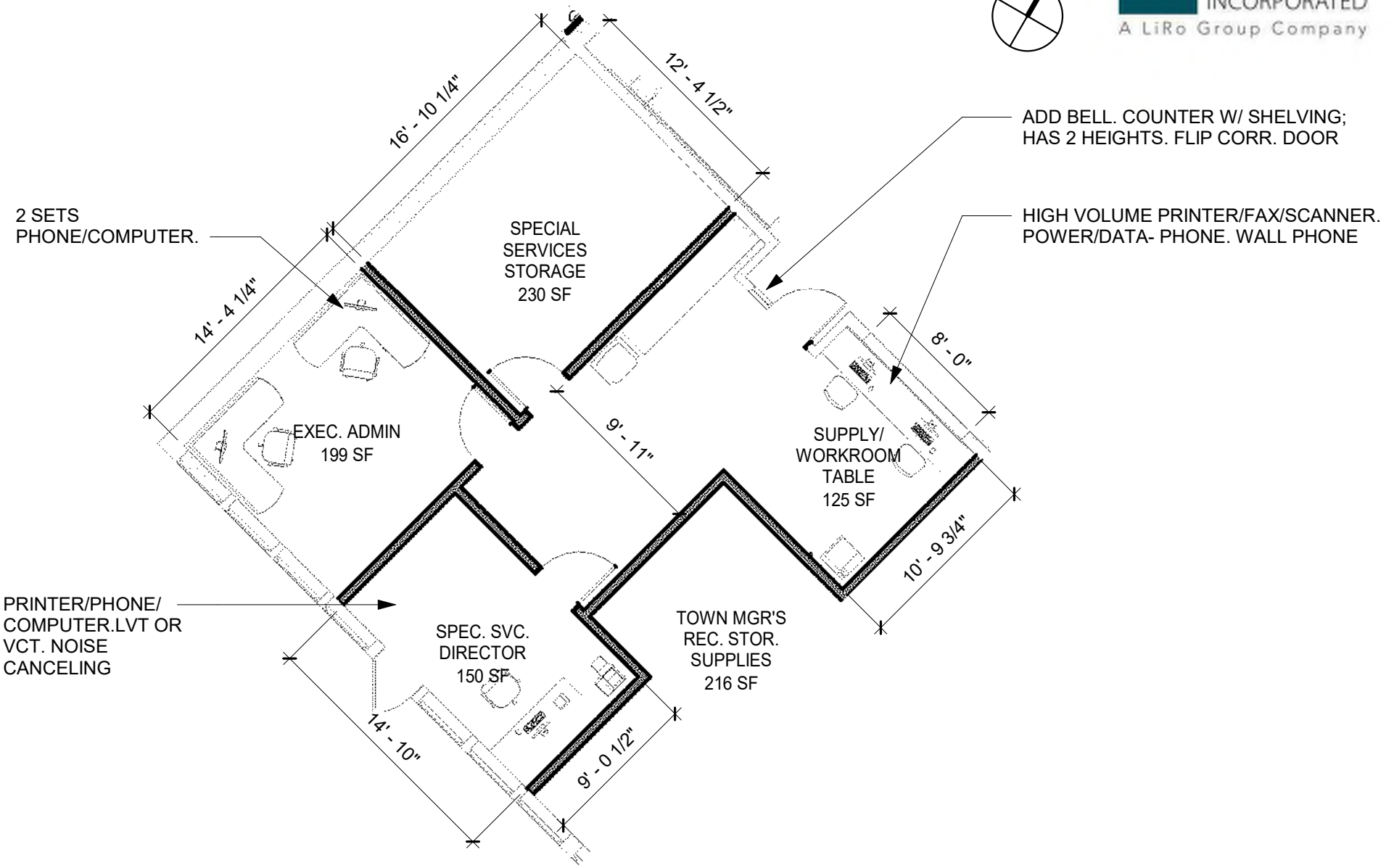
T.C PASSIOS RE-USE PROJECT

0' 10' 20' 40'

SCALE: 1/8" = 1'-0"

03/19/2021

DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company



T.C PASSIOS
RE-USE PROJECT

0' 10' 20' 40'

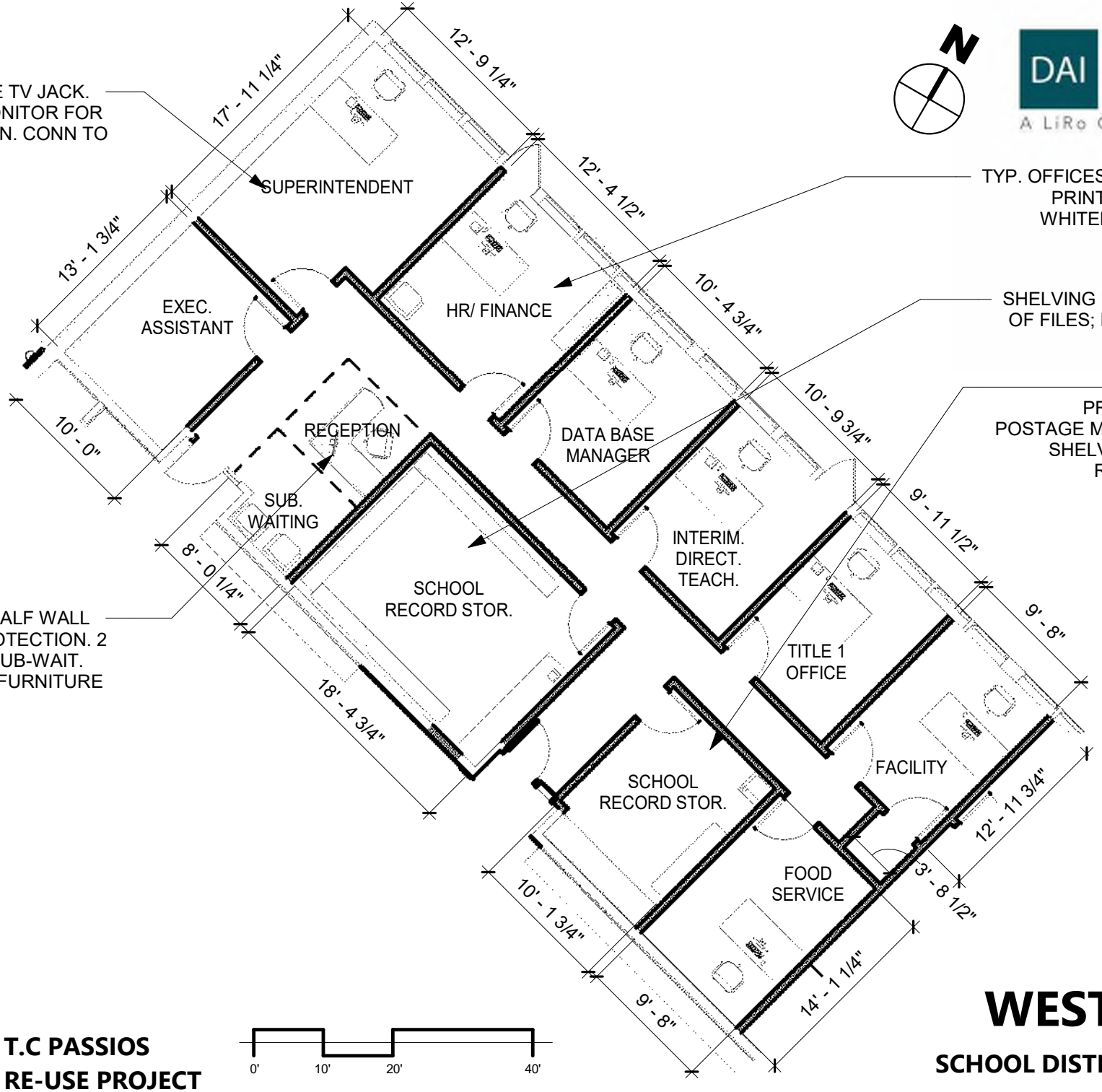
SCALE: 1/8" = 1'-0"

WEST WING

OTHER OFFICES

03/19/2021

DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company



T.C PASSIOS RE-USE PROJECT

0' 10' 20' 40'

SCALE: 1/8" = 1'-0"

WEST WING

SCHOOL DISTRICT CENTRAL OFFICES

03/19/2021

Appendix E

COST BREAKDOWN SUMMARY
TOTAL PROJECT BUDGET
LUNENBURG TCP BUILDING RE-USE
LUNENBURG, MA

DATE: 03/19/21

PROJECT #: 20-138-2329

Descriptions	Amount	Notes
Construction Value	**$ 18,376,939**	Based on REVISED Preliminary Estimate 2/12/21
Architectural and Engineering Fees	**$ 1,837,694**	10% of construction value
Architectural and Engineering Special Services	**$ 275,654**	1.5% of construction value
Owner's Project Manager Fees	**$ 643,193**	3.5% of construction value
Furnishings. Furniture, equipment, appliances	**$ 85,000**	allowance.
		Incl. WB Mason $77,000 estimate 2/11/21
Communications/Low Voltage- IT, security, cables	**$ 125,000**	*allowance for security. IT & cable costs per e-mail*
		from S. Maladrinos dated 3/11/21.
Printing Cost- advertisement	**$ 10,000**	allowance
Legal Costs	**$ 30,000**	allowance
Commissioning	**$ 50,000**	allowance
Chapter 17 Test and inspections	**$ 50,000**	allowance
Temporary Facilities- 12 months	**$ 100,000**	pro-rated allowance
Owner Moving Costs	**$ 25,000**	allowance
Construction Contingency	**$ 1,482,985**	allowance. 10% of construction cost
Sub-total SOFT COSTS	**$ 4,714,526**	
Soft Costs Contingency (10%)	**$ 471,453**	
TOTAL SOFT COSTS	**$ 5,185,979**	
	28%	% of construction value
TOTAL PROJECT BUDGET= CONSTRUCTION + SOFT COST	**$ 23,562,918**	

COST BREAKDOWN SUMMARY
CONSTRUCTION BUDGET
LUNENBURG TCP BUILDING RE-USE
LUNENBURG, MA

DATE: 03/19/21

PROJECT #: 20-138-2329

DIVISION	DESCRIPTION OF WORK	01/26/21 BUDGET	02/03/2021 BUDGET	02/12/2021 BUDGET	VARIANCE 1/6 to 2/12
01000	General Requirements- NOTE 1	1,260,000	1,400,000	1,260,000	-
02000	Sitework	1,380,000	1,380,000	1,304,000	
	General	836,000	836,000	760,000	(76,000)
	Segmental Retaining Wall	50,000	50,000	50,000	-
	Storwater management system	333,000	333,000	333,000	-
	Landscaping	71,000	71,000	71,000	-
	Site Lighting	90,000	90,000	90,000	-
	Building & Selective Demolition	500,000	500,000	500,000	-
	Hazmat Remediation	800,000	750,000	750,000	(50,000)
03000	Concrete Restoration	10,000	10,000	10,000	-
04000	Masonry	330,000	260,000	260,000	(70,000)
05000	Structural Steel	500,000	320,000	320,000	(180,000)
	Miscellaneous Iron and Lintels	115,000	115,000	115,000	-
06000	Woods and Plastics	550,000	550,000	550,000	-
	Rough Carpentry- includes wood fascia replacement	130,000	130,000	130,000	-
	Finish Carpentry	420,000	420,000	420,000	-
07000	Thermal and Moisture Protection	1,507,000	1,507,000	1,507,000	-
	Building insulation	40,000	40,000	40,000	-
	Water repellent coating at CMU	35,000	35,000	35,000	-
	Single Ply Membrane Roofing- includes flashing	1,360,000	1,360,000	1,360,000	-
	Firestopping	20,000	20,000	20,000	-
	Joint Sealants	52,000	52,000	52,000	-
08000	Doors and Windows	340,000	340,000	340,000	-
	Steel doors and frames	34,000	34,000	34,000	-
	Flush wood doors	100,000	100,000	100,000	-
	Access Doors & frames	10,000	10,000	10,000	-
	Window screens- 6,000SF	30,000	30,000	30,000	-
	Door hardware	66,000	66,000	66,000	-
	Glass and Glazing	100,000	100,000	100,000	-
09000	Finishes	1,690,000	1,690,000	1,434,500	
	Gypsum wall board assemblies- incl shaft walls	430,000	430,000	430,000	-
	Ceramic tile	130,000	130,000	65,000	(65,000)
	Acoustical ceiling	270,000	270,000	229,500	(40,500)
	Resilient Flooring	600,000	600,000	450,000	(150,000)
	Painting	260,000	260,000	260,000	-
10000	Specialties	195,000	195,000	195,000	-
	Misc. building specialties- includes corner guards, fire extinguishers	150,000	150,000	150,000	-
	Toilet accessories	45,000	45,000	45,000	-
11000	Equipment- (By Owner)				-
12000	Furnishings- (By Owner)				-
14000	Conveying System (NIC)				-
15000	Fire Protection Sprinkler System	430,000	430,000	430,000	-
	Infrastructure- 10%	43,000	43,000	43,000	-
	Distribution	387,000	387,000	387,000	-
15400	Plumbing Systems	550,000	550,000	550,000	-
	Infrastructure- 15%	82,500	82,500	82,500	-
	Distribution	467,500	467,500	467,500	-
15500	HVAC Systems	2,920,000	2,920,000	2,920,000	-
	Infrastructure- 15%	438,000	438,000	438,000	-
	Distribution	2,482,000	2,482,000	2,482,000	-
16000	Electrical Systems	2,125,000	2,125,000	2,125,000	-
	Infrastructure-50%	1,062,500	1,062,500	1,062,500	-
	Distribution	1,062,500	1,062,500	1,062,500	-
	Sub-total	**15,202,000**	**15,042,000**	**14,570,500**	**(631,500)**
	Supervision, Mgmt & Admin - included w/ Gen. Conditions				-
	Building Permit Fee. NOTE 2	127,980	126,320		(127,980)
	Sub-Bonds	271,000	265,000	259,355	(11,645)
	General Liability Insurance	57,250	56,636	54,858	(2,392)
	GC Bonds	151,396	138,543	134,049	(17,347)
	Sub-total	**15,809,626**	**15,628,499**	**15,018,761**	(790,865)
	Design Contingency (%of sub-total + Sub-bonds). NOTE 3	3,094,600	1,530,700	1,482,985	(1,611,615)
	Sub-total	18,904,226	17,159,199	16,501,747	(2,402,479)
	Contractor O & P (6.0%)	1,125,170	1,021,239	990,105	(135,065)
	Sub-total	20,029,396	18,180,438	17,491,852	(2,537,544)
	Escalation 3% (YEAR 2021)	600,882	545,413	524,756	(76,126)
	Escalation 4% (YEAR 2022)- count 6 months	412,606	374,517	360,332	(52,274)
	Escalation 4% (YEAR 2023)				-
	Escalation 4% (YEAR 2024)				
	Total Preliminary CONSTRUCTION Estimate	**21,042,884**	**19,100,368**	**18,376,939**	**(2,665,945)**
Notes:	1. THREE-PHASED CONSTRUCTION FOR 1/26/21 & 2/3/21 BUDGET. REDUCED TO SINGLE PHASE IN 2/12/21 BUDGET.				
	CONSTRUCTION DURATION WAS CORRECTED TO 14 MONTHS & REDUCED TO 12 MONTHS IN 2/12/21 BUDGET.				
	2. NEED TO ADD ELECTRICAL ANG PLUMBING INSPECTION COST.				
	3. OWNER CONTINGENCY MOVED TO THE SOFT COST IN THE 2/3/21 & 2/12/21 BUDGET.				

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A LiRo Group Company

Town of Lunenburg
Reuse of TC Passios Building
PRELIMINARY BUDGET ESTIMATE CLARIFICATIONS *DRAFT*
DAI #: 20-138-2329
01/26/21

a) Basis of cost estimates:
   i) List of narratives- architecture, M/E/P/FP, structural, civil, hazardous materials removal
   ii) List of drawings- civil, arch demolition plan, architectural proposed plan, exterior elevations and typical departmental entry and exterior entry images
   iii) Project Summary
   iv) Assumptions and Understanding:
      (1) MA Prevailing wage rates
      (2) MGL CH 149 bid and filed subbid trades
      (3) Phasing- 3 phases
      (4) Construction start (6-month for design plus 2-month for bidding)- August to February 2022 for design. March to April 2022 for bidding. Construction start May 2022.
      (5) Construction duration- 14 months due to phased construction.

b) Frequently Asked Questions (FAQ) about budgets:
   i) What are some of the reasons this estimate is high?
      (1) Extensive infrastructure upgrade- new electrical service, new plumbing systems, new HVAC equipment and distribution, additional sprinklers, new roof
      (2) Extensive hazardous waste abatement- asbestos and lead paint
      (3) Associated architectural cost for hazardous material removal and infrastructure upgrade- new ceilings and lights
      (4) Expensive Building Code Level III categorization- additional structural support for lateral load
      (5) Extensive repair- exterior masonry, exterior fascia and soffits, sealants, clerestory windows
      (6) Phased construction
      (7) MA Prevailing wage rates
      (8) Cost escalation to mid-point of construction.

   ii) Proposed strategies to reduce first costs:
      (1) Prioritize and define the minimal scope with following suggested categories:
         (a) Life safety- will someone get hurt walking around or using the building?
         (b) Building integrity- is the building going to get worse if things are not fixed?
         (c) Long-term operations- is the town going to spend more operations funds because of energy inefficiencies or repairs and maintenance?
         (d) Occupant and visitor comfort and satisfaction- will they have a pleasant experience working or using the building?
         (e) Should this list be sub-divided further?
      (2) Re-categorize items for separate funding?
         (a) Repair Vs upgrade. Repair is maintenance related; one can argue it is not part of the project.

(b) Infrastructure Vs project cost. Infrastructure upgrade are fundamental system for a building to perform. One can argue that is a long-term investment and is not part of the project.

(3) Identified scope the town can perform (i.e. can DPW do the parking lot and driveway paving/construction work?)

(4) Consider single phase construction. There will be net cost savings. However, there will be cost of additional move and interim housing.

(5) Reduction in door types and interior finishes will have minimal effect on cost.

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Town of Lunenburg
Reuse of TC Passios Building
DESIGN DEVELOPMENT- PROJECT SUMMARY *DRAFT*
DAI #: 20-138-2329
REVISED 1/20/2021 REVISION IN PURPLE TEXT

DIVISION 1 GENERAL REQUIREMENTS

- Temporary Facilities & Controls
- Temporary construction- *This is a phased project*
- Field offices and sheds- not required
- Temporary roads
  - To be located in areas of proposed parking lots/access drives as required for demolition and construction
- Temporary barriers *This is a phased project*
- Alternates:
  - Plastic laminates Vs solid surface on work counters without sinks
  - VCT Vs LVT on floors other than corridors
- ~~Unit Prices~~ - *irrelevant for this level of cost estimating*

DIVISION 2 EXISTING CONDITIONS

- Demolition:
  - Major items include removal of 1976 Wing and stage on multi-purpose/Gymnasium.
  - All finishes, ceilings, wall finishes and selected flooring to be removed. Wall and ceiling finishes are aged and should be replaced as part of any renovation.
  - Vertical chases and corridor classroom doors
  - Plumbing fixtures and toilet accessories
- Site existing conditions assessment report- See appendix for Civil Report
- Site and Facility Remediation- See appendix for Environmental Engineering Report
- Contaminated Site Material Removal- See appendix for Environmental Report. *All lead paint and asbestos be removed*

DIVISION 3: CONCRETE

- Repairs:
  - Exposed Foundation wall – the exposed foundation wall is in good condition with minor cracking.
  - Exterior Concrete Platforms, Stairs, and railings – are in poor condition and need to be repaired and rebuilt.

DIVISION 4: MASONRY

- Repairs:
  - Brick Veneer – the exterior brick veneer is in good condition. The mortar is worn and cracked in about 33% of the wall area and requires the joints to be repointed.
  - Concrete Masonry Units – Many areas show deteriorated and cracked blocks and mortar.
  - Masonry Chimney – the brick masonry chimney at the boiler room shows cracking and spalled bricks. The chimney needs significant repair, repointing, and partial rebuilding. *DELETE Chimney*

- Face Brick: infill areas where 1976 addition is removed

- Concrete Masonry Unit:
  - 6" CMU on three walls where new vault is in the Town Clerk office area. Infill along corridors

DIVISION 5: METALS

- Structural Steel- none
- Steel deck- none
- Cold-form metal framing- typical 3 5/8" studs for new partitions, 2 ½" studs for furring
- Metal fabrications- lintels over new transaction counters

DIVISION 6: WOODS, PLASTICS, COMPOSITES

- Repairs:
  - Fascia and Soffit – The fascia and soffits are constructed of painted finish wood and are in disrepair. Replace 33% of the finish wood, refinish, and paint the remainder.
- Rough carpentry- blocking
- Finish carpentry-
  - Plastic counters to have bull nose edges and integral backsplash.
  - Wall cabinets to have locks.
  - Dividers in work areas to have sound absorption fabric.
  - Solid surface material- counters with sinks.
  - Soffits above wall cabinets to be plastic laminate.
  - Wood chair rail, trim and bench in West Wing Corridors.

DIVISION 7 THERMAL & MOISTURE PROTECTION

- Building insulation-
  - ~~Exterior wall- pending energy modelling~~, if required
  - New interior partitions should be insulated
  - *New roof insulation*
- Fire-stopping
- Joint Sealants Sealant – The sealant at the perimeter of all exterior fenestrations have failed. All sealants need to be removed and re-sealed.
- Moisture mitigation- none
- Low-Slope Roofing – The low-slope roofing is a fully adhered membrane over rigid insulation on wood plank construction. The condition of the roofing including the roofing penetrations is fair and should be replaced including all new roof penetrations, roof insulation, domed skylights, and perimeter edge flashing. Internal roof ladders and hatches should be provided.
- Fiber Cement Panels- at selected building entries and department entries

DIVISION 8 OPENINGS

- Doors and Door Hardware- applies to new doors
  - Interior doors are wood except utility room doors are metal
  - Office doors to have office function locks and have no window/glazing
  - Conference room and meeting room doors have peek (narrow windows) and passage lock set

  - Utility room and storage room doors have storage set locks and no windows/glazing
  - Office department entry doors are half glazed and have OPTIONAL card reader access
  - Door frames and sidelights to be painted follow metal
  - Exterior *entry* doors are existing to remain with card reader access.
  - *Existing classroom doors to remain. Access from inside only*
  - Sound insulated doors at PACC studios
  - Barn door at Flex space in studio
- Access doors and frames- allowance?
- Windows- Repairs
  - Classroom Windows – The classroom aluminum window is a combination of fixed and mostly double hung. The windows are in fair usable condition. The insect screens on all windows need to be replaced.
  - Clerestory windows are in poor condition and need to be replaced.
  - Lobby Windows – Wood windows at front entrance lobby are in fair condition. They need to be refinished and re-glazed.
  - Insulated Translucent Panels – KallWall panels are in fair usable condition.
  - Exterior Louvers – Exterior steel louvers are in poor condition and need replacement.
- Glass and glazing-
  - See door section
  - Fixed glazing in transaction window with sliding window in bottom
  - Double-glazed windows in PACC studios control room
- Security doors- 8’ wide roll-down for Treasurer’s office

DIVISION 9- FINISHES

- Gypsum Wall Types-
  - New partitions will consist of 5/8” GWB on both sides, extend to deck above
  - Studio partitions to have acoustical drywall mounted on staggered studs
  - Chase walls at toilet headwalls
  - Furred walls in front of CMU walls except in main corridors
  - Half height partitions to have solid wood cap
- Tiles- Ceramic Tiles up to 4’ above finish floor at wet walls (lavatories, urinals and toilets) in toilets
- Ceilings-
  - Gypsum- soffits and ceilings at and outside Department entries
  - Corridors and Lobby- Type 1 Acoustical Ceiling Tiles (ACT)
  - All occupied spaces- Level 2
  - Utility Rooms- Level 3
  - Kitchen- Specialty tiles
  - Studios- Specialty tiles
- Resilient Flooring-
  - Vinyl Composition Tiles (VCT) Typical. See Alternate
  - Luxury Vinyl Tiles (LVT) all corridors and offices
- ~~Carpet- in selected offices~~. Excluded from project
- Painting- all interior surfaces except in existing mechanical rooms and garage
- Wall protection- corner guards at Department Entries at corridors
- Wall Types-
  - New partitions will consist of 5/8” GWB on both sides, extend to deck above
  - Studio partitions

  - Chase walls at toilet headwalls
  - Furred walls in front of CMU walls except in main corridors
  - Half height partitions to have solid wood cap
- Acoustical wall panels- surface-mounted from 3' AFF to 8' AFF
  - (1) side wall in Conference rooms #1 and #2
  - (2) walls in Meeting rooms #1, #2 and #3
- Acoustical ceiling panels- floating panels in 40% of Meeting Room #1

DIVISION 10- SPECIALTIES

- Miscellaneous Specialties- fire extinguishers and cabinets
- Toilet accessories- Mirrors, grab bars, coat hooks, toilet paper dispensers, paper towel dispensers.
- Toilet partitions- powdered coated steel. *Solid plastics may be 50% higher. To be verified with estimator.*
- Floor mats at building entries

DIVISION 11- EQUIPMENT

- Studio equipment- by Owner
- Appliances- by Owner ***DEVELOPING***
  - *Stove, refrigerator, washer/dryer, microwave in ACE room*
  - *Bell outside PACC*
- AV equipment- by Owner
  - *Meeting Rooms:*
    - *Camera and recording devices- under PACC's budget*
    - *Sound system/microphones and speakers*- under Town's budget, but PACC has access to feed for recording and boarding casting
    - *Video/ screen monitors- need size and quantity*- under Town's budget, but PACC has access to feed for recording and boarding casting
  - *Ceiling-mounted projectors- (3) meeting rooms, ACE, Community Link, Early Learning*
  - Wall-mounted monitor and cable TV jack in Superintendent's office
  - PACC will provide (where appropriate) a separate monitor that is capable of showing the actual shot being recorded/broadcasted- PENDING CLARIFICATIONS

Equipment that PAC will provide comes from PAC's budget.

Note that the accessible duct will need to go to each meeting room, the multipurpose room and the two conference rooms, as well as the PAC Suite

- Security Equipment- by Owner ***DEVELOPING***
  - Vault door construction cost
  - Under-counter vault- to be verified
  - *(5) New card readers for exterior doors. The existing card readers at TCP is antiquated and there isn't any in town hall.*
  - *(12) additional (Optional) card readers for (10) department entries, (1) staff lounge and (1) shared copy room.*
  - *(3) sets of alarms and electronic locks between the public corridor and the office (west) wing, the public corridor and the center wing, the center and north wing*
  - *(8) sets in north wing, (7) sets in center wing, and (8) sets in the west wing of door alarms for the existing exterior classroom doors*

  - *Security cameras focusing on (5) building entries and both ends of each of the (4) long corridors*
  - *(2) sets of under-counter panic buttons to be relocated from current offices in town hall. They will either be connected to the Lunenburg PD or Regional Dispatch.*
- *Office equipment- copiers, printers, fax. Excluded from budget*
- *IT and low-voltage Equipment- by Owner:*
  - *Phone, fax, scanners*
  - *Co-ax cables*
  - *Wi-Fi system-new routers ethernet cables in new spaces. Construction budget will include outlets but not the cables. Estimate hardware cost by Owner is $1,500.*
  - *4 network drops in each meeting rooms*

DIVISION 12- FURNISHINGS

- Blinds and Shades-
  - black-out shades in PACC studios outside wall
  - shades in all exterior windows
- Furniture- by Owner; add new conference table
- Interior signage by owner
- 36" X 48" White boards typical in all private offices*; 36" X 96" white boards in ACE and (4) Extended Day*

- Bulletin Boards:
  - Corridors
  - *ACE and (4) Extended Day rooms*
- ~~Lockers- by Owner~~
- *Office partition in town clerks in soft cost section*
- *See furniture list for cost/pricing. Soft cost section*

DIVISION 13- SPECIAL CONSTRUCTION. NOT USED

DIVISION 14- CONVEYING EQUIPMENT. NOT USED

DIVISION 21- FIRE SUPPRESSION. See MEP/FP Narratives

DIVISION 22- PLUMBING. See MEP/FP Narratives

DIVISION 23 HVAC. See MEP/FP Narratives

DIVISION 25 INTEGRATED AUTOMATION. See MEP/FP Narratives

DIVISION 26- ELECTRICAL. See MEP/FP Narratives

- Site Lighting
  - Site lighting will be required in the areas of the proposed parking and access drives. Specific fixtures to be coordinated with the owner. Typically, downward facing LED light poles with heights around 18ft are selected for this application.
- Exterior Lighting- wall sconces by entries
- Interior Lighting:
  - Typical 2X2 recessed LEDs
  - Dimmable lights in all meeting and conference rooms, PACC rooms

- Wall washers and wall sconces along corridor department and meeting room entries
- Track lighting in selected rooms in PACC
- Down lights in reception areas, department entries, conference and meeting rooms

DIVISION 27- COMMUNICATIONS. See MEP/FP Narratives

DIVISION 31 EARTHWORK

- Refer to site plans

DIVISION 32 EXTERIOR IMPROVEMENT-

- Asphalt paving, repair, lighting, ballasts, pavement and curbing, retaining wall, irrigation, planting
- *Site furniture- By Owner*
- *Exterior signage- By Owner*

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ASSUMPTIONS FOR DESIGN DEVELOPMENT BUDGET:

- # of phases- *to be confirmed with TCB Committee on 1/27/21*:
  - Phase I:
    - Renovate west wing.
    - Special Ed and School offices and extended day stay in current locations.
  - Phase II:
    - Move Special Ed and School offices to renovated west wing.
    - Renovate center wing and front area.
  - Phase IIA:
    - Renovate north wing during summer months with no Extended Day or ACE program
- Construction duration: **XX** months. Phased construction.
- Construction start date: 2ND QUARTER 2022
- Mid-point of construction
- Percentage of escalation: **4**% per annum
- Contingency: **15**%
- Contractor overhead and profit: 6%
- Prevailing wage
- Inclusions:
  - Sitework
  - Asbestos abatement
  - Lead paint removal
  - Acoustic wall panels
  - Shades and window coverings
  - Bulleting and white boards
  - Building permits and fees
  - GC Performance and Payment Bond
- Exclusions:
  - Furniture, furnishings and equipment- in Soft Cost
    - Security system
    - Audio-Visual and studio equipment
    - IT system
    - Office furniture
    - Appliances
    - Kitchen equipment
- Alternates –
  - Deduct Alternate #1: Replace LVT with VCT in offices. Replace CT with VCT in toilets
  - Deduct Alternate #2: Replace Sliding window with fixed

- END OF PROJECT SUMMARY -

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Town of Lunenburg
Reuse of TC Passios Building
DESIGN DEVELOPMENT: DOOR SCHEDULE *DRAFT*
DAI #: 20-138-2329
01/18/2021

	TYPE	MATERIAL	HARDWARE	NOTES
Departmental Entries	HG	WOOD	OFFICE LOCKSET	Optional CR
Corridors	HG	WOOD	PASSAGE	Connect to building security alarm. CR for staff access.
Private Offices	F	WOOD	OFFICE LOCKSET	
Open work areas	N/A	N/A	N/A	No door
Conference & Meeting Rooms	P	WOOD	OFFICE LOCKSET	Optional CR
Toilets- Single	F	WOOD	PRIVACY SET	
Toilets Group	F	WOOD	PUSH-PULL	
Shared staff areas	P	WOOD	OFFICE	Staff Lounge, Copy Room
Storage & utility rooms	F	WOOD	STORAGE LOCKSET	
Extended Day/ ACE/ Comm link/ Early Child	P	WOOD	OFFICE LOCKSET	Film on glass
Classroom exterior	EXIST	EXIST	ADJUSTED	Remove handles from exterior. Connect to fire alarm when open
Building entries	EXIST	EXIST	ADJUSTED	Connect to building security alarm. CR
PACC				
Studios	F	METAL	PASSAGE	Sound insulated. Emergency egress only.
Master control	HG	WOOD	OFFICE LOCKSET	
Reception	N/A	N/A	N/A	No door
Training	N/A	N/A	N/A	No door
Flex space	F	WOOD	BARN DOOR	
Offices	F	WOOD	OFFICE LOCKSET	

Abbreviations & Notes

CR= Card Readers;
FG= fully glazed= full glass; HG= half glazed= top half of door has glass; P= peek= 12” slot of glass; F= flush= no glass; SL= sidelight= glass next to door

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Town of Lunenburg
Reuse of TC Passios Building
DESIGN DEVELOPMENT: ROOM FINISH SCHEDULE *DRAFT*
DAI #: 20-138-2329
01/18/2021

	FLOOR	***WALLS***	***CEILING***	***MILLWORK***	***NOTES***
Departmental Entries	LVT	PTD	GWB		Fiber Cement Panels
Corridors	LVT	PTD/ Glazed tiles	GWB/ACT 1	Wood trim and railing	West wing only
Private Offices	LVT*	PTD	GWB/ACT 2	Adj shelves	P. lam
Transaction	LVT*	PTD	GWB	Reception counter	SSM- Transaction counter; p. lam on vertical surfaces & work counters. Sliding glass wall and fixed wall
Open work areas	LVT*	PTD	GWB/ACT 2		
Conference & Meeting Rooms	LVT	PTD/ acoustical panels	GWB/ACT 1		Consider acoustical panels
Toilets- Single	CT	PTD GWB/CT	GWB/ACT 3		CT 4' Wet wall
Toilets Group	CT	PTD GWB/CT	GWB/ACT 3		CT 4' Wet wall
Shared staff areas	LVT*	PTD GWB	GWB/ACT 2	Wall & base cabinets	P. Lam
Storage & utility rooms	VCT	PTD GWB	GWB/ACT 3		
Extended Day/ ACE/ Comm Link/ Early Child	LVT	PTD GWB/PLASTER	GWB/ACT 2	Wall & base cabinets*	* in ACE
Existing Multi-purpose	LVT*	PTD GWB*	ETR		* area where stage is removed
Existing Kitchen	ETR	ETR	ACT 4		
Safe- Town Clerk	VCT	PTD CMU	ACT 3		
PACC					
Studios	LVT*	PTD GWB*	GWB/ACT 1		Painted dark; additional sound absorption
Master control	LVT*	PTD GWB	ACT 1	Work counter	
Reception	LVT*	PTD GWB	ACT 2		
Training	LVT*	PTD GWB	ACT 2		
Flex space	LVT*	PTD GWB	ACT 2	Work counter	
Corridor	LVT	PTD GWB	ACT 2		
Offices	LVT	PTD GWB	ACT 2	Adj shelves	

Abbreviations & Notes
VCT= Vinyl Composition Tile; LVT= Luxury Vinyl Tile; CPT= Carpet; CT= ceramic tile; Conc: Exposed concrete
Ceilings: ACT= Acoustical Ceiling Tiles;
Walls: FCP= Fiber Cement Panel; CMU=concrete masonry unit; PTD= Painted;

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Town of Lunenburg
Reuse of TC Passios Building
DESIGN DEVELOPMENT- NEW FURNITURE REQUEST LIST *DRAFT*
DAI #: 20-138-2329
01/26/2021

1) School Superintendent and Special Services
   a) Office area: Wall-mounted monitor and cable TV jack in Superintendent's office.
   b) (4) Extended Day rooms: 8' l white board and 4' bulletin board
   c) School Storage: (2) 6' long NEW tables & (1) 3 shelf shelving unit
   d) ACE: stove, kitchen sink, refrigerator, Washer/Dryer, microwave, 8' l white board, 4' l bulletin board
   e) Early Learning and Community Link: ceiling projector, smart board
   f) Possible additional furniture if existing furniture does not fit

2) Town Clerk:
   a) 8' wide bulletin boards with glass doors
   b) (2) office cubicles with desks and chairs
   c) (1) conference table
   d) (1) desk and chair

3) Planning Department: file rack system

4) Conservation Committee: (1) new file cabinet

5) Building Department: (4) shelf units at 18"d X 48" l

6) Treasurer/Finance: under counter vault- to verify if this is existing

7) Town Manager's office
   a) Assist. L-shaped desk that has drawers on both sides that lock, preferably one side that holds hanging file folders (office furniture system)

8) Assessors- pending meeting

9) Board of Health- no request

10) IT-
   a) For each (3) office:
      i) (1) desk approximately 3'x5' and desk chair
      ii) (2) guest chairs
      iii) (1) 2-drawer filing cabinet
      iv) Small table
   b) For server room:
      i) (1) worktable approximately 4'x6'
      ii) (2) guest chairs

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A LiRo Group Company

11) PACC: separate budget for equipment. Furniture below includes:
    a) (4) chairs and table in waiting room
    b) (3) desk and chairs office furniture system
    c) (1) round table in flex space

12) Meeting Rooms: ceiling-mounted projectors and AV equipment. See “Project Summary”
    a) Meeting room #1: (40) stackable chairs. See plan for table arrangement
    b) Meeting room #2: (46) stackable chairs. See plan for table arrangement
    c) Meeting room #3: (112) stackable chairs. Please estimate the number of folding tables for this meeting room if it is re-arranged for tables and chairs like a classroom. Plus, a fixed table in the front for 7-10 people, plus chairs

Furniture Info and Budgetary Numbers
Prepared for: Town of Lunenburg and DiGiorgio Associates Inc.

School Superintendent and Special Services

Item Description	*Price*	*Qty*	*Extended Price*
Extended Day Rooms – 8' White Board	$168.00	4	$672.00
Extended Day Rooms – 4' Bulletin Board	$42.52	4	$170.08
School Storage 6 ' Long Table	$175.00	2	$350.00
School Storage – 3 Shelf Shelving Unit	$172.00	1	$172.00
ACE – Refrigerator	$1,399.99	1	$1,399.99
ACE – Microwave	$279.99	1	$279.99
ACE – 8' White Board	$168.00	1	$168.00
ACE – 4' Bulletin Board	$42.52	1	$42.52
Early Learning and Community Link – Ceiling Projector	$620.39	1	$620.39
Early Learning and Community Link – Smart Board	$2,000.00	1	$2,000.00
TOTAL			$5,874.97

Town Clerk

Item Description	*Price*	*Qty*	*Extended Price*
8' Wide Bulletin Board w/ glass doors	$649.00	1	$649.00
Office Cubicles with desks and chairs (Registrar of Voters)	$2,179.99	2	$4,359.98
Conference Table	$949.79	1	$949.79
Desk and Chair	$1,095.00	1	$1,095.00
TOTAL			$7,053.77

Planning Department

Item Description	*Price*	*Qty*	*Extended Price*
File Rack System	$299.00	1	$299.00
TOTAL			$299.00

Conservation Committee

Item Description	*Price*	*Qty*	*Extended Price*
File Cabinet (36" wide, 4 Drawer Lateral File)	$525.74	1	$525.74
TOTAL			$525.74

Building Department

Item Description	*Price*	*Qty*	*Extended Price*
Shelf Units – 18" d x 48" Wide	$182.34	4	$729.36
TOTAL			$729.36

Treasurer/Finance

Item Description	*Price*	*Qty*	*Extended Price*
Under Counter Vault	$469.00	1	$469.00
TOTAL			$469.00

Town Manager's Office

Item Description	*Price*	*Qty*	*Extended Price*
Assist L Shaped Desk w/ drawers that lock	$936.18	1	$936.18
TOTAL			$936.18

IT

Item Description	*Price*	*Qty*	*Extended Price*
Furniture for Each office (desk, task chair, 2 guest chairs, small table, 1 2-drawer file cabinet	$1,959.05	3	$5,877.15
Server Room (1 table 4'x6' and 2 guest chairs)	$603.54	1	$603.54
TOTAL			$6,480.69

PACC

Item Description	*Price*	*Qty*	*Extended Price*
4 Chairs and Table in Waiting Room	$1,362.53	1	$1,362.53
3 Desks and chairs office furniture system	$2,168.43	3	$6,505.29
1 round table in flex space	$351.45	1	$351.45
TOTAL			$8,219.27

Meeting Rooms			
Item Description	*Price*	*Qty*	*Extended Price*
Meeting Room # 3- 40 Stackable Chairs	$95.00	40	$3,800.00
Meeting Room # 2 – 46 Stackable Chairs	$95.00	46	$4,370.00
Meeting Room # 1 – 112 Stackable Chairs	$95.00	112	$10,640.00
Tables (Meeting Room 1 – 24 Flip/Nest Tables can fit in this area – 72” x 24”)	$525.00	24	$12,600.00
Tables (Meeting Room 1 – 3 Fixed Tables can fit in the front of the room – 60” x 24”)	$275.00	3	$825.00
TOTAL			$32,235.00
Delivery and Installation Estimate	$15,000.00	1	$15,000.00
Grand Total			**$77,822.98**

Appendix F

TOWN OF LUNENBURG

TRAFFIC IMPACT STUDY

DECEMBER 4, 2020

LiRo Engineers, Inc.
1 State Street Plaza 28th Floor, New York, NY 10004

Contents

Executive Summary

On behalf of DiGiorgio Associates, LiRo conducted a traffic impact study for the Town of Lunenburg regarding the renovation of the TC Passios Building. LiRo performed field investigations, near the TC Passios Building, on curb ramps, sidewalks and crosswalks. Nine intersections underwent through traffic counts and Level of Service analysis, utilizing SYNCHRO software, to determine the existing capacity and forecasted demand. Three nearby parking lots also had been tracked of their usage for one day to determine the capacity; building codes were references to understand whether they could meet its projected demand. The results conclude that current roadway features require significant improvement to meet ADA compliance, however the intersections and nearby parking lots can meet the demand of the proposed building.

Background

Existing traffic condition analysis was conducted for proposed Lunenburg Public Schools study area shown in Figure 1. The study area includes five intersections and three parking lots.

Intersections:

1. Massachusetts Avenue and Lancaster Avenue (signalized)
2. Massachusetts Avenue and West School Driveway (unsignalized)
3. Memorial Drive and West School Driveway (unsignalized)
4. Massachusetts Avenue and East School Driveway (unsignalized)
5. Oak Avenue and West School Driveway (unsignalized)

Parking lots:

1. North side parking lot
2. Main parking lot
3. Street parking at building entrance

Figure 1: Project Map

Data Collection

Turning movement counts were conducted using Miovision in order to establish the existing traffic conditions at the five key intersections studied for this project, as shown in Figure 1. These counts were used to develop the peak hour traffic volume networks utilized to assess traffic operations for this study. These counts were conducted on October 1st and October 2nd, 2020 (two typical workweek days). The counts were performed during the AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak hours.

Included in these counts were the vehicle classification counts (autos, buses, and trucks) needed to determine the constraints associated with various traffic operating modes in a traffic stream. Pedestrian and bicycle counts were also conducted during these peak time periods.

Refer to Appendix B for traffic count data.

Existing Conditions Analysis

A field investigation was conducted on 9/22 to collect basic information of existing roadway conditions like curb ramps, pavement markings, sidewalks, and so on. The details of each intersection are analyzed below:

Massachusetts Avenue and Lancaster Avenue

1. Sidewalks in poor condition: Sidewalks, at this intersection, are cracked with vegetation growing through joints, as shown in Figure 2, creating trip hazards to pedestrians

Figure 2: Sidewalk at Massachusetts Ave & Lancaster Ave

2. Lack of a sidewalk on North side of intersection: As shown in Figure 3, the sidewalks are discontinued in the north side direction of Massachusetts Avenue and Lancaster Avenue. The pedestrian have to hazardously walk on the lawn or share the travel lane with vehicles.

Figure 3: Satellite image of Massachusetts Ave & Lancaster Ave

3. Lack of Detectable surfaces on curb ramps: As shown in Figure 4, curb ramps, at this intersection, lack detectable surfaces, therefore not meeting ADA compliant requirements.

Figure 4: Curb ramp conditions at Massachusetts Ave & Lancaster Ave

4. Faded Crosswalks: Since the crosswalks are fading, pedestrians may not necessarily walk safely across the road. It may increase vehicular and pedestrian conflicts, especially for turning vehicles. Therefore, it is highly recommended to use high visible crosswalks for the intersection near the school.

Figure 5: Crosswalk conditions at Massachusetts Ave & Lancaster Ave

Massachusetts Avenue and West School Driveway

This intersection is one of three main entrances/exits of schools. It has STOP control for School Driveway but the major roadway, Massachusetts Avenue, is free of traffic control. It is the nearest entrance/exit for Lunenburg Public School main buildings.

1. Detectable surface on curb ramp in poor conditions: Only one curb ramp out of two at this intersection has detectable surface and is in very poor condition, as shown in Figure 6.

Figure 6 Detectable surface at Massachusetts Ave & School Dr.

2. Curb ramps are not flush with roadway pavement
3. Poor pavement conditions around curb ramps
4. No continuous sidewalks to safely access the school: As shown in Figure 7, pedestrians have to share the roadway with vehicles beyond the school entrance, since there is no continuous sidewalks. This will increase vehicular and pedestrian conflicts and make extremely unsafe situation for both pedestrians and vehicles.

Figure 7: Sidewalk at Massachusetts Ave & W. School Driveway

5. The stop bar is too close to the crosswalk. As per MUTCD, it is recommended to have minimum 4 feet gap between the stop bar and crosswalk. As shown in Figure 8, that gap is less than 4 feet, which increases the possibility of pedestrian and vehicular conflicts.

Figure 8 Crosswalk at Massachusetts Ave & School Driveway

6. Lack of high visibility crosswalk: It is recommended to use high visibility crosswalk and traffic personnel at this intersection because the main roadway has no stop control and vehicles can make the turn without any stops. The traffic personnel needs to manage the pedestrian and turning vehicles from Massachusetts Avenue.

Figure 9 Example of high visibility crosswalk marking

Memorial Drive and West School Driveway

It is an intersection, inside the study area, that does not receive outside traffic. It is also a major intersection for parents to drop off and pick up students. There is no traffic control at this intersection but Vehicles do stop at the intersection and keep moving straight forward after pick-up or drop-off. Therefore these vehicles do not make turns.

1. Curb ramp has broken detectable surface (shown in Figure 10)
2. Need one-way signs (MUTCD R6-1L): It is a T-intersection. If the eastbound is one way, it needs to show one-way sign (MUTCD R6-1L).

Figure 10 Detectable surface at Memorial Drive & School driveway

Memorial Drive and East School Driveway

This intersection is also one of three main entrances/exits of schools. It has a STOP control for School Driveway but the major roadway, Massachusetts Avenue, is free of control. There is a speed bump near this intersection to reduce the travel speed of vehicles. It is the nearest entrance/exit to the parking lot in the south.

1. Detectable surface on curb ramp in poor conditions: The detectable surface on curb ramp has been nearly deteriorated as shown in Figure 11. The entire ramp needs reconstruction.

Figure 11 Detectable surface at Massachusetts Ave & West School Driveway

2. Lack of sidewalks on east side of driveway: There are no sidewalks on the east side of School Driveway. Pedestrians share the roadway with vehicles, which increases the vehicular and pedestrian conflicts.
3. Roadway curbs in poor conditions: The curbs within the school entrance are in poor conditions, broken or missing, and will require reconstruction.

Figure 12: Curbs at Massachusetts Ave & West School driveway

Oak Avenue and West School Driveway

This intersection is one of the school entrance/exit. It has STOP control for School Driveway but the major roadway, Oak Avenue, is free of control. It is the nearest entrance/exit to the parking lot in the north. It is also the closest entrance/exit to Lunenburg Middle High School.

1. Lack of Sidewalks: Pedestrians are unable to safely walk up to this intersection unless they use the travel lanes. There are also no curb ramps and no crosswalk at this intersection.

Figure 13: No sidewalk at Oak Ave & W. School Driveway

2. Lack of visibility for Stop Signs: As shown in Figure 14, the stop sign is hidden by the tree branches and has a high offset distance from the roadway. Drivers will be unable to see the STOP sign and it will be hazardous to turn onto Oak Avenue. Therefore, the STOP sign may need to be relocated closer to the intersection.

Figure 14: Stop sign at Oak Ave & W. School driveway

Level of Service Analysis

In order to determine existing traffic operating conditions, capacity analyses were conducted utilizing the SYNCHRO 9 software package. This software utilizes the highway capacity analysis techniques outlined in the 2010 Highway Capacity Manual (published by the Transportation Research Board). Under this methodology, the analysis determines the traffic operations in terms of flow rates, volume to capacity (v/c) ratios, traffic delays, and Levels of Service (LOS). These are the typical Measures of Effectiveness (MOEs) used to evaluate traffic impacts at an intersection.

LOS is an important designation that describes a range of traffic operating conditions on a particular type of roadway facility. LOS Criteria are given in terms of the average control delay per vehicle during an analysis period of 15 minutes. For intersections:

1. LOS-A describes that level of operation at which average delay per vehicle is 10 seconds, or less. Vehicles arrive mainly during the green phase, resulting in only a few vehicles stopping at the intersection.
2. LOS-B describes that level of operation at which delay per vehicle is greater than 10 seconds but not greater than 20 seconds. Vehicle stopping at an intersection is greater than that of LOS-A, but progression is still good, and cycle length also may be short.
3. LOS-C describes that level of operation at which delay per vehicle is greater than 20 seconds but not greater than 35 seconds. Vehicles at an approach will not clear the intersection during the first cycle.
4. LOS-D describes that level of operations at delay per vehicle is greater than 35 seconds but not greater than 55 second. The longer delays at this level of service is due to a combination of two or more of several factors that include long cycle lengths, high (v/c) ratios, and unfavorable progression.

5. LOS-E describes that level of operation at which the delay per vehicle is greater than 55 seconds but not greater than 80 seconds. This long delay, which is usually taken as the limit of acceptable delay by many agencies, generally includes high (v/c) ratios, long cycle lengths, and poor progression.
6. LOS-F describes that level of operation at which the delay per vehicle is greater than 80 seconds. Oversaturation usually occurs, where the arrival flow rates are greater than the capacity at the intersection.

The capacity analyses were based on the existing roadway components including intersection geometry, peak hour factors, traffic controls and traffic signal timing, signage, posted speed, and the traffic volume mix (vehicle classifications). The analyses were conducted during weekday AM and PM peak travel periods for northbound (NB), westbound (WB), southbound (SB), and eastbound (EB) approaches.

Table 1: Existing LOS for all intersections

INTERSECTION		APPROACH	LANE GROUP	EXISTING CONDITIONS - AM PEAK HOUR							EXISTING CONDITIONS - PM PEAK HOUR						
				Volume (v/h)	V/C Ratio	Delay (s)	LOS	App. Delay (s)	App. LOS	Queue Length 95th	Volume (v/h)	V/C Ratio	Delay (s)	LOS	App. Delay (s)	App. LOS	Queue Length 95th
1	Massachusetts Ave and Lancaster Ave	EB	L	13	0.05	8.8	A	11.0	B	8	25	0.13	9.8	A	11.6	B	14
			TR	299	0.41	11.2	B			137	330	0.46	11.8	B			146
		WB	L	148	0.46	14.9	B	12.5	B	77	217	0.59	19.1	B	14.9	B	146
			TR	176	0.27	10.4	B			73	340	0.44	12.4	B			164
		NB	LTR	233	0.65	27.7	C	27.7	C	209	156	0.78	36.0	D	36.0	D	#294
		SB	LTR	148	0.44	22.8	C	22.8	C	113	192	0.38	21.3	C	21.3	C	101
				Overall				**17.6**	**B**		**Overall**				**19.5**	**B**	
2	Massachusetts Ave and School Dr W	EB	LT	321	0.19	4.8	A	4.8	A	17	278	0.02	0.8	A	0.8	A	2
		WB	TR	330	0.25	0.0	A	0.0	A	0	533	0.35	0.0	A	0.0	A	0
		SB	LR	58	0.37	18.0	C	18.0	C	42	27	0.13	14.9	B	14.9	B	11
				Overall				**2.2**	**A**		**Overall**				**1.1**	**A**	
3	Memorial Dr and School Dr W	NB	LT	142	N/A	N/A	A	N/A	A		84	N/A	N/A	A	N/A	A	
		SB	TR	58	N/A	N/A	A	N/A	A		50	N/A	N/A	A	N/A	A	
				Overall				**N/A**	**A**		**Overall**				**N/A**	**A**	
4	Massachusetts Ave and School Dr E	EB	LT	255	0.06	2.1	A	2.1	A	5	266	0.06	2.3	A	2.3	A	5
		WB	TR	335	0.25	0.0	A	0.0	A	0	494	0.36	0.0	A	0.0	A	0
		SB	L								23	0.27	23.4	C	17.7	C	27
			R	2	0.01	10.8	B	10.8	B	1	63	0.31	15.2	C			33
				Overall				**1.0**	**A**		**Overall**				**4.2**	**A**	
5	Oak Street and School Dr W	EB	TR	112	0.16	0.0	A	0.0	A	0	66	0.05	0.0	A	0.0	A	0
		WB	LT	62	0.05	4.4	A	4.4	A	4	48	0.01	0.5	A	0.5	A	0
		NB	LR	63	0.35	13.8	B	13.8	B	39	100	0.28	11.1	B	11.1	B	28
				Overall				**3.2**	**A**		**Overall**				**5.6**	**A**	

As shown in Table 1, the overall Level of Service (LOS) are B or better for all intersections during AM and PM peak hours.

1. Massachusetts Avenue and Lancaster Avenue: This is the only signalized intersection with the study area. The overall LOS in AM and PM peak hours at this intersections are B. The northbound approach is LOS D in PM peak hour.
2. Massachusetts Avenue and West School Driveway: The southbound approach is LOS C during AM peak hour and LOS B during PM peak hour. Southbound traffic can be continued to be controlled by the STOP sign while the eastbound and westbound traffic can be continued to be free of control. Therefore, the LOS for Massachusetts Avenue is A for both eastbound and westbound traffic.
3. Memorial Drive and West School Driveway: Since this intersection does not have any traffic control, Synchro shows the LOS for all approaches are A. However, this is the intersection for parents to drop off or pick up the students, there must be some reasonable stop time for each vehicle, which has a similar LOS to the other nearby intersections

4. Massachusetts Avenue and East School Driveway: Southbound traffic is controlled by the STOP sign while the eastbound and westbound traffic is free of control. The LOS is A for both eastbound and westbound traffic during both peak hours. The LOS for southbound traffic is B in AM peak hour and C in PM peak hour.
5. Oak Avenue and West School Driveway: This intersection does not have high traffic volume in both AM and PM peak hours. The LOS for major roadway, Oak Avenue, are A for both eastbound and westbound traffic. However, the northbound traffic has LOS B for both AM and PM peak hours.

Parking Analysis

Currently there are three parking lots around the main Public School main buildings: north side parking lot, main parking lot, and street parking at building entrance and their locations are shown in Figure 1.

North Side Parking Lot

This parking lot is mainly used for high school staffs or students. As shown in Figure 15, it is unpaved and unstriped, with a capacity of roughly 20 vehicles. But it is observed to be fully occupied with just 13 vehicles. Due to each vehicle occupying more than 10 ft-wide space. The number of parked vehicles are consistent during the school hours but after that (3pm), the number of parked vehicles dropped significantly.

Figure 15 North Side parking lot

Table 2: North Side Parking Lot Data

	Cars	Capacity	Occupancy
6am - 7am	0	20	0%
7am - 8am	1	20	5%
8am - 9am	13	20	65%
9am - 10am	15	20	75%
10am -11am	13	20	65%
11am -12pm	13	20	65%
12pm -1pm	13	20	65%
1pm -2pm	13	20	65%
2pm -3pm	13	20	65%
3pm -4pm	8	20	40%
4pm - 5pm	2	20	10%
5pm - 6pm	1	20	5%

Main Parking Lot

This parking lot is located on the west side of the school building. As shown in Figure 16, it is paved and striped, with a capacity of roughly 26 parking spaces. This parking lot is mainly used by people for recreation. It was observed in the field that people parked here and took a considerable walk to the High School. It was also observed that parents or students parked here for after school and sport activities.

Figure 16 Main Parking Lot

The occupancy of this parking lot is generally around 50% from 9am to 3pm. The number of parked vehicles are not consistent, which might indicate this parking lot is used for short term parking. As per Table 3, the highest occupancy is at the time from 10am to 12pm. After school hour (3pm), the number of parked vehicles dropped significantly.

Table 3: Main Parking Lot Data

	Cars	Capacity	Occupancy
6am - 7am	1	26	4%
7am - 8am	4	26	15%
8am - 9am	10	26	38%
9am - 10am	12	26	46%
10am -11am	14	26	54%
11am -12pm	14	26	54%
12pm -1pm	13	26	50%
1pm -2pm	12	26	46%
2pm -3pm	12	26	46%
3pm -4pm	9	26	35%
4pm - 5pm	6	26	23%
5pm - 6pm	4	26	15%

Street Parking at Building Entrance

As shown in Figure 17, There are approximately 17 parking spaces for street parking around building entrance, among which there are 7 striped parking spaces. This parking lot is mainly used for drop-of and pick-up students. Different from the other two parking lots, this one has school buses and large vehicles. As per Table 4, the time from 10am to 1pm had generally high parking occupancy which are over 70% of the

Figure 17: Street Parking Data

capacity. The highest occupancy was at the time from 11am to 12pm, which was 94%. The occupancy of the rest of hours are less than 30% during the school hours (8am -3pm). The occupancy was decreased after 1pm but was increased again after 4pm.

Table 4: Street Parking at Building Entrance Data

	Cars	Buses	Large Vehicles	Capacity	Occupancy
6am - 7am	1	0	0	17	6%
7am - 8am	1	0	0	17	6%
8am - 9am	3	2	0	17	29%
9am - 10am	3	0	0	17	18%
10am -11am	13	0	0	17	76%
11am -12pm	16	0	0	17	94%
12pm -1pm	10	0	2	17	71%
1pm -2pm	4	0	0	17	24%
2pm -3pm	4	0	0	17	24%
3pm -4pm	5	0	0	17	29%
4pm - 5pm	8	0	0	17	47%
5pm - 6pm	10	0	0	17	59%

Existing Conditions summary

Roadway conditions

The sidewalk conditions at all five intersections are poor. They have not met ADA compliant requirements, and all of them need to be re-built. Additional sidewalks are also needed for all intersections except the intersection of Oak Avenue and School Drive.

Level of service (LOS)

The overall LOS of all intersections are A or B, which indicates that the existing traffic conditions at these intersections are acceptable, even if some approaches are at LOS D.

Parking

There are three parking lots around main school buildings. The North side parking lot occupancy is higher than 65%, during school hours, while the occupancy of both the Main parking lot and Street Parking lot have the highest parking occupancy from 10am to 1pm. The occupancy rates indicated that the North side parking lot is mainly used by the staffs or students that have long-term parking while Main parking lot and Street Parking lot are used as short-term parking like pick-up/drop-of or parking within an hour. These two parking lots may have higher turnover rates than the North side parking lot.

Traffic impact study

The existing public school buildings will be used as town hall offices as well as school administration department offices. Before and after school programs, as well as the extended day school, will also take place in this building. In addition, the building will be used as general meeting rooms for community uses such as boys and girls clubs. The town's cable-TV studio will be in this building too. Therefore, this school building will be used as multiple land uses. The new building in use may general traffic impacts like traffic volume difference, transportation mode difference, and impacts to the parking lots. The renovation of

the building will be finished by 2022 which will be the expected completion time (ETC) of this project. This section will include two parts, No-Build condition and Build condition analysis, to compare the traffic impacts difference between the proposed projects not conducted and conducted at ETC year (2022) and ETC+10 year (2032).

No Build Condition Analysis

1. Estimated Completion Time (ETC): No Build condition means the school building is not renovated and is kept as a school in the future. The traffic volumes under this condition will grow naturally with the increase of population. The growth rate is 2% as indicated by Massachusetts Regional Planning Commission. The volumes are assumed not to significantly vary by the developments in the community within ETC year. Therefore, there is a 4% increase of volume to ETC year (2022) and a 27% increase of volume to ETC+10 year (2032).
2. Level of Service (LOS): The LOS of all five intersections for No Build ETC are shown in Table 5. As shown in Table 5, the LOS for all intersections are similar to existing conditions except the intersection Massachusetts Ave & Lancaster Ave PM peak. The delay is increased with the increase of volumes. The LOS becomes C instead of B in the existing conditions. All other unsignalized intersections have the same LOS.

Table 5: LOS for all intersections in No Build Conditions

INTERSECTION		APPROACH	LANE GROUP	NO-BUILD CONDITIONS - ETC -AM PEAK HOUR							NO-BUILD CONDITIONS - ETC- PM PEAK HOUR						
				Volume (v/h)	V/C Ratio	Delay (s)	LOS	App. Delay (s)	App. LOS	Queue Length 95th	Volume (v/h)	V/C Ratio	Delay (s)	LOS	App. Delay (s)	App. LOS	Queue Length 95th
1	Massachusetts Ave and Lancaster Ave	EB	L	14	0.05	8.8	A	11.3	B	9	26	0.14	10	A	11.9	B	14
			TR	311	0.42	11.4	B			144	343	0.48	12.1	B			154
		WB	L	154	0.49	15.8	B	12.9	B	82	226	0.63	21.1	C	15.8	B	161
			TR	183	0.28	10.5	B			76	354	0.46	12.6	B			170
		NB	LTR	242	0.68	29	C	29	C	219	162	0.82	39.7	D	39.7	D	#316
		SB	LTR	154	0.47	23.2	C	23.2	C	117	200	0.39	21.5	C	21.5	C	105
				Overall				**18.2**	**B**		**Overall**				**20.8**	**C**	
2	Massachusetts Ave and School Dr W	EB	LT	334	0.20	5	A	5	A	18	289	0.02	0.8	A	0.8	A	2
		WB	TR	343	0.26	0	A	0	A	0	555	0.37	0	A	0	A	0
		SB	LR	60	0.40	19.5	C	19.5	C	48	28	0.15	15.4	C	15.4	C	13
				Overall				**5.1**	**A**		**Overall**				**1.2**	**A**	
3	Memorial Dr and School Dr W	NB	LT	148	N/A	N/A	A	N/A	A		87	N/A	N/A	A	N/A	A	
		SB	TR	60	N/A	N/A	A	N/A	A		52	N/A	N/A	A	N/A	A	
				Overall				**N/A**			**Overall**				**N/A**		
4	Massachusetts Ave and School Dr E	EB	LT	265	0.06	2.2	A	2.2	A	5	277	0.07	2.3	A	2.3	A	5
		WB	TR	349	0.26	0	A	0	A	0	514	0.37	0	A	0	A	0
		SB	L								24	0.3	25.1	D	18.7	C	30
			R	2	0.01	10.9	B	10.9	B	10.9	66	0.34	15.8	C			37
				Overall				**1.0**	**A**		**Overall**				**4.4**	**A**	
5	Oak Street and School Dr W	EB	TR	117	0.17	0	A	0	A	0	69	0.05	0	A	0	A	0
		WB	LT	65	0.05	4.4	A	4.4	A	4	50	0.01	0.4	A	0.4	A	0
		NB	LR	66	0.37	14.3	B	14.3	B	43	104	0.29	11.3	B	11.3	B	30
				Overall				**5.69**	**A**		**Overall**				**5.7**	**A**	

The LOS of all five intersections for No Build ETC+10 are shown in Table 6. As shown in this table, the overall LOS for all intersections are similar to No Build conditions except the intersection Massachusetts Ave & Lancaster Ave PM peak. The LOS in both AM and PM peak hours are changed. LOS in AM peak is C while LOS in PM peak is D. The northbound approach has LOS F in PM peak hour. Although other unsignalized intersections keep LOS A in ETC+10 conditions, some approaches have significant delay due to the increase of volume such as the southbound approach at Massachusetts Ave& School Dr. W and southbound approach at Massachusetts Ave & School Dr. E.

Table 6: LOS for all intersections in No Build Condition – ETC+10

INTERSECTION		APPROACH	LANE GROUP	NO-BUILD CONDITIONS - ETC+10 - AM PEAK HOUR							NO-BUILD CONDITIONS - ETC+10 -PM PEAK HOUR						
				Volume (v/h)	V/C Ratio	Delay (s)	LOS	App. Delay (s)	App. LOS	Queue Length 95th	Volume (v/h)	V/C Ratio	Delay (s)	LOS	App. Delay (s)	App. LOS	Queue Length 95th
1	Massachusetts Ave and Lancaster Ave	EB	L	16	0.07	9.1	A	12.7	B	10	32	0.21	11.2	B	13.9	B	17
			TR	379	0.52	13	B			186	419	0.59	14.3	B			204
		WB	L	188	0.70	25.8	C	17.9	B	117	275	0.94	56.5	E	30.3	C	#286
			TR	223	0.34	11.2	B			93	431	0.56	14.4	B			219
		NB	LTR	296	0.83	26.2	D	36.2	D	#293	198	1.08	92.6	F	92.6	F	#432
		SB	LTR	188	0.61	27.2	C	27.2	C	146	244	0.48	22.3	C	22.3	C	123
				Overall				22.6	C		Overall				38.4	D	
2	Massachusetts Ave and School Dr W	EB	LT	407	0.26	5.9	A	5.9	A	26	353	0.03	0.9	A	0.9	A	2
		WB	TR	419	0.32	0	A	0	A	0	676	0.45	0	A	0	A	0
		SB	LR	74	0.65	36.1	E	36.1	E	107	34	0.22	19.3	C	19.3	C	21
				Overall				8	A		Overall				1.4	A	
3	Memorial Dr and School Dr W	NB	LT	180	N/A	N/A	A	N/A	A		107	N/A	N/A	A	N/A	A	
		SB	TR	74	N/A	N/A	A	N/A	A		63	N/A	N/A	A	N/A	A	
				Overall				N/A	A		Overall				N/A	A	
4	Massachusetts Ave and School Dr E	EB	LT	323	0.08	2.5	A	2.5	A	6	337	0.09	2.8	A	2.8	A	8
		WB	TR	425	0.32	0	A	0	A	0	627	0.45	0	A	0	A	0
		SB	L								29	0.5	43.4	E	28.2	C	62
			R	3	0.02	11.8	B	11.8	B	1	80	0.49	21.5	C			65
				Overall				1.2	A		Overall				6.5	A	
5	Oak Street and School Dr W	EB	TR	142	0.21	0	A	0	A	0	84	0.07	0	A	0	A	0
		WB	LT	79	0.07	4.6	A	4.6	A	5	61	0.01	0.5	A	0.5	A	1
		NB	LR	80	0.51	18.4	C	18.4	C	73	127	0.38	12.5	B	12.5	B	44
				Overall				7.4	A		Overall				6.4	A	

Build Condition Analysis

Build condition means that school building is renovated into offices in the future. All existing trips entering and exiting to the building will not be included for Build condition analysis since it is assumed that all trips related to public school will not happen after new use of this building. In order to do the analysis, Trip Generation and Trip Assignment were conducted to obtain new traffic demand for each intersection.

1. Trip Generation

   Trip generation is to analyze the traffic volumes after the building in new use. The process is based on Trip Generation manual (ITE manual 10th Edition). As described before, this building will have multiple uses. In this study, three land uses are defined and implemented for the trip generation of the new building: Government Office Building (ITE code 730), Extended Day School (ITE code 536), and Conference rooms.

   a. Government Office Building (730)

      A government office building is an individual building containing either the entire function or simply one agency of a city, county, state, federal, or other governmental unit (ITE Trip Generation Manual Land Use 730). There are two ways to calculation the trips generated by this land use. One is by 1000 gross footage area (GFA) and the other one is by number of employees. There are 10900 GFA and 38 employees for this land use. After the comparison, the number of employees are used since the number of employees generate more trips than the calculation based on GFA. In order to get conservative results, higher trips are implemented for analysis.

      AM Peak Hour of Generator in Weekdays

      Ln(T) = 0.59Ln(X)+1.83

      T is the trip number and X is the number of employees

      The directional distribution for AM peak hour is 55% entering and 45% exiting.

PM Peak Hour of Generator in Weekdays

T=0.39(X)+20.44

T is the trip number and X is the number of employees

The directional distribution for PM peak hour is 43% entering and 57% exiting.

The trip generation results of this land use are shown in Table 6.

b. Extended Day School (ITE code 536)

The land use 536 is actually for a private school (K-12). It services students attending kindergarten through the 12th grade but may also include those beginning with pre-k classes. These schools may also offer extended care and day care (ITE Trip Generation Manual Land use 536). Since this building is used as extended day school and school buses are not the primary transportation, Land use 536 is used here for carpool or single rides for students by passenger cars.

Due to the COVID-19, the number of the students may not reach the capacity of the school. Currently, there are 9 students (18-22 year old) for ACE program, 125 students for Extended Day School, and 24 students for Early Learning Center (12 in AM and 12 in PM). Therefore, it is assumed 146 students will use the building in both AM and PM. On the other hand, the total GFA of Extended Day School is approximately 8240sf. Per MA Department of Education code, it can have 1 student per 50sf (https://www.doe.mass.edu/lawsregs/603cmr18.html?section=04). The maximum number of students can be 165.

AM Peak Hour of Generator in Weekdays

T = 0.77(X)+19.92

The directional distribution for AM peak hour is 61% entering and 39% exiting.

PM Peak Hour of Generator in Weekdays

T = 0.43(X)+79.59

Since this school is not regular school that students are leaving the school in the PM, the directional distribution for PM should implement the similar percentage as AM. Students are entering the building in PM peak hours as well. Therefore, the directional distribution for PM peak hour is 61% entering and 39% exiting too.

The trip generation results of this land use are shown in Table 6.

c. Conference rooms

According to the building plan, there is 11828 sf for meetings and conference. ITE Trip Generation Manual does not include a specific land use for conference rooms. It is hard to predict the trip generated by the conference room since it is highly relied on the schedule of the events and the types of the event. All meeting rooms may not be occupied at once. The maximum occupancy is approximately 197 people (1 person per 60sf).

Table 7: Trip Generation by land use

	GFA (Sf)	# Employee / Students	AM Trip	AM Directional Distribution	PM Trip	PM Directional Distribution
Office area (730)	10900	38	53	29	35	15
				24		20
School/Extended Day school (536)	8240	146	132	81	142	87
				52		56
	Max	165	147	90	150	92
				57		59

2. Trip Distribution is to obtain the entering and exiting volumes at each intersection for peak hours so that the Level of Service can be calculated. According the Trip Generation manual, the directional distribution for AM peak hour is 88% entering and 12% exiting. Therefore, in AM peak, there is 89 vehicles entering the site and 12 vehicles leaving the site. The directional distribution for PM peak hour is 18% entering and 82% exiting. Therefore, 15 vehicles are entering the site while 113 vehicles are leaving the site. In ETC+10 year (2032), there is 22% increase of volumes.

   The next step is to distribute the entering/exiting trips into each intersection. The new demand for each approach for AM and PM peak hours are shown in Table 7. The trip generation and trip distribution formula details are shown in Appendix D.

   a. Massachusetts Avenue and Lancaster Avenue: According to existing traffic conditions, the Memorial Drive is closed and no vehicles can access the school building through this roadway. Therefore it is assumed that in the Build conditions no vehicles will access the building through this intersection either. The trips within the red boxes in Figure 16 will be adjusted accordingly but the demand of the rest approaches will remain the same with 2% growth rate.

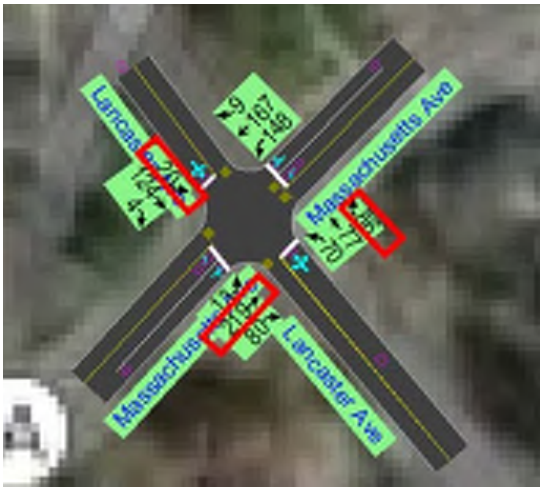

Figure 18 Existing Traffic Volume at Massachusetts Ave & Lancaster Ave - AM

   b. Massachusetts Avenue and West School Driveway: The trips within the red boxes in Figure 19 will be adjusted accordingly but the demand of the rest of the approaches will remain the same with 2% growth rate. According to the existing volumes of all five intersections in AM peak hour, 60% of entering trips are traveling through this intersection. 35% trips are from west making left turn and 25% trips are from east making right turn. Meanwhile, 47% of exiting trips are through this intersection. 13% trips are making left-turn to the east and 34% trips are making right –turn to the west. In PM peak hour, 34% of entering trips are through this intersection. 16% trips are from west making left turn and 18% trips are from east making right turn. Meanwhile, 13% of exiting trips are through this intersection.

Figure 19 Existing Traffic Volume at Massachusetts Ave & West School Dr. - AM

c. Memorial Drive and West School Driveway: Since this intersection is within the site, all the trips passing this intersections are internal trips. Therefore demand of all approaches will be adjusted accordingly.
d. Massachusetts Avenue and East School Driveway: The trips within the red boxes in Figure 20 will be adjusted accordingly but the demand of the rest approaches will remain the same with 2% growth rate. According to the existing volumes of all five intersections in AM peak hour, 18% of entering trips are through this intersection. 14% trips are from west making left turn and 4% trips are from east making right turn. Meanwhile, only 2% of exiting trips are through this intersection, making right –turn to the west. In PM peak hour, 53% of entering trips and 40% of exiting trips are through this intersection.

Figure 20 Existing Traffic Volume at Massachusetts Ave & East School Dr.

e. Oak Avenue and West School Driveway: The trips within the red boxes in Figure 21 will be adjusted accordingly but the demand of the rest approaches will remain the same with 2% growth rate. According to the existing volumes of all five intersections in AM peak hour, 22% of entering trips are through this intersection. 13% trips are from west making right-

turn and 9% trips are from east making left-turn. Meanwhile, only 51% of exiting trips are through this intersection. 34% trips are making left-turn to the west and 17% trips are making right –turn to the east. In PM peak hour, 9% of entering trips and 33% of exiting trips are through this intersection.

Figure 21 Existing Traffic Volume at Oak Ave & West School Dr.

Table 8 Trip distribution to all intersections

INTERSECTION		APPROACH	LANE GROUP	AM PEAK HOUR			PM PEAK HOUR		
				Existing Volume (v/h)	Proposed Volume (v/h)	Proposed approach Total	Existing Volume (v/h)	Proposed Volume (v/h)	Proposed approach Total
1	Massachusetts Ave and Lancaster Ave	EB	L	13	14	282	25	26	390
			T	219	185		216	245	
			R	80	83		114	119	
		WB	L	148	132	288	217	212	545
			T	167	149		317	310	
			R	9	8		23	23	
		NB	L	70	73	226	141	147	335
			T	77	80		146	152	
			R	86	73		32	36	
		SB	L	20	17	150	13	15	164
			T	124	129		122	127	
			R	4	4		21	22	
2	Massachusetts Ave and School Dr W	EB	L	82	32	275	14	17	296
			T	239	243		264	280	
		WB	T	273	284	306	517	538	557
			R	57	22		16	19	
		SB	L	16	2	6	7	3	10
			R	42	4		20	7	
3	Memorial Dr and School Dr W	NB	T						
		SB	T						
4	Massachusetts Ave and School Dr E	EB	L	32	12	244	34	41	282
			T	223	232		232	241	
		WB	T	325	306	310	477	534	554
			R	10	4		17	20	
		SB	L	0	0	0	23	9	32
			R	2	0		63	23	
5	Oak Street and School Dr W	EB	T	83	86	98	63	66	69
			R	29	11		3	4	
		WB	L	20	8	51	5	6	51
			T	42	44		43	45	
		NB	L	42	4	6	69	26	37
			R	21	2		31	11	

3. The Level of Service of all five intersections are shown in Table 9 and Table 10.

Table 9 LOS for all intersections in Build Condition - ETC

INTERSECTION		APPROACH	LANE GROUP	BUILD CONDITIONS - ETC -AM PEAK HOUR							BUILD CONDITIONS - ETC -PM PEAK IOUR						
				Volume (v/h)	V/C Ratio	Delay (s)	LOS	App. Delay (s)	App. LOS	Queue Length 95th	Volume (v/l)	V/C Ratio	Delay (s)	LOS	App. Delay (s)	App. LOS	Queue Length 95th
1	Massachusetts Ave and Lancaster Ave	EB	L	14	0.05	8.8	A	10.4	B	9	26	0.14	9.9	A	11.3	B	14
			TR	272	0.37	10.5	B			121	322	0.46	11.5	B			142
		WB	L	142	0.42	13.9	B	11.9	B	72	214	0.57	18.4	B	14.6	B	141
			TR	169	0.26	10.3	B			71	335	0.44	12.3	B			159
		NB	LTR	227	0.62	27.0	C	27.0	C	198	329	0.81	38.6	D	38.6	D	#309
		SB	LTR	150	0.42	22.2	C	22.2	C	111	161	0.39	21.4	C	21.4	C	104
				Overall				17.0	B		Overall				20	C	
2	Massachusetts Ave and School Dr W	EB	LT	280	0.09	2.9	A	2.9	A	8	246	0.01	0.1	A	0.1	A	0
		WB	TR	314	0.22	0	A	0	A	0	541	0.01	0	A	0	A	0
		SB	LR	38	0.20	13.5	B	13.5	B	19	14	14.1	14.1	B	14.1	B	6
				Overall				2.9	A		Overall				0.5	A	
3	Memorial Dr and School Dr W	NB	LT	71	N/A	N/A	A	N/A	A		71	N/A	N/A	A	N/A	A	
		SB	TR	25	N/A	N/A	A	N/A	A		25	N/A	N/A	A	N/A	A	
				Overall				N/A	A		Overall				N/A	A	
4	Massachusetts Ave and School Dr E	EB	LT	249	0.03	1.2	A	1.2	A	2	247	0.01	0.5	A	0.5	A	1
		WB	TR	317	0.24	0	A	0	A	0	510	0.35	0	A	0	A	0
		SB	L	0							12	0.12	18.1	C	15	B	10
			R	1	0.01	10.6	B	10.6	B	0	33	0.17	13.6	B			15
				Overall				0.6	A		Overall				2	A	
5	Oak Street and School Dr W	EB	TR	101	0.14	0	A	0	A	0	66	0.05	0	A	0	A	0
		WB	LT	54	0.02	2.8	A	2.8	A	2	46	0.01	0	A	0	A	0
		NB	LR	41	0.21	11.6	B	11.6	B	20	53	0.15	10.1	B	10.1	B	13
				Overall				4.1	A		Overall				3.5	A	

Table 10 LOS for all intersections in Build Condition – ETC+10

INTERSECTION		APPROACH	LANE GROUP	BUILD CONDITIONS - ETC+10 - AM PEAK HOUR							BUILD CONDITIONS - ETC+10- PM PEAK HOUR						
				Volume (v/h)	V/C Ratio	Delay (s)	LOS	App. Delay (s)	App. LOS	Queue Length 95th	Volume (v/h)	V/C Ratio	Delay (s)	LOS	App. Delay (s)	App. LOS	Queue Length 95th
1	Massachusetts Ave and Lancaster Ave	EB	L	16	0.07	9	A	11.6	B	10	32	0.19	10.9	B	13.1	B	17
			TR	332	0.46	11.8	B			156	392	0.55	13.4	B			185
		WB	L	174	0.58	18.8	B	14.5	B	98	260	0.83	37.3	D	22.7	C	#253
			TR	206	0.32	10.9	B			86	408	0.53	13.9	B			204
		NB	LTR	277	0.82	38.3	D	38.3	D	#287	401	1.08	93.6	F	93.6	F	#425
		SB	LTR	183	0.54	24.9	C	24.9	C	137	196	0.48	23.0	C	23	C	126
				Overall				21.4	C		Overall				36.1	D	
2	Massachusetts Ave and School Dr W	EB	LT	342	0.12	1.3	A	1.3	A	10	300	0.01	0.1	A	0.1	A	0
		WB	TR	382	0.27	0	A	0	A	0	659	0.44	0	A	0	A	0
		SB	LR	47	0.30	16.7	C	16.7	C	31	17	0.11	16.7	C	16.7	C	9
				Overall				3.5	A		Overall				0.6	A	
3	Memorial Dr and School Dr W	NB	LT	87	N/A	N/A	A	N/A	A		87	N/A	N/A	A	N/A	A	
		SB	TR	30	N/A	N/A	A	N/A	A		30	N/A	N/A	A	N/A	A	
				Overall				N/A	A		Overall				N/A	A	
4	Massachusetts Ave and School Dr E	EB	LT	303	0.04	1.3	A	1.3	A	3	301	0.01	0.5	A	0.5	A	1
		WB	TR	387	0.29	0	A	0	A	0	622	0.43	0	A	0	A	0
		SB	L	0							15	0.19	23.5	C	18.4	C	17
			R	2	0.01	11.3	B	11.3	B	1	41	0.24	16.1	C			23
				Overall				0.6	A		Overall				2.4	A	
5	Oak Street and School Dr W	EB	TR	124	0.17	0	A	0	A	0	81	0.06	0	A	0	A	0
		WB	LT	66	0.03	2.9	A	2.9	A	2	56	0	0.1	A	0.1	A	0
		NB	LR	51	0.28	12.9	B	12.9	B	29	65	0.19	10.7	B	10.7	B	17
				Overall				4.5	A		Overall				3.7	A	

The overall LOS for Build Conditions are all A or B except the intersection of Massachusetts Ave & Lancaster Ave PM peak hour, which is LOS C. This indicates that overall capacity of each intersection is enough for new uses of the building. The overall LOS for Build Conditions at ETC+10 are all A except Massachusetts Ave & Lancaster Ave, which has LOS C in AM peak and LOC D in PM peak. It is a significant signalized intersection near the building but it is not the direct entrance to the building. The inbound and outbound traffic are not planned to go through this intersection.

The mitigation strategies such as signal optimization can be considered to improve the traffic condition at ETC+10. For other unsignlized intersections, the capacity is still sufficient for daily uses.

4. Consideration and Discussion: The Build Conditions only consider the land use of Office Area and Extended Day School. However, there are still areas for conference rooms. The ITE manual does not include this land use since the conference rooms are not used by daily basis but event basis. As shown in LOS tables, the unsignalized intersections have LOS A so that they have sufficient capacity to carry the traffic generated by events. The intersection of Massachusetts Ave & Lancaster Ave needs more investigations since its overall LOS is C or D, especially northbound approach at this intersection. It is suggested that traffic mitigations are needed for events. For example, traffic guides or assistants can help with traffic congestion during the event by overriding the signal timing. They can also help with pedestrian safety issues. Detour planning is another mitigation for events. The detours can divert the inbound or/and outbound traffic to the intersections that have lower volume/capacity ratio.

Traffic Impact Study Summary

The No Build conditions analysis in ETC and ETC+10 show that all unsignalized intersections have level of service A in both AM and PM peak hours. The Build conditions have similar but fewer entering and exiting trips than No Build conditions in both AM and PM peak hours. The LOS of both No Build and Build conditions are very similar. Therefore, the new use of the building will not generate significant traffic impacts to the study area.

Parking Impact Study

The existing parking stalls, as described before, are mainly used for temporarily pick-up/drop-off, parking for recreation, and staffs or students parking. After building renovation, the building needs 56 parking spaces for administration officers, child cares and visitors per Meridian's calculation. There will be another 65 parking spaces provided for 65 employees in offices. Therefore, the new design will provide 125 parking spaces after a factor of safety. This number is almost twice as many as existing parking spaces. According to the Town Code, parking spaces provided after building renovation are sufficient for new parking demand.

As described in the Trip Generation section, the trip generated by the new use of the building is similar to existing traffic pattern. Existing Parking Analysis previously shows that parking occupancy is less than 76% except only peak hour in street parking. Therefore, significant impacts are not expected with such increase of parking stall numbers. However, there might be events to use conference rooms in the new building. The parking demand will be increased during the event. It is suggested to schedule the events off the peak hours when staffs and employees leave the building. More temporarily street parking can be planned and used for big events to satisfy the increased demand.

Table 11: Parking Usage Capacity during COVID and Post-COVID

	COVID		Post-COVID(@Capacity)	
	School Session	Evening(after school)	School Session	Evening(after school)
Visitors (per day)	2	0	2	0
Admin	19	2	19	2
Students (remote learning center)	10	0	90	92
Students (extended day – AM&PM until 5:30pm)	19	21		
Total	50	23	111	94

Conclusion

The existing conditions analysis show that the current sidewalks or curb ramps needs lots of improvement to meet ADA compliant. These facilities need to be fixed or even re-built to improve the pedestrian safety. In addition, pavement markings such as fade crosswalk markings need to be re-striped to increase the visibility and therefore improve the safety issues. Existing traffic conditions are good at unsignalized intersections and the signalized intersection is also acceptable. If the building is renovated into new uses in the future, significant traffic impacts are not expected since the traffic demand is not extraordinarily increased. The traffic pattern will be very similar to existing conditions. The capacity of each intersection is capable to carry projected traffic demand. Meanwhile, significant impacts on parking are not expected either. Although parking demand may increase, there are sufficient parking stalls to meet the Town Code after building renovation.

In conclusion, roadway facilities like sidewalks, curb ramps and crosswalk pavement markings need to be updated with the renovation of the building. The traffic controls at either signalized or unsignalized intersections are acceptable and no further improvements are needed at Estimated Completion Time (ETC). For the conditions 10 years after the project is completed, traffic signal optimization is recommended for the signalized intersection.

Phase I Environmental Site Assessment

1025 Massachusetts Avenue
Lunenburg, MA 01462

Prepared for:

Town of Lunenburg

August 2020

Prepared by:

LiRo Engineers, Inc.
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Hicksville, New York 11801

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FIGURES

APPENDICES

Executive Summary

At the request of the Town of Lunenburg, LiRo Engineers, Inc. (LiRo) prepared this Phase I Environmental Site Assessment (ESA) for the property located at 1025 Massachusetts Avenue (Site), as shown on Figure 1. The Site is located north of Massachusetts Avenue, south of Oak Avenue, east of Main Street and west of Northfield Road. The Site includes two on-Site buildings: Thomas C. Passios Elementary School, and a small building referred to as "Brooks House."

This Phase I ESA was prepared in accordance with ASTM International's Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process - E1527-13 (ASTM E1527-13). According to the United States Environmental Protection Agency (USEPA), the All Appropriate Inquiry (AAI) Final Rule is the process of evaluating a property's environmental conditions and assessing potential liability for any contamination. All appropriate inquiries must be conducted to obtain certain protections from liability under the federal Superfund Law (also known as Comprehensive Environmental Response Compensation and Liability Act [CERCLA]).

The purpose of this assessment is to identify recognized environmental conditions (REC), historic RECs (HREC), and/or controlled RECs (CREC) associated with the Site. A REC, as defined by ASTM E1527-13 is "*the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. de minimis conditions are not recognized environmental conditions*." An HREC is defined as "*a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)*." A CREC is defined as "*a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)*."

This Phase I ESA was performed to evaluate RECs, HRECs, CRECs, and potential environmental concerns along with assessing potential liability for any contamination associated with the Site for the purpose of potential property transfer or redevelopment. This Phase I ESA consists of the following tasks:

- Records review;
- Site reconnaissance;
- Interviews; and
- Report preparation.

The Site address is 1025 Massachusetts Avenue, which is located in the Town of Lunenburg, Worcester County, Massachusetts, as shown on Figure 1. The Site shares a single parcel of land (overall approximately 52.03 acres) with the Lunenburg Middle High School, "Brooks House" and Turkey Hill Middle School,

and is referred to as Lot 55 from the Town of Lunenburg Tax Assessor's Online GIS Map/Property Data. The Site limits were confirmed with a draft land survey (Existing Conditions Plan) prepared for DiGiorgio Associates, Inc. by Meridian Associates on June 12, 2020, comprising approximately 12 acres. A copy of the Site Survey is shown on Figure 2. The Site is surrounded by educational, municipal, recreational, and residential-use buildings. The surrounding property usage is detailed in the table below and on Figure 3. Figure 4 details the Wetland map for the Site.

Recognized Environmental Condition (REC)

Based on the information evaluated during this Phase I ESA, LiRo identified the following REC in association with the Site:

- Site Reconnaissance – Dark surface staining was observed directly under both sets of old oil-filled switchgear equipment in the Electric/Transformer Room on the east side of the building. A floor drain is located approximately 4 feet away from the electrical equipment, near the blue transformers. Since the PCB content of the surface staining and terminus of subsurface floor drain piping are unknown, potential exists for spills to reach the environment, thus it is considered a REC.

Controlled Recognized Environmental Condition (CREC)

Based on the information gathered during the Phase I ESA, no CRECs were identified in association with the Site.

Historical Recognized Environmental Condition (HREC)

Based on the information gathered during this Phase I ESA, LiRo identified the following HREC associated with the Site:

- Historical Spills – Two separate but related #4 fuel oil spills resulting from overflow of 10,000 gallon and 20,000 gallon USTs occurred on-Site on March 5, 1987. Per interviews with Mr. John Londa, Director of Facilities, Captain James Ricci, Captain of Lunenburg Fire Department (Fire Prevention), a 2013 Phase I ESA prepared by Lord Associates, Inc., and information provided by MassDEP, the 10,000 gallon UST was removed on April 24, 1987 by Zecco, Inc and the 20,000 gallon was removed on July 3, 2007 by D B Environmental. According to data provided to LiRo by MassDEP, both historic oil spills were reported as closed in the agency's regulatory database, and are thus considered an HREC.

Although technically not defined as a REC, the following may pose potential environmental considerations to the Site:

- Records obtained from the Town of Lunenburg regarding asbestos abatements performed at the Site, as well as the Site's presence in the ASBESTOS database in the EDR, indicate that the likeliness of asbestos-containing materials on-Site presents an environmental consideration for any demolition or renovation plans for the property.

LiRo identified the following data gaps that might affect the evaluation of RECs associated with the Site.

- Responses to the FOIL requests are pending from the Town of Lunenburg School Department and Massachusetts Department of Public Health (Bureau of Environmental Health). If any pertinent information is provided in these responses, LiRo will prepare an addendum summarizing these findings.

1.0 INTRODUCTION

At the request of the Town of Lunenburg, LiRo Engineers, Inc. (LiRo) prepared this Phase I Environmental Site Assessment (ESA) for the property located at 1025 Massachusetts Avenue, Lunenburg, MA (Site), as shown on Figure 1. The Site is located north of Massachusetts Avenue, south of Oak Avenue, east of Main Street and west of Northfield Road. The Site includes two on-Site buildings: Thomas C. Passios Elementary School, and a small building referred to as "Brooks House."

The purpose of this assessment is to identify recognized environmental conditions (REC), historical RECs (HREC), and/or controlled RECs (CREC) associated with the Site. As defined by ASTM International's Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process - E1527-13 (ASTM E1527-13), a REC is "*the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. de minimis conditions are not recognized environmental conditions*." An HREC is defined as "*a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)*." A CREC is defined as "*a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)*."

LiRo prepared this Phase I ESA in conformance with ASTM E1527-13 and the United States Environmental Protection Agency (USEPA) All Appropriate Inquiries (AAI) Final Rule. According to the USEPA, the AAI Final Rule is the process of evaluating the environmental conditions of a property and assessing potential liability for any contamination. All appropriate inquiries must be conducted to obtain certain protections from liability under the federal Superfund Law (also known as Comprehensive Environmental Response Compensation and Liability Act [CERCLA]).

This report is intended for the sole use of the User (Town of Lunenburg) unless written approval is granted by the User and LiRo.

1.1 Scope of Work

This Phase I ESA consists of the following tasks:

- Records review;
- Site reconnaissance;
- Interviews; and
- Report preparation.

Records Review - A review of the public records for the Site and the immediate vicinity was conducted to characterize environmental features of the Site and to identify past and present land use activities, on or in the vicinity of the Site that might indicate the potential for the presence of RECs, HRECs, and/or CRECs. The review of the public records included:

- Evaluation of reasonably ascertainable public records that are practically reviewable and made available to LiRo by regulatory personnel regarding past, present, and pending enforcement actions and investigations at the Site and within the immediate vicinity.
- Evaluation of readily available aerial photographs, Sanborn fire insurance maps, city directories, and topographic maps of the Site and vicinity for evidence suggesting past uses that might have involved hazardous substances or petroleum products. The extent of the review of these resources was limited to information that was practically reviewable within the time and feasibility constraints of this Phase I ESA.

Site Reconnaissance - A Site reconnaissance was performed to identify signs of current and/or historical contamination on or adjacent to the Site, and to evaluate if any evidence of hazardous substances or petroleum product use existed based on the results of the records review. The Site reconnaissance included the following activities:

- A visual reconnaissance of the Site and adjacent properties was performed to observe signs of hazardous substance and/or petroleum spills, stressed vegetation, buried waste, underground storage tanks (UST), aboveground storage tanks (AST), subsidence, transformers and any unusual soil discoloration/stressed vegetation that might be indicative of the possible presence of contaminants on the subject property.
- A walkthrough was conducted on the property.
- Photographs of the Site were taken to document the current use and condition of the property and any significant observations such as unusually discolored soil, stressed vegetation, or other prominent features associated with the property.

Interviews - Where possible, interviews were conducted with appropriate local authorities to consider any local knowledge of hazardous substances or petroleum products on the subject property or on adjacent properties. In addition, the current property owner was interviewed regarding their knowledge of hazardous substances or petroleum products on the subject property or on adjacent properties.

Report Preparation - This task includes the evaluation of the environmental database report, Site conditions observed during the Site reconnaissance, and the Site personnel interviews.

1.2 Significant Assumptions

This Phase I ESA is limited by the availability of information at the time of the assessment. It is possible that unreported disposal of waste or illegal activities that impaired the environmental status of the property might have occurred that could not be identified. The conclusions and recommendations regarding environmental conditions that are presented in this report are based on a scope of work authorized by the User. However, we note that virtually no scope of work, no matter how exhaustive, can identify all contaminants or all conditions above and below ground.

1.3 Limitations and Exceptions

LiRo obtained information through various sources including an environmental database report provided by Environmental Data Resources, Inc. (EDR). It is possible that additional information exists for the property that was not provided to LiRo at the time that this Phase I ESA was prepared. The findings presented in this report are based upon information reasonably ascertainable or visible at the time of the assessment.

1.4 Special Terms and Conditions

This Phase I ESA does not warrant against the following.

- Conditions not visible at the time of the Site reconnaissance;
- Historical information that was not included in the records obtained;
- Information from off-Site contaminant sources not available in public records; and
- Conditions only accessible through Site investigation techniques (i.e., drilling or excavating).

ASTM E1527-13 Phase I ESA non-scope considerations not addressed in this report include biological agents, cultural and historic resources, ecological resources, endangered species, health and safety, air quality unrelated to releases of hazardous substances or petroleum products into the environment, industrial hygiene, lead in drinking water, radon, regulatory compliance, and wetlands.

1.5 User Reliance

LiRo can attest that this Phase I ESA was prepared in accordance with ASTM E1527-13. This report is valid for 180 days after the date of issue, or until such time when new information pertinent to the assessment is obtained by the User or LiRo, whichever is less. The findings, opinions, and recommendations presented in this report are exclusive to the User and the assessed property. Written permission must be obtained from LiRo and the User for use of this report, its findings, opinions, and recommendations by other parties, persons, or firms.

1.6 Reason for Performing a Phase I ESA

According to the USEPA, the AAI Final Rule is the process of evaluating the environmental conditions of a property and assessing potential liability for any contamination. All appropriate inquiries must be conducted to obtain certain protections from liability under the federal Superfund Law (also known as CERCLA). The purpose of this Phase I ESA is to identify RECs, HRECS, CRECS, and environmental issues associated with the Site, as defined in ASTM E1527-13.

This Phase I ESA was prepared solely for use of the User, Town of Lunenburg.

2.0 SITE DESCRIPTION

2.1 Location and Legal Description

The Site address is 1025 Massachusetts Avenue, which is located in the Town of Lunenburg, Worcester County, Massachusetts, as shown on Figure 1. The Site shares a single parcel of land (approximately 52.03 acres) with the Lunenburg Middle High School, "Brooks House", and Turkey Hill Middle School, and is referred to as Lot 55 from the Town of Lunenburg Tax Assessor's Online GIS Map/Property Data. The Site inspection itself was done in accordance to a draft land survey (Existing Conditions Plan) prepared for DiGiorgio Associates, Inc. by Meridian Associates on June 12, 2020, and was approximately 12 acres. A copy of the Site Survey is shown on Figure 2. Figure 4 details the Wetland map for the Site.

2.2 Site and Vicinity General Characteristics

The Site is located in a suburban setting and surrounded by educational, municipal, recreational, and residential-use buildings. The surrounding property usage is detailed in the table below and on Figure 3.

North	Lunenburg Middle High School, Turkey Hill Elementary School, Oak Avenue, Turkey Hill Road, residential neighborhoods.
South	Lunenburg Public Library, Massachusetts Avenue, National Weather Services, recreational and commercial businesses, Lunenburg Historic District, Whiting Street, residential homes and agricultural land.
East	Athletic fields, Hillside Drive, Massachusetts Avenue, Northfield Road, residential homes, agricultural/vacant land, Seeley Automotive Services, JBTURF (lawn care service), KC Sales and Services (used car dealer), commercial buildings.
West	Main Street, commercial and municipal buildings, United Parish Lunenburg Community Center (southwest of Site), Marshall Park & Pond, Massachusetts Avenue, restaurant, St. Boniface Preschool.

2.3 Current Use of the Property

The Site features the following two buildings: Thomas C. Passios Elementary School and a small house referred to as "Brooks House" near Massachusetts Avenue. Thomas C. Passios Elementary School is a single-story building constructed in 1952 with a building footprint of approximately 55,000 square feet. There is a small crawlspace located below the mezzanine (former stage area). The school was functioning until approximately 2010, and is now currently used as the Lunenburg Public Schools' administrative offices, as well as the Town's cable access. The "Brooks House" is a small three-story farmhouse with a basement that is currently used as an office for the Director of Facilities of Lunenburg Public Schools, as well as file storage. The Brooks House was originally used as the School District's headquarters since the early 1950s, but the headquarters has since moved to the Thomas C. Passios Elementary School.

2.4 Current Uses of the Adjoining Properties

The area surrounding the Site primarily consists of educational, municipal, recreational, and residential-use buildings. The current uses of the properties adjoining the Site are provided in Section 2.2.

2.5 Physical Setting

2.5.1 Topography, Area Geology, and Hydrogeology

According to the USGS 7.5 Minute Series Topographic Map – 2012 Shirley, MA Quadrangle, the elevation at the Site is approximately 546 feet above mean sea level (amsl).

Based on the *Interim Surficial Geologic Map of the Shirley Quadrangle* by R.W. Allmendinger and W.D. Schneider (provided by United States Geological Survey), dated May 17, 1976, the Site is situated on undifferentiated deposits from the Pleistocene epoch of the Quaternary period. Glacial lake bottom deposits of clay, silt, and fine sand were deposited on top of the existing deposits. The Glacial Lake Nashua deposits, made up of coarse gravel and sand, average about 30 feet thick. In addition, according to the USGS Mineral Resources Online Spatial Data, the Paxton Formation of the Silurian system (Paleozoic Era), which consists of metamorphic rock and schist, makes up most of the Lunenburg, MA area. The soil surface texture at the Site consists of fine sandy loam.

The direction of groundwater flow is assumed to the southeast and the depth to the water table is estimated to range from 2 feet below ground surface (bgs) to 10 feet bgs based on the USGS National Water Information System Mapper and data from the "Comprehensive Wastewater Management Plan" prepared for the Town of Lunenburg by Wright-Pierce in March 2010; the data was taken within close proximity to the Site (Massachusetts Avenue / Beal Street and Highland Street). Depth to water was not verified during this Phase I ESA.

3.0 USER PROVIDED INFORMATION

3.1 Title Record, Environmental Liens or Activity and Use Limitations (AUL)

LiRo did not perform a title or lien search as part of this Phase I ESA. In accordance with ASTM E1527-13, the title and lien search are the responsibility of the User and at the time of this report, no title or lien records were provided to LiRo.

3.2 Specialized Knowledge/Commonly Known or Reasonably Ascertainable Information

Information containing specialized knowledge about the Site and surrounding property for the preparation of this Phase I ESA was obtained through interviews with Mr. John Londa, the Director of Facilities for Lunenburg Public Schools since 1998.

3.3 Owner, Property Manager, and Occupant Information

The Site features the following two buildings: Thomas C. Passios Elementary School and a small house referred to as "Brooks House" near Massachusetts Avenue. Both are owned by the Town of Lunenburg. Thomas C. Passios Elementary School was utilized as a functioning school until approximately 2010, and is now currently used as the Lunenburg School Department offices, as well as the Town's cable access. The "Brooks House" is a small farmhouse that was originally used as the School District's office since the early 1950s. The School District relocated their offices to Thomas C. Passios Elementary School in 2010, and the current occupant of "Brooks House" is the Director of Facilities. It is currently used as an office and file storage.

3.3 Previous Environmental Investigations

A copy of a Phase I Environmental Site Assessment prepared for the Site by Lord Associates, Inc. and dated April 15, 2013, was reviewed as part of this Phase I ESA. The report did not identify any Recognized Environmental Conditions (RECs); however, the report noted removal of the 10,000-gallon UST lacking documentation identified as a Historical Recognized Environmental Condition (HREC).

A copy of the "Asbestos 3-Year Re-Inspection Report and Updated Management Plan" (AHERA) prepared by ATC Group Services LLC on May 15, 2019 was also provided to LiRo for review. Based on a brief review of the file, various 9" floor tiles/mastic and cove base/mastic in multiple classrooms were listed as damaged asbestos-containing materials (ACM); however, the materials are non-friable, and are not easily disturbed.

4.0 RECORDS REVIEW

4.1 Standard Environmental Record Sources

The government records search developed by EDR includes federal, state, and local government databases of known or suspected inactive hazardous waste sites; petroleum and chemical bulk storage tank sites; reported spills, including leaking USTs; air pollution point sources; toxic wastewater dischargers; and, hazardous waste generators and treatment, storage, and disposal facilities.

A complete list of the federal and state databases searched by EDR is provided in Appendix A (Radius Report). Provided below is a summary of the sites identified through the federal and state regulatory agency databases review.

Federal, State and City List	Last Update	Site Appears on List	Search Radius	No. of Sites within Search Radius
State Hazardous Waste Sites (SHWS)	6/24/2020	No	1 mile	7
Leaking Underground Storage Tanks (LUST)	6/24/2020	No	½ mile	1
Underground Storage Tank (UST)	1/6/2020	No	¼ mile	1
Aboveground Storage Tank (AST)	2/18/2020	No	¼ mile	1
Reportable Releases (RELEASE)	6/24/2020	No	-	4
Facility Index System/Facility Registry System (FINDS)	2/3/2020	Yes	TP	1
Asbestos Notification Listing (ASBESTOS)	2/28/2020	Yes	TP	1
Massachusetts Hazardous Waste Generators (HW GEN)	3/13/2020	Yes	TP	1

The Site was identified in the following databases: Facility Index System/Facility Registry System (FINDS), Asbestos Notification Listing Asbestos Sites (ASBESTOS), and Massachusetts Hazardous Waste Generators (HW GEN).

The following subsections provide a discussion of the surrounding properties that were identified in the environmental database report. Off-Site properties that meet the following criteria are discussed in this report:

- Facilities located immediately adjacent to the Site due to their proximity to the Site and the potential for surface water discharges (e.g., stormwater runoff) to enter the Site or through the migration of groundwater onto the Site; and,
- Facilities located topographically or hydraulically upgradient to the Site within the ASTM search radius.

For the purposes of this assessment, groundwater is assumed to flow southeast. Facilities that are located downgradient or cross-gradient to the Site (but not immediately adjacent to the Site) are not generally discussed in this report as these conditions are considered to pose a low potential environmental concern to

the Site.

4.1.1 State Hazardous Waste Sites (SHWS)

The State Hazardous Waste Sites records are the States' equivalent to CERCLIS. The sites identified in this database might or might not already be listed on the federal CERCLIS list. The SHWS database contains information on releases of oil and hazardous materials that have been reported to DEP.

The EDR report identified seven (7) SHWS sites within the ASTM search radius (1 mile). A summary of the sites is provided below; the first site is upgradient to the Site.

Listing	Distance (Miles)/Direction	Status/Available Data
Lunenburg Fire Department (655 Massachusetts Avenue)	0.890 mi/W	Release Tracking Number: 2-0017280. The site reported a #2 Fuel Oil 75-gallon oil spill to the Massachusetts DEP on October 7, 2008. A tanker was the source of contamination. A Response Action Outcome (RAO) and permanent solution was achieved on December 5, 2008.
Robinson Residence (65 Rolling Acres Road)	0.341 mi/SSE	Release Tracking Number: 2-0013855. The Massachusetts DEP was notified of an oil spill from a #2 Fuel Oil 10-gallon tank at a residence on June 14, 2001. A Response Action Outcome (RAO) and permanent solution was achieved on June 10, 2002.
Chase Road (1 Northfield Road)	0.395 mi/ENE	Release Tracking Number: 2-0011552. The Massachusetts DEP was notified of an oil spill from a vehicle (Diesel fuel 50-gallon tank) on January 2, 1997. A Response Action Outcome (RAO) and permanent solution was achieved on March 11, 1997.
Transformer Modf Rel (870 Massachusetts Avenue)	0.421 mi/WSW	Release Tracking Number: 2-0018514. The Massachusetts DEP was notified of a mineral oil dielectric fluid spill (10 gallons) on the roadway from a transformer on March 4, 2012. A Response Action Outcome (RAO) and permanent solution was achieved on May 22, 2012.

Listing	Distance (Miles)/Direction	Status/Available Data
Arciprete Residence (287 Northfield Road)	0.622 mi/N	Release Tracking Number: 2-0016516. The Massachusetts DEP was notified of a #2 Fuel Oil spill from a pipe at a residence/waterbody on December 26, 2006. A Response Action Outcome (RAO) and permanent solution was achieved on July 20, 2010.
Townsend Harbor Rd P (79 Townsend Harbor Road)	0.745 mi/ENE	Release Tracking Number: 2-0000084. The Massachusetts DEP was notified of a release of VOCS from drums on August 24, 1988. A Response Action Outcome (RAO) and permanent solution was achieved on November 1, 2000.
Hickory Hills Lake (52 Birch Island Way)	0.865 mi/NE	Release Tracking Number: 2-0016276. The Massachusetts DEP was notified of an oil spill from a #2 Fuel Oil 10-gallon aboveground storage tank in a residence/waterbody on September 14, 2003. A Response Action Outcome (RAO) and permanent solution was achieved on November 7, 2006.

Based on satisfactory remediation of the identified sites, it is unlikely that these SHWS sites represent any environmental concerns with respect the Site.

4.1.2 Leaking Underground Storage Tanks (LUST)

Sites within the Leaking Underground Storage Tank Listing (Releases Database) that have a UST listed as its source.

The EDR report identified one (1) LUST site (L&M Service Center) within the ASTM search radius (0.5 mile). On September 12, 2007, the Massachusetts DEP was notified of a UST spill (82 parts per million of Naphthalene and 6.3 parts per million of Xylene) onto the commercial property located at 925 Massachusetts Avenue. The site is classified as “TIER 1D”, meaning the responsible party failed to provide a required submittal to DEP by a specified deadline.

Although the site is still considered open on the Massachusetts DEP Waste Site & Reportable Releases Information database, based on the hydraulic gradient relative to the Site (downgradient) and its distance from the Site (> 0.125 mile), it is unlikely that this LUST site represents an environmental concern with respect to the Site.

4.1.3 Underground Storage Tank (UST) Sites

The UST database includes an inventory of sites with registered USTs, which are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data comes from the Department of Environmental Protection's Summary Listing of all the Tanks Registered in the State of Massachusetts.

The EDR report identified one (1) listed UST site within the ASTM search radius (0.25 mile). Since it is located hydraulically upgradient from the Site, a summary of this site is provided below.

Listing	Distance (Miles)/Direction	Status/Available Data
Town of Lunenburg Fire & Police (7 School Street)	0.230 mi/SW	This facility (ID No. 16660) is listed as having one 1,000-gallon gasoline UST, which was installed on May 6, 1977. As of July 13, 1990, the tank was removed.

Based on the lack of open spills and lack of violations associated with the site referenced above, as well as the closed status of the tank, it is unlikely that this UST site represents an environmental concern with respect to the Site.

4.1.4 Aboveground Storage Tank (AST) Sites

The AST database includes an inventory of sites with registered ASTs. The data comes from the Department of Environmental Protection's Summary Listing of all the Tanks Registered in the State of Massachusetts.

The EDR report identified one (1) AST site within the ASTM search radius (0.25 mile). A summary of this site is provided below.

Listing	Distance (Miles)/Direction	Status/Available Data
Not Reported (Address: N/A)	0.234 mi/SW	This facility (Release tracking #22321) is listed as having the following AST: one 500-gallon Diesel AST. No other information is listed for the site.

Based on the lack of violations and information associated with the AST site identified above, it is unlikely that it represents an environmental concern with respect to the Site.

4.1.5 Reportable Releases (RELEASE)

RELEASE database contains information on all releases of oil and hazardous materials that have been reported to the DEP.

The EDR report identified four (4) RELEASE sites; however, the sites were not mapped in the EDR report due to poor or inadequate address information. A summary of the sites is provided below.

Listing	Distance (Miles)/Direction	Status/Available Data
Roadway Release (Lancaster Avenue)	N/A	Release Tracking Number: 2-0011597. The Massachusetts DEP was notified of a 10 gallon gasoline and 20 gallon diesel fuel spill on the roadway from a vehicle on February 5, 1997. A Response Action Outcome (RAO) and permanent solution was achieved on August 21, 1997.
Hydraulic Oil To Roadway (Leominster Road)	N/A	Release Tracking Number: 2-0021154. The Massachusetts DEP was notified on February 24, 2020. The chemical and quantity is unreported. A Permanent Solution with No Conditions (PSNC) was achieved on April 13, 2020.
Lafarge Building Materials (541 Leominster Shirley Road)	N/A	Release Tracking Number: 2-0018673. The Massachusetts DEP was notified of a 15 gallon diesel fuel spill from a vehicle on August 21, 2012. A Response Action Outcome (RAO) and permanent solution was achieved on October 26, 2012.
No Location Aid (Massachusetts Avenue)	N/A	Release Tracking Number: 2-0010499. The Massachusetts DEP was notified of an oil spill from a #2 Fuel Oil 10-gallon aboveground storage tank in a residence/waterbody on September 6, 1994. A Utility-related Abatement Measure (URAM) was achieved on September 6, 1994.

Based on satisfactory remediation of the identified sites, it is unlikely that these RELEASE sites represent any environmental concerns with respect the Site.

4.1.6 Facility Index System/Facility Registry System (FINDS)

FINDS database contains both facility information and "pointers" to other sources that contain more detail on specific sites. EDR included the following FINDS databases: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

The EDR report identified one (1) FINDS site (Target Property, Registry ID #110024839237) within the ASTM search radius (0.25 mile). The information was pulled from the MA-EPICS database (Massachusetts Environmental Protection Integrated Computer System). Besides listing the Site under "Hazardous Waste Program", the Site's presence on the FINDS list does not pose an environmental concern.

4.1.7 Asbestos Notification Listing (ASBESTOS)

The Asbestos Notification Listing database provides information about asbestos sites. The source of the information is the Department of Environmental Protection.

The target property (Thomas C. Passios Elementary School) was identified in the ASBESTOS database eleven (11) times. A quick summary below is provided for each listing.

Listing	Distance (Miles)/Direction	Status/Available Data
Thomas C. Passios Elementary School (1025 Massachusetts Avenue)	TP	A full-containment abatement of corrugated pipe in a closet (85 SF & 2 LF) began on September 27, 2002 and concluded on September 30, 2002.
		A full-containment abatement of asbestos material (5 LF) began on June 18, 2005 and concluded on June 30, 2005.
		A mini containment abatement of asbestos material (20 LF) began on December 23, 2013 and concluded on January 3, 2014.
		A three-chamber abatement of pipe insulation in the boiler room (3 LF) began on October 25, 2003 and concluded on October 27, 2003.
		A three-chamber abatement of popcorn spray-on and corrugated pipe throughout the building (10 SF & 25 LF) began on July 12, 2004 and concluded on July 30, 2004.
		A three-chamber abatement of vinyl asbestos tile and other materials in the boiler room (1,583 SF & 265 LF) began on February 3, 2004 and concluded on March 3, 2004.
		A three-chamber abatement of asbestos material throughout the building (25 LF) began on June 26, 2008 and concluded on June 28, 2008.

Listing	Distance (Miles)/Direction	Status/Available Data
Thomas C. Passios Elementary School (1025 Massachusetts Avenue)	TP	A three-chamber full containment abatement of vinyl asbestos tile, boiler insulation, pipe insulation, tank insulation, and header insulation in the cafeteria, unit ventilations, and boiler room (1583 SF & 265 LF) began on July 23, 2008 and concluded on August 23, 2003.
		A three-chamber wash bucket abatement of asbestos material in the school (30 SF) began on August 11, 2012 and concluded on August 11, 2012.
		An abatement of various asbestos materials throughout the school (1000 SF & 100 LF) began on June 21, 2011 and concluded on June 30, 2011.
		A three-chamber wash bucket abatement of asbestos material in the school (30 SF) began on August 11, 2012 and concluded on August 17, 2012.

Based on the nature of the reports, which detail abatement projects, it is unlikely that the presence of the Site on the ASBESTOS database represents an environmental concern itself. However, the likeliness of more hazardous materials (asbestos-containing materials) on-Site presents an environmental concern for any demolition or renovation plans for the property.

4.1.8 Massachusetts Hazardous Waste Generators (HW GEN)

The HW GEN database lists all permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities.

The EDR report identified one (1) HW GEN site, which is the Target Property (Thomas C. Passios Elementary School). The school's State Generator Status is VQG-MA, the RCRA Generator Status is VSQG (Very Small Quantity Generator) and its EPA ID is MV9785824105. According to the USEPA, a VSQG "generate 100 kilograms or less per month of hazardous waste or one kilogram or less per month of acutely hazardous waste."

Based on the lack of violations for the Site, it is unlikely that it represents an environmental concern.

4.2 Historical Use Information on the Property/Adjoining Properties

4.2.1 Sanborn Fire Insurance Maps

Sanborn Fire Insurance maps (i.e., Sanborn maps) were obtained from EDR for 1936 and 1946. The maps are provided in the EDR report (Appendix B). A summary of the historical Site and surrounding property operations is provided below.

Year	Comments
1936	**Site** The Sanborn map is not developed within and around the vicinity of the Site. **Surrounding Properties** North: 30% of the Sanborn map north of the Site is not registered due to inadequate information. South: The property south of the Site appears to be developed with a dwelling near Massachusetts Avenue, as well as a smaller dwelling adjacent-east which appears to be a garage. A few more small dwellings are shown south and northeast of Massachusetts Avenue. East: The land is not developed east of the Site. West: The land is not developed west of the Site.
1946	**Site** No change from the 1936 Sanborn map. **Surrounding Properties** North: 25% of the Sanborn map north of the Site is not registered due to inadequate information. South: A structure appeared southwest of the Site labeled “American Legion Club Ho.” East: No change from the 1936 Sanborn map. West: No change from the 1936 Sanborn map.

No RECs were identified as a result of the Sanborn map review.

4.2.2 Historical Aerial Photographs

Historical aerial photographs were obtained by EDR for 1938, 1963, 1969, 1975, 1980, 1985, 1995, 2008, 2012, and 2016, as presented in Appendix C.

The following is a summary of the Site and surrounding property usage as determined from the aerial photograph review.

Year	Comments
1938	**Site:** The Site appears to be underdeveloped, vacant land. **Surrounding Properties:** The surrounding area appears to be developed with residential structures southwest of the Site, with some dwellings scattered north, east, and south of the Site. Most of the surrounding land is underdeveloped, vacant (agricultural) land, with the development of Massachusetts Avenue and Main Street.

Year	Comments
1963	**Site:** The Site appears to be developed with a large structure (Thomas C. Passios Elementary School). **Surrounding Properties:** The area directly south of the Site is developed with roads/driveways. Another large structure appears adjacent-east of the Site. The surrounding area (to the north, east, south, and west) appears to be developed with more residential dwellings and various buildings, as well as a baseball field.
1969	The Aerial photograph is of poor quality and the only changes observed are the addition of more residential dwellings north of the Site, and a large structure northeast of the Site.
1975	**Site:** No change from the 1969 aerial photograph. **Surrounding Properties:** The surrounding properties appear as previously noted besides a few new structures northeast of the Site.
1980	The Site and surrounding properties appear as previously noted with minor changes.
1985	The Site and surrounding properties appear as previously noted with minor changes north of the Site.
1995	The Site and surrounding properties appear as previously noted.
2008	**Site:** The modular/temporary classroom appears on the Site (northwest side of the school). **Surrounding Properties:** The property northeast of the Site has been further developed with a new athletic field.
2012	The Site and surrounding properties appear as previously noted with minor changes to the residential areas.
2016	**Site:** A gravel lot appears adjacent-north of the Site. **Surrounding Properties:** The property adjacent-east of the Site appears to be under construction. A newer, big structure is shown north of the Site near the athletic field with a new parking lot.

No RECs were identified as a result of the review of the aerial photographs.

4.2.3 Historical Topographic Maps

Historical topographic photographs were obtained by EDR for 1893, 1935, 1936, 1939, 1943, 1949, 1950, 1965, 1979, 1988, and 2012, as presented in Appendix D.

The maps generally corroborate the overall development of the Site and the surrounding area presented in the Sanborn/Aerial maps. A few noteworthy observations include an Abandoned Airfield approximately 0.5 mile north of the Site on the 1949 Topographic Map, and a “Substa” shown approximately 0.5 mile southwest of the Site on the 1988 Topographic Map. However, based on LiRo’s review of historical USGS Topographic Maps, no additional RECs associated with the Site or the surrounding properties were identified.

4.2.4 City Directories

A review of historical city directories from 1972 through 2017 was conducted by EDR. A copy of the historical city directories can be found in Appendix E.

The Site has been owned by the Town of Lunenburg School Department since 1972 based off the historical city directory records.

No RECs were identified as a result of the review of City Directories.

4.3 Freedom of Information Law Requests

LiRo submitted Freedom of Information Law (FOIL) requests to the USEPA, Massachusetts Department of Environmental Protection (MassDEP), Massachusetts Department of Public Health (Bureau of Environmental Health), Town of Lunenburg Fire Department, Town of Lunenburg School Department, and the Town of Lunenburg General Public Records Department. Copies of the FOIL requests are included in Appendix F.

Responses were received from the USEPA, Town of Lunenburg, Lunenburg Conservation Commission, Massachusetts Department of Public Health, and the Town of Lunenburg Fire Department. Captain James Ricci, Captain of the Lunenburg Fire Department (Fire Prevention), provided documents regarding tanks on the Site and a historic oil spill that took place at the Thomas Passios Elementary School on March 5, 1987. According to the documents, approximately 9,000-10,000 gallons of #4 Fuel Oil entered the nearby drainage system and flowed into a brook near 1170 Massachusetts Avenue. The MassDEP and various agencies/companies were called on Site to contain the tank overfill.

The MassDEP staff could not initially find any pertinent records relevant to the Site; however, after further correspondence, a representative found information from the regulatory database regarding the historic oil spill from 1987 and spill closure documentation in the regulatory database, including a spill/release incident inspection report completed on March 6, 1987. According to documents written by the former Chief of the Town of Lunenburg Fire Department, both a 10,000-gallon and 20,000-gallon UST were confirmed on-Site at the time of the spill. The 10,000-gallon tank was not structurally sound and was removed by Zecco, Inc. on April 24, 1987, but no further documentation on the UST removal was provided.

Separate documentation was provided by Captain Ricci documenting removal of one 20,000-gallon UST on-Site on July 3, 2007.

The Lunenburg Conservation Commission did not have records of the Site, and the USEPA gave references to online databases where information was found (i.e. FRS Facility Detail Report, EPA Registry Id: 110024839237).

The Town of Lunenburg provided asbestos abatement documents.

Responses from the Town of Lunenburg School Department and Massachusetts Department of Public Health (Bureau of Environmental Health) were not received prior to the completion of this report.

4.4 Vapor Migration

ASTM E1527-13 requires the evaluation of vapor migration with respect to the surrounding properties of the Site.

Based on the lack of documented subsurface contamination on the sites hydraulically upgradient to the Site, vapor migration is not anticipated at the Site.

5.0 SITE RECONNAISSANCE

The Site reconnaissance was conducted on July 22, 2020 by Sophia Waxenberg of LiRo. Mr. John Londa (Owner's representative) provided Site access during the Site reconnaissance. The Site reconnaissance included a visual inspection / walkthrough of the Site to identify any evidence of activities or conditions that might be relevant to this assessment. The photographs from the Site reconnaissance are provided in Appendix G.

The Site limits were confirmed with a draft land survey (Existing Conditions Plan) prepared for DiGiorgio Associates, Inc. by Meridian Associates on June 12, 2020, comprising approximately 12 acres. A brief description of the Site reconnaissance observations is provided below.

Thomas C. Passios Elementary School Building

Thomas C. Passios Elementary School is a single-story building constructed in 1952 with a building footprint of approximately 55,000 square feet. The building functioned as an elementary school until approximately 2010, and is now currently used as the Lunenburg School Department HQ, as well as the Town's cable access. The building consists of mostly classroom spaces. Adjacent to the gymnasium is a crawlspace located below the mezzanine (former stage area), and a stairwell leading to a staging room above the mezzanine. An Electrical Room (Transformer Room) on the east side of the building housed unlabeled transformers and two sets of old oil-filled switchgear equipment manufactured by General Electric. One set was used for the High School, and the other was for the Passios building. Although the PCB content is unknown, dark surface staining was observed directly under both sets of switchgear. A floor drain is located about 4-5 feet away from the electrical equipment, near the blue transformers. The terminus of subsurface floor drain piping is unknown. There was no staining around the transformers.

Three gas-fired hot water boilers were located in the Boiler Room; Boiler 1 (manufactured by Viemann in 2003) is the primary boiler for the Passios building. According to Mr. Londa, one AST and two USTs (a 20,000-gal UST and 10,000-gal UST) associated with the Site were removed since the building converted to natural gas, so at the time of the Site inspection, only the former locations of the tanks were identified. Mr. Londa also confirmed a 275-gal AST was used for a modular classroom installed on the west side of the school around 1997, but was removed circa 2017. There was no immediate evidence of staining or abnormally stressed vegetation near the former location of the modular classroom and AST.

The Old Generator Room adjacent to the Boiler and Electrical Rooms contains typical hazardous storage for fluorescent bulbs, ballasts, paints, and old batteries. Mr. Londa mentioned that lead-sealed batteries used to be stored here as well.

In the back of the Boiler Room, there is evidence of old incinerators near the old oil pump switches. The incinerators are not in use. Paint peeling was observed on the interior wall associated with the brick chimney.

Three unlabeled drums were observed in Classroom 10 in the Passios building. According to the Site's representative, the drums were previously used as "line painters". Another empty and unlabeled drum was found in the same classroom, and as stated by the Site's representative, it was an old paint mixer associated with the "line painters". In the same classroom, paint cans and a Minuteman 24 Volt Automatic Battery Charger were observed.

Potential lead-based paint (peeling paint observed on several walls, specifically in the Boiler Room), PCB materials (e.g., fluorescent lighting), mold (observed on the ceiling tiles in the Janitor's Shop and Cafeteria), and potential asbestos-containing materials (floor tile/mastic and cove base/mastic in the classrooms) were observed.

"Brooks House"

This building is three-story dwelling that is currently used as an office for the Director of Facilities, as well as file storage for the Town. The building includes approximately six (6) bedrooms, a living room, a storage room on the first floor ("School Committee Conference Room"), an office area, kitchen, and two (2) bathrooms. There is also an attic room accessible from the third floor, and a full basement. There was no access to the zone control valve on the third floor, as it was boarded up. According to Mr. Londa, there was a #2 Fuel Oil 275-gal AST in the basement of the Brooks House. There was some surface staining observed at the approximate former location of the AST. The tank was removed during the house's conversion to natural gas, and there are no records of any leaks or spills associated with the tank. There were also some insect and rat poisoning products as well as paints stored in the basement, and an old fireplace that is not in use. Throughout the Brooks House, there are 8 foot fluorescent light fixtures, which could possibly contain PCBs due to age.

Exterior Inspection

The exterior portion of the Site was inspected as part of the Site reconnaissance. Stressed vegetation was observed over the approximate area where the 10,000-gal UST was located (slightly north of the generator), and the 10,000-gal and 20,000-gal USTs were most likely in the same vicinity, according to Mr. Londa. Stressed vegetation was observed near the existing soil stockpile north of the school, near a big gravel lot. The stressed area is in the shape of what could have been another adjacent soil stockpile. A large portion of the heavily wooded area in the northwest/west portion of the Site survey was inaccessible. This inaccessibility to the heavily wooded area is considered a data gap. However, a small portion of woods southwest of Entrance 3 of the Thomas C. Passios Elementary School was accessible, and no debris or garbage was observed in the area. A catch basin was observed on the west side of the Brooks House. No visual evidence of dumping was observed from the perimeter of the heavily wooded area.

The area surrounding the Site consists of educational, municipal, recreational, and residential-use buildings. The current use of the property to the north is educational (Lunenburg Middle High School, and Village Play School), to the south is municipal (Lunenburg Public Library), to the east is recreational, and to the west is residential.

The following REC was identified as a result of the 7/22/2020 Site inspection:

- Dark surface staining was observed directly under both sets of old oil-filled switchgear equipment in the Electric/Transformer Room on the east side of the building. A floor drain is located approximately 4 feet away from the electrical equipment, near the blue transformers. Since the PCB content of the surface staining and terminus of subsurface floor drain piping are unknown, potential exists for spills to reach the environment, thus it is considered a REC.

5.1 Methodology and Limiting Conditions

A visual inspection/walkthrough was conducted at the Site and the surrounding properties.

5.2 Observations

The following sections summarize the observations made during LiRo's Site reconnaissance.

5.2.1 Current Uses of the Property

The Site is primarily used by the Town of Lunenburg. Thomas C. Passios Elementary School is used as the Lunenburg School Department HQ, as well as the Town's cable access. In addition, "Brooks House" is currently used as an office for the Town's Director of Facilities and file storage.

5.2.2 Hazardous Substances and Petroleum Products in Connection with Identified Uses

At the time of the Site reconnaissance, two sets of old oil-filled switchgear equipment manufactured by General Electric were discovered near the transformers in the Electrical/Transformer Room adjacent to the Boiler Room. The potential exists for PCBs to be present in the oil filled switchgear.

5.2.2 Storage Tanks

Storage tanks were not observed during the Site reconnaissance. The former locations of the 20,000-gallon and 10,000-gallon USTs, and the 275-gallon AST associated with the modular/temporary classroom (no longer on Site) were observed.

5.2.3 Heating/Cooling

A boiler room exists within Thomas C. Passios Elementary School. Three gas-fired hot water boilers were observed, each with a different manufacturer. The primary boiler for the elementary school is the gas-fired condensing Viessmann boiler. Some window air conditioning systems were observed in the classrooms. A Smith Cast Iron gas-fired Boiler was observed in the basement of the Brooks House.

5.2.4 Drains or Pits

A floor drain was observed in the Electrical Room (adjacent to the Boiler Room) near the transformers. The Site's representative assumed it led to the old french drainage system.

5.2.6 Odor

No petroleum odor was observed on Site.

5.2.7 Pools of Liquid

No pools of liquid were observed on Site, besides small pools of water on the roof of Thomas C. Passios Elementary School due to a recent rain event.

5.2.8 Drums

Three unlabeled drums were observed in Classroom 10 in the Thomas C. Passios Elementary School. According to the Site's representative, the drums were previously used as "line painters". Another empty

and unlabeled drum was found in the same classroom, and as stated by the Site's representative, it is an old paint mixer associated with the "line painters".

5.2.9 Polychlorinated Biphenyls

Potential PCB-containing materials (e.g., fluorescent lighting, old oil-filled switchgear equipment with unknown contents) were observed during the 7/22/2020 Site reconnaissance.

5.2.10 Surface Depressions, Ponds, and Lagoons

No surface depressions, ponds, or lagoons were observed during the 7/22/2020 Site reconnaissance.

5.2.11 Stained Soil or Pavement

Stained pavement was observed in Thomas C. Passios Elementary School's electrical (transformer) room during the 7/22/2020 Site reconnaissance.

5.2.12 Stressed Vegetation

Stressed vegetation was observed near the former location of the Passios School's USTs, as well as stressed vegetation near the existing soil stockpile north of the school, near a big gravel lot during the 7/22/2020 Site reconnaissance. The latter is in the shape of what could have been another adjacent soil stockpile.

5.2.13 Solid Waste

Solid waste was not observed during the 7/22/2020 Site reconnaissance.

5.2.14 Wastewater

According to the Site contact, the building originally discharged to a septic system, but most of the system has since been removed. No evidence was provided to document if prior subsurface septic systems were previously removed. The Passios building's sewer piping has been connected to the town municipal sewers since 2005, and is serviced with water underground from the Town of Lunenburg Water District's main line. No odors were observed.

5.2.15 Wells

No wells were observed during the 7/22/2020 Site reconnaissance.

5.2.16 Suspect Asbestos Containing Materials (ACM)

Potential ACM such as floor tile/mastic and cove base/mastic were observed throughout the classrooms in the Passios School during the 7/22/2020 Site reconnaissance.

5.2.17 Suspect Lead-Based Paint

Potential lead-based paint (peeling paint on several walls) was observed in the Boiler Room in the Passios School during the 7/22/2020 Site reconnaissance.

6.0 INTERVIEWS AND QUESTIONNAIRE

As part of this Phase I ESA, LiRo conducted an interview regarding the Site's historical operations and potential environmental concerns relative to the Site. Additionally, LiRo provided a questionnaire to the User (Town of Lunenburg) for completion.

6.1 Interview

LiRo conducted an interview with John Londa, the Town of Lunenburg's Director of Facilities since 1998, and the Owner's representative. Mr. Londa indicated knowledge of the presence of potential ACM throughout the Passios School, as well as fluorescent light fixtures and containers of typical hazardous waste (paint, batteries, and ballasts). He mentioned that there have been two USTs in the past (one 20,000-gallon UST, and one 10,000-gallon UST), and stated that a #4 Fuel Oil spill occurred on-Site circa 1980's. He did not have any records of the 10,000-gallon UST or the oil spill associated with it. Mr. Londa also indicated there were old oil-filled switchgear equipment in the electrical/transformer room, but he was unsure if PCBs were present. Mr. Londa noted that the Boiler Room drainage was not connected to sewer or septic service, so there is possible contamination over 70 years of use; however, this cannot be verified. No other environmental concerns related to the Site were discussed.

6.2 User Questionnaire

LiRo provided the User Questionnaire to Mr. Londa for completion. A copy of the completed questionnaire is provided in Appendix H. Mr. Londa did not indicate any environmental concerns related to the Site other than the oil spill discussed during the interview.

7.0 FINDINGS AND CONCLUSIONS

Recognized Environmental Condition (REC)

Based on the information evaluated during this Phase I ESA, LiRo identified the following REC associated with the Site:

- Site Reconnaissance – Dark surface staining was observed directly under both sets of old oil-filled switchgear equipment in the electric/transformer room on the east side of the building. A floor drain is located approximately 4 feet away from the electrical equipment, near the blue transformers. Since the PCB content of the oil filled switchgear/surface staining and terminus of subsurface floor drain piping are unknown, potential exists for spills to reach the environment, thus it is considered a REC.

Controlled Recognized Environmental Condition (CREC)

Based on the information gathered during the Phase I ESA, no CRECs were identified in association with the Site.

Historical Recognized Environmental Condition (HREC)

Based on the information gathered during this Phase I ESA, LiRo identified the following HRECs associated with the Site:

- Historical Spills – Two separate but related #4 fuel oil spills resulting from overflow of 10,000 gallon and 20,000 gallon USTs occurred on-Site on March 5, 1987. Per interviews with Mr. John Londa, Director of Facilities, Captain James Ricci, Captain of Lunenburg Fire Department (Fire Prevention), a 2013 Phase I ESA prepared by Lord Associates, Inc., and information provided by MassDEP, the 10,000 gallon UST was removed on April 24, 1987 by Zecco, Inc and the 20,000 gallon was removed on July 3, 2007 by D B Environmental. According to data provided to LiRo by MassDEP, both historic oil spills were reported as closed in the agency's regulatory database, and are thus considered an HREC.

Although technically not defined as a REC, the following may pose potential environmental considerations to the Site:

- Records obtained from the Town of Lunenburg regarding asbestos abatements performed at the Site, as well as the Site's presence in the ASBESTOS database in the EDR, indicate that the likeliness of asbestos-containing materials on-Site presents an environmental consideration for any demolition or renovation plans for the property.

LiRo identified the following data gaps that might affect the evaluation of RECs associated with the Site.

- Responses to the FOIL requests are pending from the Town of Lunenburg School Department and Massachusetts Department of Public Health (Bureau of Environmental Health). If any pertinent information is provided in these responses, LiRo will prepare an addendum summarizing these findings.

8.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of this part.

We possess the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

The Qualifications for the following Environmental Professionals is included Appendix I.

Report Prepared By:

Sophia Waxenberg

Sophia Waxenberg
Environmental Engineer

Report Reviewed By:

Joshua Levine, P.E.
Senior Associate Vice President

9.0 REFERENCES

1079 Massachusetts Avenue – Existing Conditions Plan Located In Lunenburg, Massachusetts (Worcester County) Prepared for DiGiorgio Associates, Inc. Meridian Associates, Draft 6/12/2020.

Allmendinger, Richard and Schneider, William. "Interim surficial geologic map of the Shirley Quadrangle, Massachusetts." USGS Numbered Series, Open-File Report 76-388, 1976.

ASTM International, 2013. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process - E1527-13 (ASTM E1527-13)

ATC Group Services, LLC. *Asbestos 3-Year Re-inspection Report and Updated Management Plan.* Woburn, MA. May 15, 2019.

Environmental Data Resources, Inc. *The EDR Radius Map Report with GeoCheck.* Inquiry No.: 6122043.2s, dated July 15, 2020.

Environmental Data Resources, Inc. *The EDR Aerial Photo Decade Package.* Inquiry No.: 6122043.8, dated July 15, 2020.

Environmental Data Resources, Inc. *EDR Historical Topographic Map Report.* Inquiry No.: 6122043.4, dated July 15, 2020.

Environmental Data Resources, Inc. *The Sanborn Fire Insurance Maps.* Inquiry No.: 6122043.3, dated July 15, 2020.

Environmental Data Resources, Inc. *The EDR-City Directory Image Report.* Inquiry No.: 6122043.5, dated July 16, 2020.

Lord Associates Inc. *Phase I Environmental Assessment for 1025 and 1079 Massachusetts Avenue, Lunenburg, MA.* Norwood, MA. April 15, 2013.

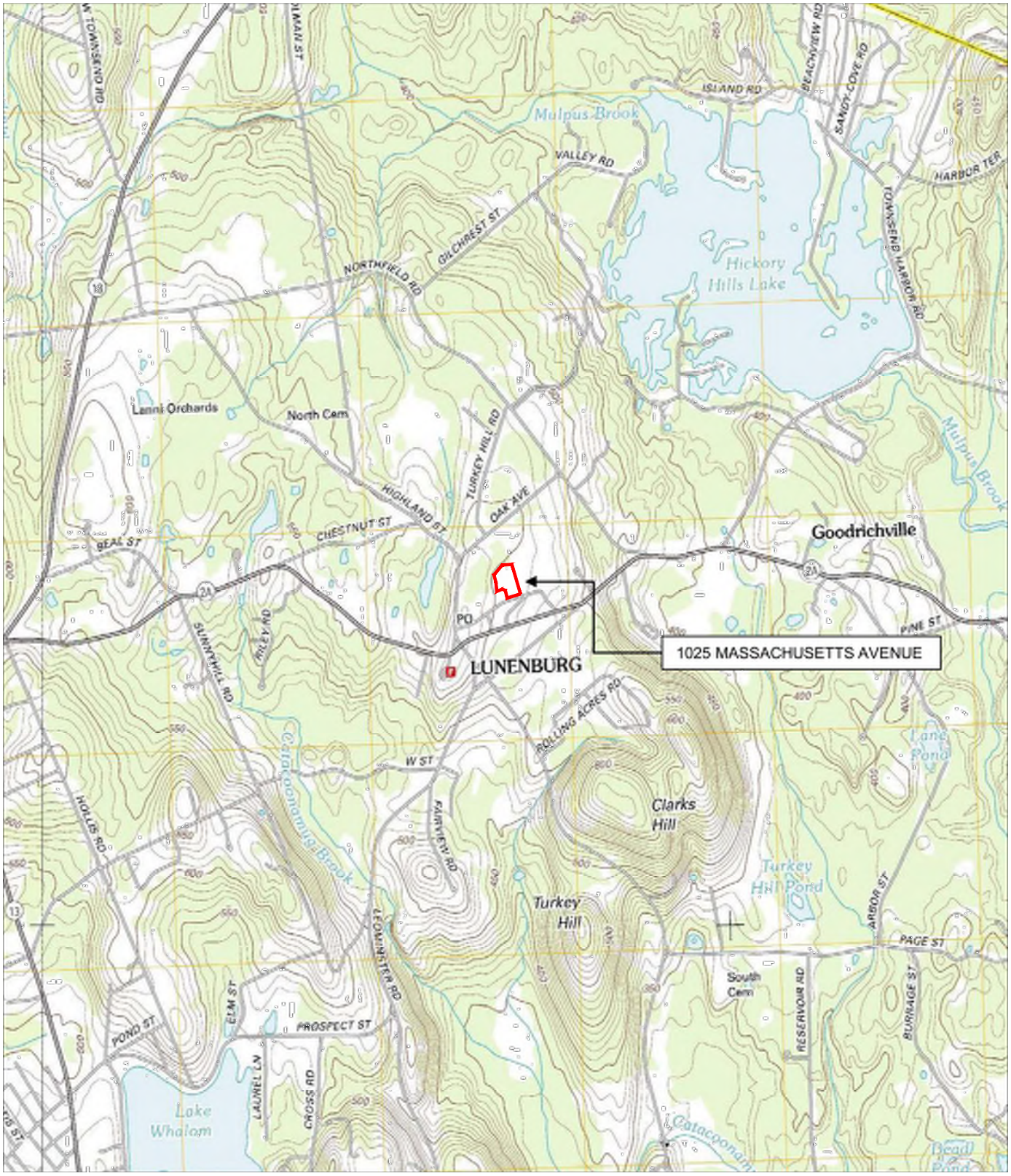
The Vertex Companies, Inc. *Thomas C. Passios Elementary School Property Condition Assessment.* Weymouth, MA. February 6, 2018.

Unites States Geological Survey (USGS). "Paxton Formation." Web page < https://mrdata.usgs.gov/geology/state/sgmc2-unit.php?unit=MASp;0>.

United States Geological Survey (USGS). "Groundwater levels for the Nation: USGS 423605071431701 MA-L4W 78." Web page < https://nwis.waterdata.usgs.gov/usa/nwis/gwlevels/?site_no=423605071431701>.

Wright-Pierce. *Town of Lunenburg, Massachusetts Comprehensive Wastewater Management Plan*. Phase IV Final Recommended Wastewater Management Plan, pp. 1-297, March 2010.

FIGURES



SOURCE: USGS 2012 SHIRLEY & 2012 FITCHBURG QUADRANGLES

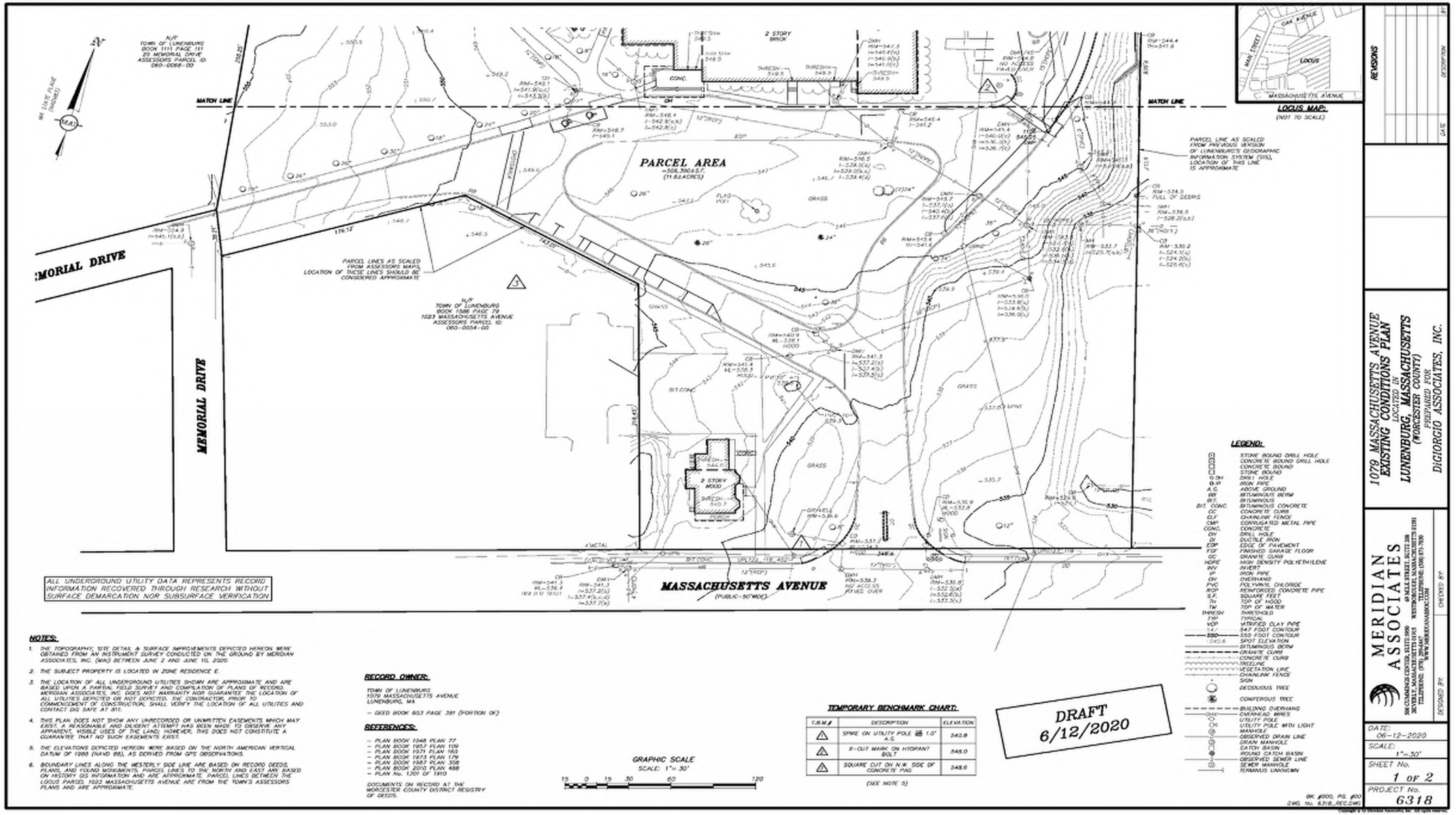
LiRo Engineers
100 Duffy Avenue Suite 402
Hicksville, NY 11801
516.583.2900 (P)

1025 MASSACHUSETTS AVENUE
LUNENBURG, MASSACHUSETTS 01462

SITE LOCATION MAP

DATE: 07/28/2020

FIGURE 1



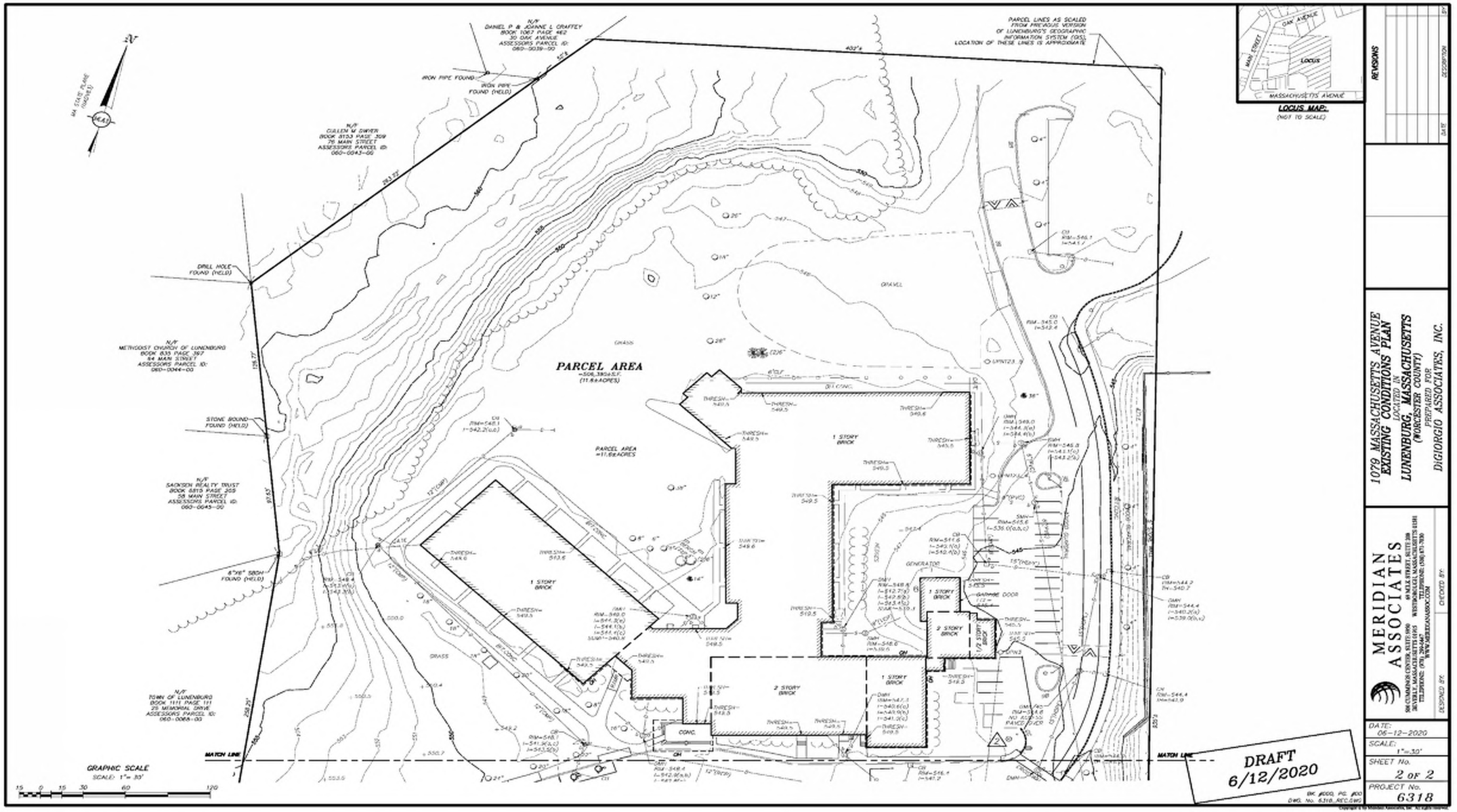
SOURCE: MERIDIAN ASSOCIATES

LiRo Engineers
100 Duffy Avenue Suite 402
Hicksville, NY 11801
516.393.2900 (P)

1025 MASSACHUSETTS AVENUE
LUNENBURG, MASSACHUSETTS 01462

SITE SURVEY PAGE 1

DATE:
07/30/2020
FIGURE
2



REVISIONS

BY	DESCRIPTION	DATE

1079 MASSACHUSETTS AVENUE
EXISTING CONDITIONS PLAN
LOCATED IN
LUNENBURG, MASSACHUSETTS
(WORCESTER COUNTY)
PREPARED FOR
DIGIORGIO ASSOCIATES, INC.

MERIDIAN ASSOCIATES
306 CHAMPION CENTER, SUITE 1900
285 VOLEY, MASSACHUSETTS 01915
TELEPHONE: (978) 256-6447
WWW.MERIDIANASSOC.COM
WESTBOROUGH, MASSACHUSETTS 01581
TELEPHONE: (508) 871-7010

DESIGNED BY:
CHECKED BY:

DATE: 06-12-2020
SCALE: 1"=30'
SHEET No. 2 OF 2
PROJECT No. 6318

BK. #000, PG. #00
DWG. No. 6318_REC.DWG

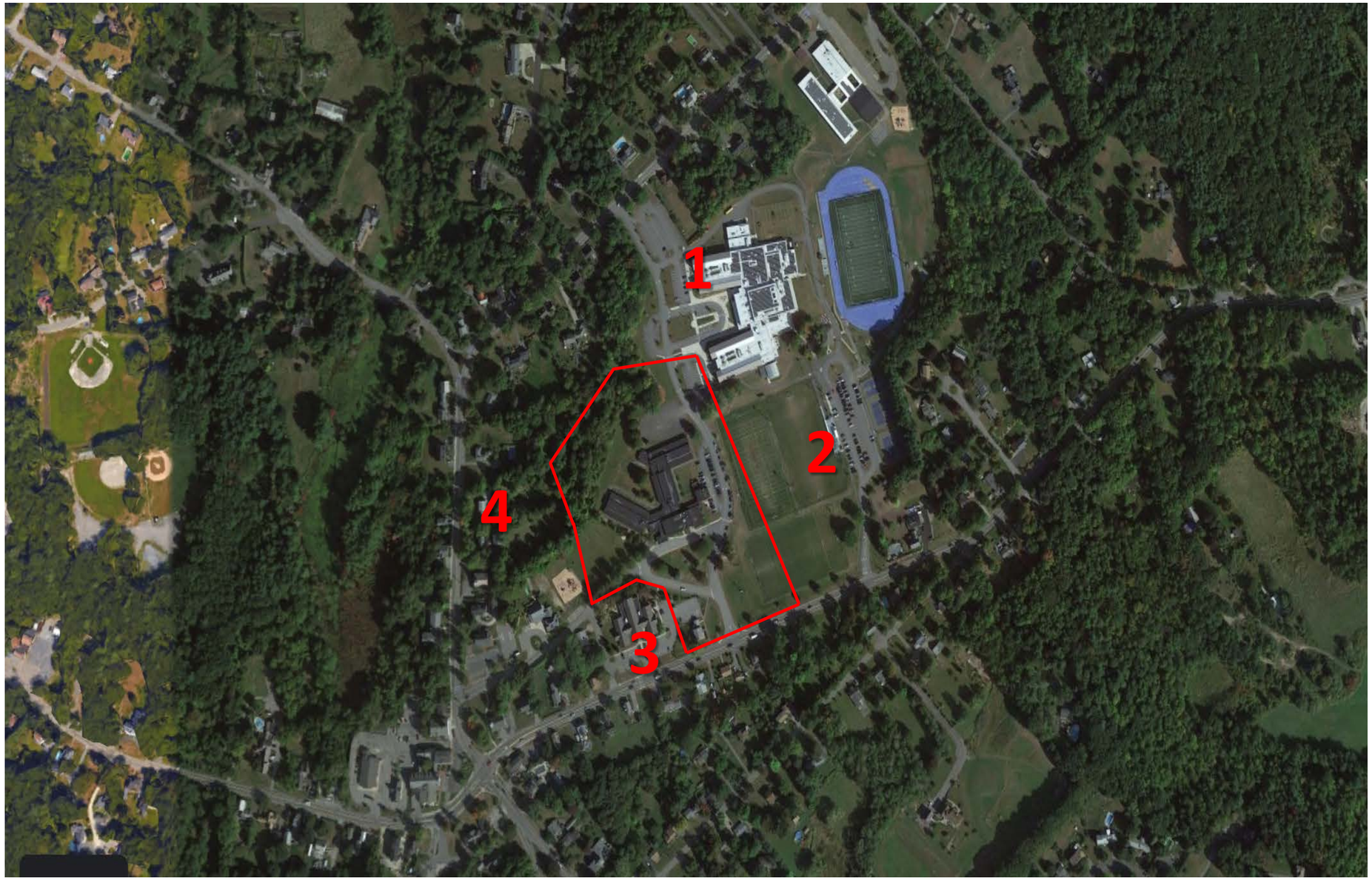
SOURCE: MERIDIAN ASSOCIATES

LiRo Engineers
100 Duffy Avenue Suite 402
Hicksville, NY 11801
516.393.2900 (P)

1025 MASSACHUSETTS AVENUE
LUNENBURG, MASSACHUSETTS 01462

SITE SURVEY PAGE 2

DATE: 07/30/2020
FIGURE 2



LEGEND

- PROJECT SITE BOUNDARY
- 1 — LUNENBURG MIDDLE/HIGH SCHOOL
- 2 — ATHLETIC FIELDS
- 3 — LUNENBURG PUBLIC LIBRARY
- 4 — RESIDENTIAL HOMES AND MAIN STREET

SOURCE: Google Earth

LiRo Engineers
100 Duffy Avenue Suite 402
Hicksville, NY 11801
516.393.2900 (P)

1025 MASSACHUSETTS AVENUE
LUNENBURG, MASSACHUSETTS 01462

SURROUNDING PROPERTY USAGE MAP

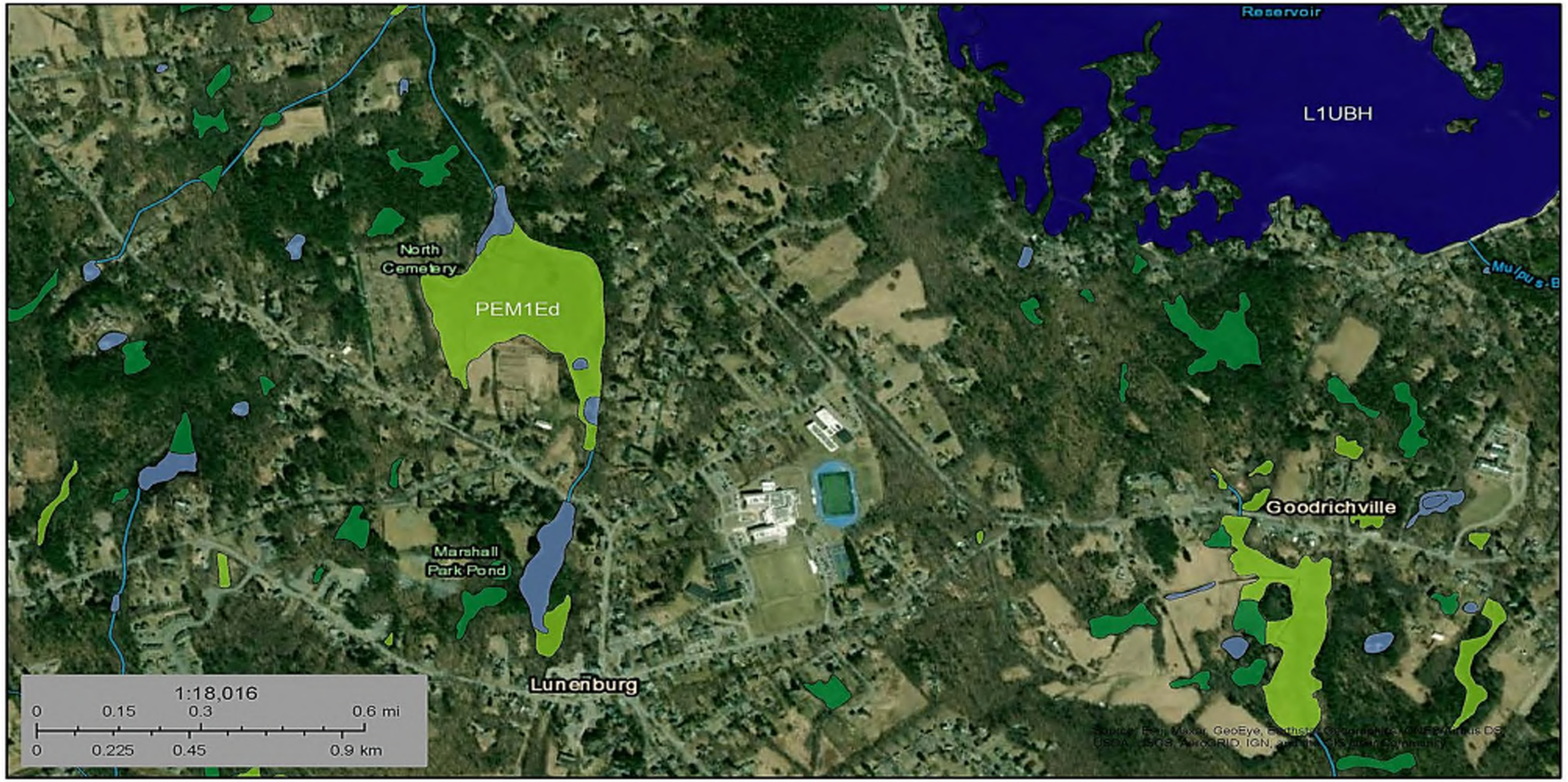
DATE: 07/30/2020

FIGURE 3

U.S. Fish and Wildlife Service

National Wetlands Inventory

National Wetlands Inventory - Site Map



July 20, 2020

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

SOURCE: U.S. FISH AND WILDLIFE SERVICE – NATIONAL WETLANDS INVENTORY

LiRo Engineers
100 Duffy Avenue Suite 402
Hicksville, NY 11801
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1025 MASSACHUSETTS AVENUE
LUNENBURG, MASSACHUSETTS 01462

MASSACHUSETTS STATE WETLANDS MAP

DATE: 07/30/2020

FIGURE 4

APPENDICES

Appendix A

Radius Report

Thomas C. Passios Elementary School
1025 Massachusetts Ave
Lunenburg, MA 01462

Inquiry Number: 6122043.2s
July 15, 2020

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1025 MASSACHUSETTS AVE
LUNENBURG, MA 01462

COORDINATES

Latitude (North):	42.5974550 - 42° 35' 50.83''
Longitude (West):	71.7218840 - 71° 43' 18.78''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	276687.5
UTM Y (Meters):	4719491.5
Elevation:	546 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5646215 SHIRLEY, MA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140712
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
1025 MASSACHUSETTS AVE
LUNENBURG, MA 01462

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	PASSIOS ELEMENTARY S	1025 MASS. AVE.	ASBESTOS		TP
A2	PASSIOS ELEMENTARY S	1025 MASSACHUSETTS A	ASBESTOS		TP
A3	PASSIOS ELEMENTARY S	1025 MASSACHUSETTS A	HW GEN		TP
A4	PASSIOS ELEMENTARY S	1025 MASSACHUSETTS A	ASBESTOS		TP
A5	PASSIOS ELEMENTARY S	1025 MASS AVE	ASBESTOS		TP
A6	PASSIOS ELEMENTARY S	1025 MASSACHUSETTS A	FINDS		TP
A7	PASSIOS ELEMENTARY S	1025 MASS AVE	ASBESTOS		TP
A8	PASSIOS ELEMENTARY S	1025 MASS AVE	ASBESTOS		TP
A9	PASSIOS ELEMENTARY S	1025 MASSACHUSETTS A	ASBESTOS		TP
A10	PASSIOS ELEMENTARY S	1025 MASS AVE	ASBESTOS		TP
A11	PASSIOS ELEMENTARY S	1025 MASS AVE	ASBESTOS		TP
A12	PASSIOS ELEMENTARY S	1025 MASSACHUSETTS A	ASBESTOS		TP
A13	PASSIOS ELEMENTARY S	1025 MASS AVE	ASBESTOS		TP
B14	TOWN OF LUNENBURG FI	7 SCHOOL ST	UST	Higher	1216, 0.230, SW
B15			AST	Higher	1234, 0.234, SW
16	L & M SERVICE CENTER	925 MASSACHUSETTS AV	LUST, UST, RELEASE, ENF, Financial Assurance	Lower	1334, 0.253, SW
17	ROBINSON RESIDENCE	65 ROLLING ACRES RD	SHWS, RELEASE	Lower	1799, 0.341, SSE
18	CHASE RD	1 NORTHFIELD RD	SHWS, RELEASE	Lower	2083, 0.395, ENE
19	TRANSFORMER MODF REL	870 MASSACHUSETTS AV	SHWS, RELEASE	Lower	2224, 0.421, WSW
20	ARCIPRETE RESIDENCE	287 NORTHFIELD RD	SHWS, RELEASE	Lower	3284, 0.622, North
21	TOWNSEND HARBOR RD P	79 TOWNSEND HARBOR R	SHWS, RELEASE	Lower	3934, 0.745, ENE
22	HICKORY HILLS LAKE	52 BIRCH ISLAND WAY	SHWS, LAST, RELEASE	Lower	4568, 0.865, NE
23	LUNENBERG FIRE DEPAR	655 MASSACHUSETTS AV	SHWS, RELEASE	Higher	4699, 0.890, West

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
PASSIOS ELEMENTARY S 1025 MASS. AVE. LUNENBURG, MA	ASBESTOS	N/A
PASSIOS ELEMENTARY S 1025 MASSACHUSETTS A LUNENBURG, MA	ASBESTOS	N/A
PASSIOS ELEMENTARY S 1025 MASSACHUSETTS A LUNENBURG, MA 01462	HW GEN State Generator Status: VQG-MA EPA Id: MV9785824105	N/A
PASSIOS ELEMENTARY S 1025 MASSACHUSETTS A LUNENBURG, MA	ASBESTOS	N/A
PASSIOS ELEMENTARY S 1025 MASS AVE LUNENBURG, MA	ASBESTOS	N/A
PASSIOS ELEMENTARY S 1025 MASSACHUSETTS A LUNENBURG, MA 01462	FINDS Registry ID:: 110024839237	N/A
PASSIOS ELEMENTARY S 1025 MASS AVE LUNENBURG, MA	ASBESTOS	N/A
PASSIOS ELEMENTARY S 1025 MASS AVE LUNENBURG, MA	ASBESTOS	N/A
PASSIOS ELEMENTARY S 1025 MASSACHUSETTS A LUNENBURG, MA	ASBESTOS	N/A
PASSIOS ELEMENTARY S 1025 MASS AVE LUNENBURG, MA	ASBESTOS	N/A
PASSIOS ELEMENTARY S 1025 MASS AVE LUNENBURG, MA	ASBESTOS	N/A

PASSIOS ELEMENTARY S 1025 MASSACHUSETTS A LUNENBURG, MA	ASBESTOS	N/A
PASSIOS ELEMENTARY S 1025 MASS AVE LUNENBURG, MA	ASBESTOS	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---- Land Use Control Information System
US ENG CONTROLS ---- Engineering Controls Sites List
US INST CONTROLS ---- Institutional Controls Sites List

Federal ERNS list

ERNS ---- Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---- Solid Waste Facility Database/Transfer Stations

State and tribal leaking storage tank lists

LAST ---- Leaking Aboveground Storage Tank Sites
INDIAN LUST ---- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ---- Underground Storage Tank Listing
INDIAN UST ---- Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

INST CONTROL ---- Sites With Activity and Use Limitation

State and tribal voluntary cleanup sites

INDIAN VCP ---- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ---- Completed Brownfields Covenants Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands
ODI ---- Open Dump Inventory
DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---- Delisted National Clandestine Laboratory Register
US CDL ---- National Clandestine Laboratory Register

PFAS ..... PFAS Contaminated Sites Listing

Local Land Records

LIENS ..... Liens Information Listing
LIENS 2 ..... CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
SPILLS ..... Historical Spill List
RELEASE ..... Reportable Releases Database
SPILLS 90 ..... SPILLS 90 data from FirstSearch
SPILLS 80 ..... SPILLS 80 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR ..... RCRA - Non Generators / No Longer Regulated
FUDS ..... Formerly Used Defense Sites
DOD ..... Department of Defense Sites
SCRD DRYCLEANERS ..... State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ..... Financial Assurance Information
EPA WATCH LIST ..... EPA WATCH LIST
2020 COR ACTION ..... 2020 Corrective Action Program List
TSCA ..... Toxic Substances Control Act
TRIS ..... Toxic Chemical Release Inventory System
SSTS ..... Section 7 Tracking Systems
ROD ..... Records Of Decision
RMP ..... Risk Management Plans
RAATS ..... RCRA Administrative Action Tracking System
PRP ..... Potentially Responsible Parties
PADS ..... PCB Activity Database System
ICIS ..... Integrated Compliance Information System
FTTS ..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ..... Material Licensing Tracking System
COAL ASH DOE ..... Steam-Electric Plant Operation Data
COAL ASH EPA ..... Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ..... PCB Transformer Registration Database
RADINFO ..... Radiation Information Database
HIST FTTS ..... FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ..... Incident and Accident Data
CONSENT ..... Superfund (CERCLA) Consent Decrees
INDIAN RESERV ..... Indian Reservations
FUSRAP ..... Formerly Utilized Sites Remedial Action Program
UMTRA ..... Uranium Mill Tailings Sites
LEAD SMELTERS ..... Lead Smelter Sites
US AIRS ..... Aerometric Information Retrieval System Facility Subsystem
US MINES ..... Mines Master Index File
ABANDONED MINES ..... Abandoned Mines
DOCKET HWC ..... Hazardous Waste Compliance Docket Listing
UXO ..... Unexploded Ordnance Sites
ECHO ..... Enforcement & Compliance History Information
FUELS PROGRAM ..... EPA Fuels Program Registered Listing
AIRS ..... Permitted Facilities Listing

DRYCLEANERS Regulated Drycleaning Facilities
ENF Enforcement Action Cases
Financial Assurance Financial Assurance Information Listing
GWDP Ground Water Discharge Permits
MERCURY Mercury Product Recyling Drop-Off Locations Listing
NPDES NPDES Permit Listing
TIER 2 Tier 2 Information Listing
TSD TSD Facility
UIC Underground Injection Control Listing
MINES MRDS Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historical Auto Stations
EDR Hist Cleaner EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS Recovered Government Archive State Hazardous Waste Facilities List
RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent CERCLIS

SHWS: Contains information on releases of oil and hazardous materials that have been reported to DEP.

A review of the SHWS list, as provided by EDR, and dated 06/24/2020 has revealed that there are 7 SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LUNENBERG FIRE DEPAR	***655 MASSACHUSETTS AV***	***W 1/2 - 1 (0.890 mi.)***	***23***	***60***

Release Tracking Number: 2-0017280
Current Status: RAO

Lower Elevation	Address	Direction / Distance	Map ID	Page
ROBINSON RESIDENCE	***65 ROLLING ACRES RD***	***SSE 1/4 - 1/2 (0.341 mi.)***	***17***	***32***
Release Tracking Number: 2-0013855 Current Status: RAO				
CHASE RD	***1 NORTHFIELD RD***	***ENE 1/4 - 1/2 (0.395 mi.)***	***18***	***36***
Release Tracking Number: 2-0011552 Current Status: RAO				
TRANSFORMER MODF REL	***870 MASSACHUSETTS AV***	***WSW 1/4 - 1/2 (0.421 mi.)***	***19***	***37***
Release Tracking Number: 2-0018514 Current Status: RAO				
ARCIPRETE RESIDENCE	***287 NORTHFIELD RD***	***N 1/2 - 1 (0.622 mi.)***	***20***	***39***
Release Tracking Number: 2-0016516 Current Status: RAO				
TOWNSEND HARBOR RD P	***79 TOWNSEND HARBOR R***	***ENE 1/2 - 1 (0.745 mi.)***	***21***	***46***
Release Tracking Number: 2-0000084 Current Status: RAO				
HICKORY HILLS LAKE	***52 BIRCH ISLAND WAY***	***NE 1/2 - 1 (0.865 mi.)***	***22***	***48***
Release Tracking Number: 2-0016276 Current Status: RAO				

State and tribal leaking storage tank lists

LUST: Sites within the Releases Database that have a UST listed as its source.

A review of the LUST list, as provided by EDR, and dated 06/24/2020 has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
L & M SERVICE CENTER	***925 MASSACHUSETTS AV***	***SW 1/4 - 1/2 (0.253 mi.)***	***16***	***23***
Release Tracking Number / Current Status: 2-0016390 / TIER1D				

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Protection's Summary Listing of all the Tanks Registered in the State of Massachusetts.

A review of the UST list, as provided by EDR, and dated 01/06/2020 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TOWN OF LUNENBURG FI	7 SCHOOL ST	SW 1/8 - 1/4 (0.230 mi.)	B14	21
Tank Status: Tank Removed				

EXECUTIVE SUMMARY

Facility Id: 16660

AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Protection's Summary Listing of all the Tanks Registered in the State of Massachusetts.

A review of the AST list, as provided by EDR, has revealed that there is 1 AST site within approximately 0.25 miles of the target property.

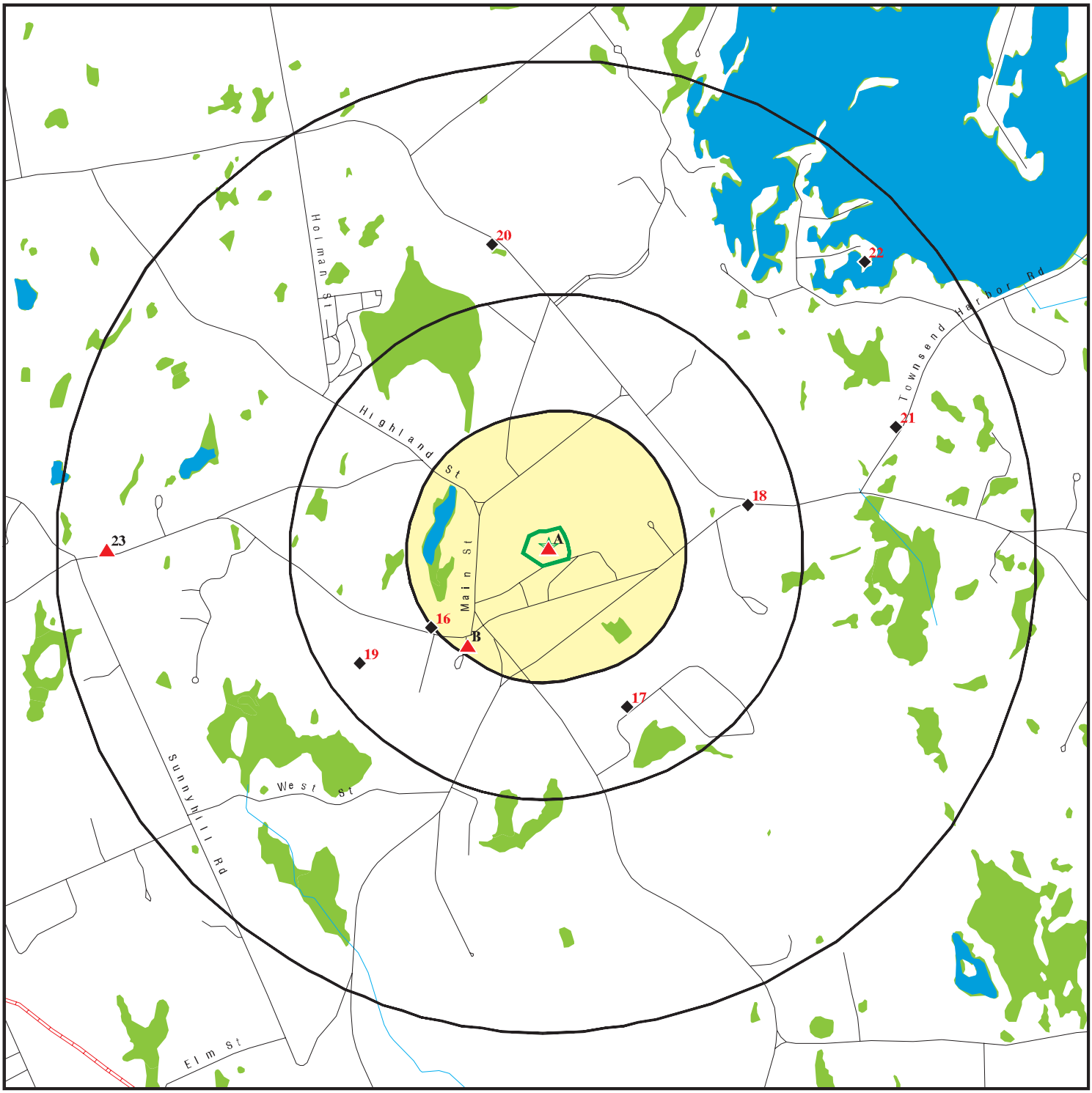
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported		SW 1/8 - 1/4 (0.234 mi.)	B15	22
Database: AST, Date of Government Version: 02/18/2020				
Release Tracking Number: 22321				

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 4 records.

Site Name	Database(s)
ROADWAY RELEASE	SHWS, RELEASE
HYDRAULIC OIL TO ROADWAY	SHWS, RELEASE
LAFARGE BLDG MATERIALS	SHWS, RELEASE
NO LOCATION AID	SHWS, RELEASE

OVERVIEW MAP - 6122043.2S



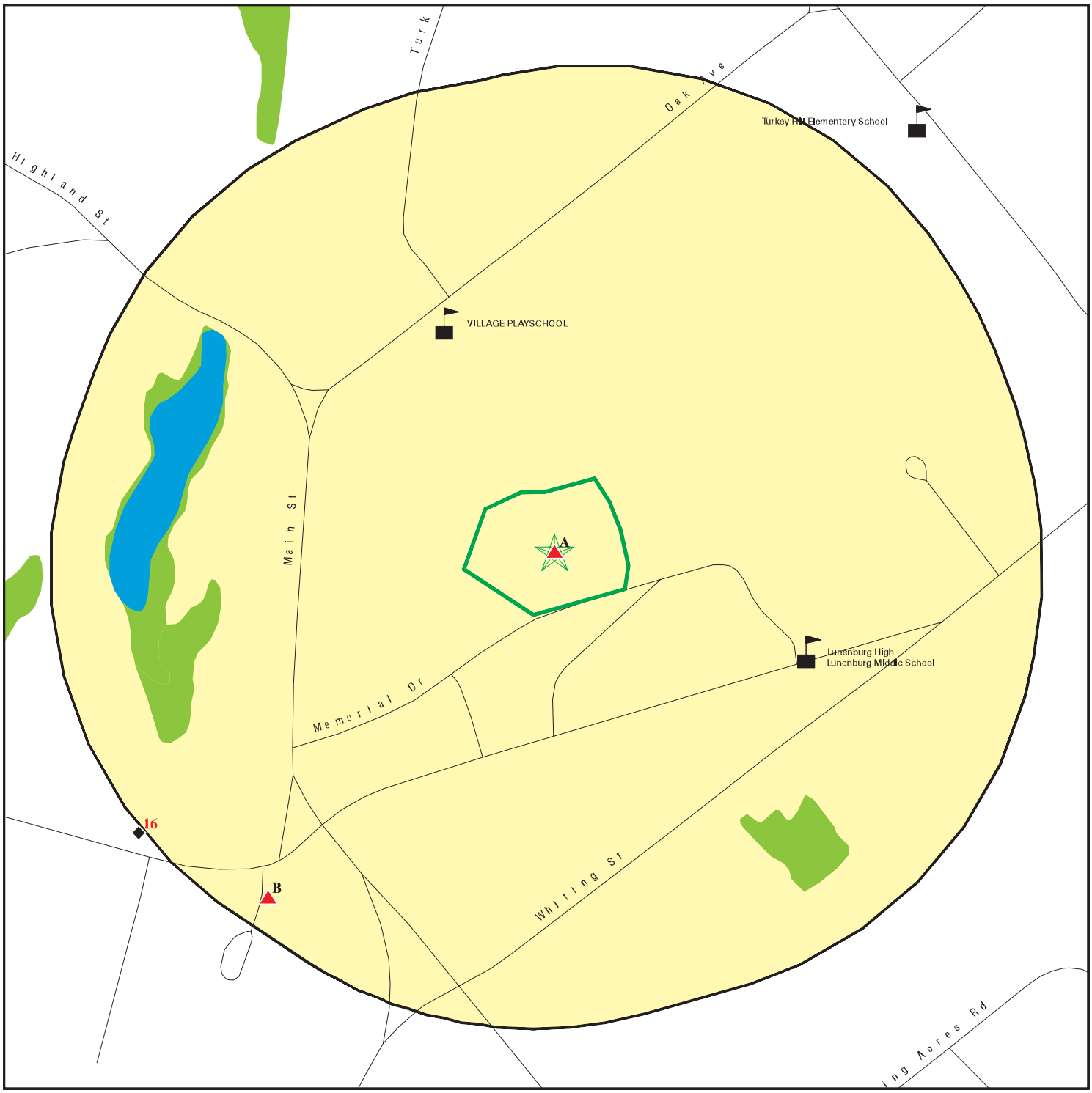
0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Pipelines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Critical Environmental Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Thomas C. Passios Elementary School	CLIENT:	The LiRo Group
ADDRESS:	1025 Massachusetts Ave Lunenburg MA 01462	CONTACT:	Sophia Waxenberg
		INQUIRY #:	6122043.2s
LAT/LONG:	42.597455 / 71.721884	DATE:	July 15, 2020 10:32 am

DETAIL MAP - 6122043.2S



Target Property
Sites at elevations higher than or equal to the target property
Sites at elevations lower than the target property
Manufactured Gas Plants
Sensitive Receptors
National Priority List Sites
Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA
Special Flood Hazard Area (1%)
0.2% Annual Chance Flood Hazard
National Wetland Inventory
State Wetlands

Areas of Critical Environmental Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Thomas C. Passios Elementary School	CLIENT:	The LiRo Group
ADDRESS:	1025 Massachusetts Ave Lunenburg MA 01462	CONTACT:	Sophia Waxenberg
LAT/LONG:	42.597455 / 71.721884	INQUIRY #:	6122043.2s
		DATE:	July 15, 2020 10:34 am

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS	1.000		0	0	3	4	NR	7
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	1	NR	NR	1
LAST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST	0.250		0	1	NR	NR	NR	1
AST	0.250		0	1	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
RELEASE	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
SPILLS 80	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP	1	NR	NR	NR	NR	NR	1
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
ASBESTOS	TP	11	NR	NR	NR	NR	NR	11
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
GWDP	TP		NR	NR	NR	NR	NR	0
HW GEN	0.250	1	0	0	NR	NR	NR	1
MERCURY	0.500		0	0	0	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
TIER 2	TP		NR	NR	NR	NR	NR	0
TSD	0.500		0	0	0	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		13	0	2	4	4	0	23

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
Target
Property

PASSIOS ELEMENTARY SCHOOL
1025 MASS. AVE.
LUNENBURG, MA

ASBESTOS **S122962754**
N/A

Site 1 of 13 in cluster A

Actual:
546 ft.

ASBESTOS:

Name:	PASSIOS ELEMENTARY SCHOOL
Address:	1025 MASS. AVE.
City,State,Zip:	LUNENBURG, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	09/27/2002
End Date:	09/30/2002
Date Entered:	Not reported
Entry Date:	09/13/2002
Quantity Materical Removed SF:	85.00
Quantity Material Removed LF:	2.00
Project Description:	CORRUGATED PIPE
AR Tracking ID:	7016
Super Lic Number:	AS033137
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	2002
Sticker Number:	762603
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	(978) 582-4700
Sub Town:	Not reported
Worksite:	CLOSET
Occupied:	-1
Contractor:	AC000362
Contract Type:	Not reported
Hours:	8 a.m. start
Project Type:	OTHER
Abatement Process:	FULL CONTAINMENT
Location:	INDOORS
Decon Process:	MINI SEAL"
Disposal Methods:	WET 2 PLY POLY BAG WITH DUMPSTER
Facility Usage:	SCHOOL
Waiver Given:	0
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	-1
Owner Name:	PASSIOS ELEMENTARY SCHOOL
Owner Address:	1025 MASS. AVE.
Owner City:	LUNENBURG
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	10000
Transporter Name:	ACS ENVIRONMENTAL SERVICES
Transporter Address:	2 INDUSTRIAL WAY
Transporter City:	SALEM
Transporter State:	NH

PASSIOS ELEMENTARY SCHOOL (Continued) **S122962754**

Final Site:	41
Certified Name:	FRANK BALOGH
Cert Sign Date:	09/12/2002
Certified Company:	Not reported
Certified Phone:	(603) 898-9472
Entered_by:	Not reported

A2 Target Property **PASSIOS ELEMENTARY SCHOOL**
1025 MASSACHUSETTS AVE
LUNENBURG, MA

ASBESTOS **S122899755**
N/A

Site 2 of 13 in cluster A

Actual: 546 ft.

ASBESTOS:

Name:	PASSIOS ELEMENTARY SCHOOL
Address:	1025 MASSACHUSETTS AVE
City,State,Zip:	LUNENBURG, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/18/2005
End Date:	06/30/2005
Date Entered:	Not reported
Entry Date:	06/07/2005
Quantity Materical Removed SF:	.00
Quantity Material Removed LF:	5.00
Project Description:	Spr
AR Tracking ID:	54532
Super Lic Number:	AS032756
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000152
Year:	2005
Sticker Number:	100018379
Form Type:	ANF-001
Fee Status:	Exempt
Facility Phone:	9785824105
Sub Town:	Not reported
Worksite:	PASSIOS E. SCHOOL
Occupied:	0
Contractor:	AC000328
Contract Type:	WRITTEN
Hours:	Week days: 7:30AM-4PM Week end: 8AM-4PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain
Location:	Indoors
Decon Process:	FULL CONTAINMENT, THREE CHAMBER DECON
Disposal Methods:	THROROUGHLY WETTED MATERIAL WILL BE DOUBLE BAGGED IN 6M POLY AND LABELED
Facility Usage:	ELEMENTARY SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	5
Owner Name:	LUNENBURG PUBLIC SCHOOLS
Owner Address:	1033 MASSACHUSETTS AVE.
Owner City:	LUNENBURG, MA
Owner State:	MA
On Site Manager Name:	JOHN LONDA

PASSIOS ELEMENTARY SCHOOL (Continued) **S122899755**

On Site Manager Phone:	978-582-4100
Ins Comp:	N/A
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	R.M. TECHNOLOGIES, INC
Transporter Address:	500 CANAL STREET
Transporter City:	LAWRENCE
Transporter State:	Not reported
Final Site:	47
Certified Name:	YAKAIRA INOA
Cert Sign Date:	06/07/2005
Certified Company:	R.M. TECHNOLOGIES, INC
Certified Phone:	9787940006
Entered_by:	Not reported

A3 **PASSIOS ELEMENTARY SCHOOL** **HW GEN** **S112560287**
Target **1025 MASSACHUSETTS AVE** **N/A**
Property **LUNENBURG, MA 01462**

Site 3 of 13 in cluster A

Actual: **546 ft.**

HW GEN:

Name:	PASSIOS ELEMENTARY SCHOOL
Address:	1025 MASSACHUSETTS AVE
City,State,Zip:	LUNENBURG, MA 01462
EPA Id:	MV9785824105
RCRA Generator Status:	VSQG
State Generator Status:	VQG-MA

A4 **PASSIOS ELEMENTARY SCHOOL** **ASBESTOS** **S122904045**
Target **1025 MASSACHUSETTS AVENUE** **N/A**
Property **LUNENBURG, MA**

Site 4 of 13 in cluster A

Actual: **546 ft.**

ASBESTOS:

Name:	PASSIOS ELEMENTARY SCHOOL
Address:	1025 MASSACHUSETTS AVENUE
City,State,Zip:	LUNENBURG, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/23/2013
End Date:	01/03/2014
Date Entered:	Not reported
Entry Date:	10/04/2013
Quantity Materical Removed SF:	.00
Quantity Material Removed LF:	20.00
Project Description:	Spr,Trwl
AR Tracking ID:	180105
Super Lic Number:	AS070247
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	2013
Sticker Number:	100186722

PASSIOS ELEMENTARY SCHOOL (Continued) **S122904045**

Form Type:	ANF-001
Fee Status:	Exempt
Facility Phone:	9785824105
Sub Town:	Not reported
Worksite:	PASSIOS ELEMENTARY SCHOOL
Occupied:	-1
Contractor:	AC000254
Contract Type:	WRITTEN
Hours:	Week days: 7AM-5PM Week end:
Project Type:	Renv
Abatement Process:	Glv,Clnp,Encp,MINI-CONTAINMENT
Location:	Indoors
Decon Process:	REMOTE AND/OR CONTIGUOUS THREE STAGE DECONTAMINATION UNIT W/SHOWER
Disposal Methods:	ACM ADEQUATELY WETTED, DOUBLE BAGGED, SEALED AND LABELED
Facility Usage:	ACADEMIC
Waiver Given:	Not reported
DEP Waiver Number:	N/A
DLWD Waiver Number:	N/A
Small Owner Occ:	5
Owner Name:	LUNENBURG PUBLIC SCHOOLS
Owner Address:	1025 MASSACHUSETTS AVENUE
Owner City:	LUNENBURG
Owner State:	MA
On Site Manager Name:	JOHN LONDA
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	60,000
Transporter Name:	ABIDE, INC.
Transporter Address:	P.O. BOX 886
Transporter City:	EAST LONGMEADOW
Transporter State:	Not reported
Final Site:	39
Certified Name:	MARIA TILLI
Cert Sign Date:	10/04/2013
Certified Company:	ABIDE, INC.
Certified Phone:	4135250644
Entered_by:	Not reported

A5 **PASSIOS ELEMENTARY SCHOOL** **ASBESTOS** **S122962837**
Target **1025 MASS AVE** **N/A**
Property **LUNENBURG, MA**

Site 5 of 13 in cluster A

Actual: **546 ft.**

ASBESTOS:

Name:	PASSIOS ELEMENTARY SCHOOL
Address:	1025 MASS AVE
City,State,Zip:	LUNENBURG, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	10/25/2003
End Date:	10/27/2003
Date Entered:	Not reported
Entry Date:	10/30/2003
Quantity Materical Removed SF:	Not reported

PASSIOS ELEMENTARY SCHOOL (Continued) **S122962837**

Quantity Material Removed LF:	3.00
Project Description:	PIPE INSUL
AR Tracking ID:	32888
Super Lic Number:	AS032756
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000152
Year:	2003
Sticker Number:	768507
Form Type:	ANF-001
Fee Status:	E
Facility Phone:	(978) 582-4105
Sub Town:	Not reported
Worksite:	BOILER RM
Occupied:	Not reported
Contractor:	AC000328
Contract Type:	Not reported
Hours:	730A-10P
Project Type:	DEMolition, RENOVA
Abatement Process:	Glove Bag
Location:	Indoors
Decon Process:	3 CHAMBER
Disposal Methods:	WET 2 PLY POLY BAG
Facility Usage:	ELEM SCH
Waiver Given:	-1
DEP Waiver Number:	C-AW-03-448
DLWD Waiver Number:	03-415-NB
Small Owner Occ:	Not reported
Owner Name:	LUNENBURG PUB SCH
Owner Address:	1025 MASS AVE
Owner City:	LUNENBURG
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	RM TECHNOLOGIES INC
Transporter Address:	88 FRANKLIN STREET
Transporter City:	LAWRENCE
Transporter State:	MA
Final Site:	42
Certified Name:	FRAMCOSCP [P;AMCP
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	(978) 794-0006
Entered_by:	mmitchell

A6 **PASSIOS ELEMENTARY SCHOOL** **FINDS** **1009455419**
Target **1025 MASSACHUSETTS AVE** **N/A**
Property **LUNENBURG, MA 01462**

Site 6 of 13 in cluster A

Actual: **546 ft.**

FINDS:
Registry ID: 110024839237

Click Here:

Environmental Interest/Information System:
MA-EPICS - Massachussetts Environmental Protection Integrated Computer System

~~Click this hyperlink~~ while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

A7 **PASSIOS ELEMENTARY SCH** **ASBESTOS** **S122962901**
Target **1025 MASS AVE** **N/A**
Property **LUNENBURG, MA**

Site 7 of 13 in cluster A

Actual: **546 ft.**

ASBESTOS:

Name:	PASSIOS ELEMENTARY SCH
Address:	1025 MASS AVE
City,State,Zip:	LUNENBURG, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	07/12/2004
End Date:	07/30/2004
Date Entered:	Not reported
Entry Date:	06/30/2004
Quantity Materical Removed SF:	10.00
Quantity Material Removed LF:	25.00
Project Description:	POPCORN SPRAYON, CORRUGATED PIPE
AR Tracking ID:	41560
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000152
Year:	2004
Sticker Number:	773867
Form Type:	ANF-001
Fee Status:	E
Facility Phone:	(978) 582-4100
Sub Town:	Not reported
Worksite:	THROUGHOUT BLDG
Occupied:	-1
Contractor:	AC000125
Contract Type:	Not reported
Hours:	8A-4P
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	3 CHAMBER
Disposal Methods:	WET 2 PLY POLY BAG
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported

PASSIOS ELEMENTARY SCH (Continued) **S122962901**

DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	TOWN OF LUNENBURG
Owner Address:	17 MAIN ST
Owner City:	LUNNBURG
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	SERVICE TRANS
Transporter Address:	POB 2132
Transporter City:	BRISTOL
Transporter State:	PA
Final Site:	47
Certified Name:	KEVIN MORAN
Cert Sign Date:	06/29/2004
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	MMitchell

A8 **PASSIOS ELEMENTARY SCHOOL** **ASBESTOS** **S122962762**
Target **1025 MASS AVE** **N/A**
Property **LUNENBURG, MA**

Site 8 of 13 in cluster A

Actual: **546 ft.**

ASBESTOS:

Name:	PASSIOS ELEMENTARY SCHOOL
Address:	1025 MASS AVE
City,State,Zip:	LUNENBURG, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	02/03/2004
End Date:	03/03/2004
Date Entered:	Not reported
Entry Date:	02/04/2004
Quantity Materical Removed SF:	1583.00
Quantity Material Removed LF:	265.00
Project Description:	VAT,ECT
AR Tracking ID:	36041
Super Lic Number:	AS060538
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000056
Year:	2004
Sticker Number:	763367
Form Type:	ANF-001
Fee Status:	E
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	BOILER RM
Occupied:	0
Contractor:	AC000470
Contract Type:	Not reported
Hours:	7-3

PASSIOS ELEMENTARY SCHOOL (Continued) **S122962762**

Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	3 CHAMBER
Disposal Methods:	PROPER CONTAINER
Facility Usage:	Not reported
Waiver Given:	-1
DEP Waiver Number:	CAW04-072
DLWD Waiver Number:	SA0453
Small Owner Occ:	Not reported
Owner Name:	LUNENBURY PUBLIC SCHOOL
Owner Address:	1033 MASS AVE
Owner City:	LUNENBURG
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	PO BOX 2132
Transporter City:	BOSTON
Transporter State:	MA
Final Site:	41
Certified Name:	VEASNA NETH
Cert Sign Date:	02/03/2004
Certified Company:	Not reported
Certified Phone:	(401) 722-0402
Entered_by:	fuminski

A9 Target Property **PASSIOS ELEMENTARY SCHOOL**
1025 MASSACHUSETTS AVENUE
LUNENBURG, MA

ASBESTOS **S122901332**
N/A

Site 9 of 13 in cluster A

Actual: 546 ft.

ASBESTOS:

Name:	PASSIOS ELEMENTARY SCHOOL
Address:	1025 MASSACHUSETTS AVENUE
City,State,Zip:	LUNENBURG, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/26/2008
End Date:	06/28/2008
Date Entered:	Not reported
Entry Date:	06/14/2008
Quantity Materical Removed SF:	.00
Quantity Material Removed LF:	25.00
Project Description:	Spr
AR Tracking ID:	99625
Super Lic Number:	AS030223
Monitor Lic Number:	AM051114
Lab Lic Number:	Not reported
Year:	2008
Sticker Number:	100073609
Form Type:	ANF-001

PASSIOS ELEMENTARY SCHOOL (Continued) **S122901332**

Fee Status:	Exempt
Facility Phone:	9785824105
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	-1
Contractor:	AC000669
Contract Type:	Off
Hours:	Week days: 7AM-7PM Week end: 7AM-7PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain
Location:	Indoors
Decon Process:	3 CHAMBER DECON
Disposal Methods:	WET REMOVAL, FIBER DRUMS
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	5
Owner Name:	TOWN OF LUNENBURG
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	PREMIER ABATEMENT & LABOR SERVICES
Transporter Address:	10 FALCON STREET
Transporter City:	METHUEN
Transporter State:	Not reported
Final Site:	39
Certified Name:	RAMON TEJADA
Cert Sign Date:	06/13/2008
Certified Company:	PREMIER ABATEMENT
Certified Phone:	9782087163
Entered_by:	Not reported

A10 **PASSIOS ELEMENTARY SCHOOL** **ASBESTOS** **S122962799**
Target **1025 MASS AVE** **N/A**
Property **LUNENBURG, MA**

Site 10 of 13 in cluster A

Actual:
546 ft.

ASBESTOS:

Name:	PASSIOS ELEMENTARY SCHOOL
Address:	1025 MASS AVE
City,State,Zip:	LUNENBURG, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	07/23/2003
End Date:	08/23/2003
Date Entered:	Not reported
Entry Date:	07/14/2003
Quantity Materical Removed SF:	1583.00
Quantity Material Removed LF:	265.00

PASSIOS ELEMENTARY SCHOOL (Continued) **S122962799**

Project Description:	VAT,BOILER INSUL,PIPE INSUL,TANK INSUL,HEADER INSU
AR Tracking ID:	27835
Super Lic Number:	AS060538
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000056
Year:	2003
Sticker Number:	766032
Form Type:	ANF-001
Fee Status:	E
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	CAFE,UNIT VENTILATIONS,BOILER RM
Occupied:	Not reported
Contractor:	AC000470
Contract Type:	Not reported
Hours:	7-3:3
Project Type:	Renovation
Abatement Process:	Full Containment
Location:	Indoors
Decon Process:	3 CHAMBER
Disposal Methods:	CERTIFIED FIELD
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	LUNENBURG PUBLIC SCHOOL
Owner Address:	1033 MASS AVE
Owner City:	LUNENBURG
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	PO BOX 2132
Transporter City:	BRISTOL
Transporter State:	PA
Final Site:	41
Certified Name:	VEASNA NETH
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	(401) 722-0402
Entered_by:	fuminski

A11 **PASSIOS ELEMENTARY SCHOOL** **ASBESTOS** **S122903609**
Target **1025 MASS AVE** **N/A**
Property **LUNENBURG, MA**

Site 11 of 13 in cluster A

Actual: **546 ft.**

ASBESTOS:

Name:	PASSIOS ELEMENTARY SCHOOL
Address:	1025 MASS AVE
City,State,Zip:	LUNENBURG, MA
Notification:	Not reported

PASSIOS ELEMENTARY SCHOOL (Continued) **S122903609**

DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	08/11/2012
End Date:	08/11/2012
Date Entered:	Not reported
Entry Date:	07/31/2012
Quantity Materical Removed SF:	30.00
Quantity Material Removed LF:	.00
Project Description:	Trns
AR Tracking ID:	161222
Super Lic Number:	AS000278
Monitor Lic Number:	AM060919
Lab Lic Number:	AA000132
Year:	2012
Sticker Number:	100154734
Form Type:	ANF-001
Fee Status:	Exempt
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	PASSIOS SCHOOL
Occupied:	0
Contractor:	AC000558
Contract Type:	Off
Hours:	Week days: 6AM 6PM Week end: 6AM 6PM
Project Type:	Renv
Abatement Process:	Fcontain
Location:	Indoors
Decon Process:	3 CHAMBER WASH BUCKET
Disposal Methods:	6 MILL DOUBLE BAG
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	5
Owner Name:	TOWN OF LUNENBURG
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	AERO TEC
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	39
Certified Name:	GREG HARDING
Cert Sign Date:	07/31/2012
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

A12
Target Property

PASSIOS ELEMENTARY SCHOOL
1025 MASSACHUSETTS AVENUE
LUNENBURG, MA

ASBESTOS **S122902858**
N/A

Site 12 of 13 in cluster A

Actual:
546 ft.

ASBESTOS:

Name:	PASSIOS ELEMENTARY SCHOOL
Address:	1025 MASSACHUSETTS AVENUE
City,State,Zip:	LUNENBURG, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/21/2011
End Date:	06/30/2011
Date Entered:	Not reported
Entry Date:	06/07/2011
Quantity Materical Removed SF:	1000.00
Quantity Material Removed LF:	100.00
Project Description:	Spr,Clth,Trns
AR Tracking ID:	142948
Super Lic Number:	AS061619
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000128
Year:	2011
Sticker Number:	100127730
Form Type:	ANF-001
Fee Status:	Exempt
Facility Phone:	9785824105
Sub Town:	Not reported
Worksite:	ALL
Occupied:	-1
Contractor:	AC000125
Contract Type:	Off
Hours:	Week days: 8A-4P Week end:
Project Type:	Renv
Abatement Process:	Glv,Fcontain
Location:	Indoors
Decon Process:	PER ALL STATE, LOCAL AND FEDERAL RULES AND REGULATIONS.
Disposal Methods:	PER ALL STATE, LOCAL AND FEDERAL RULES AND REGULATIONS.
Facility Usage:	ELEMENTARY SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	5
Owner Name:	TOWN OF LUNENBURG
Owner Address:	17 MAIN STREET
Owner City:	LUNENBURG
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	STG
Transporter Address:	P.O. BOX 2132
Transporter City:	BRISTOL, PA
Transporter State:	Not reported

PASSIOS ELEMENTARY SCHOOL (Continued) **S122902858**

Final Site:	47
Certified Name:	JOSEPH S. CAPONE
Cert Sign Date:	06/07/2011
Certified Company:	SCS ENVIRONMENTAL
Certified Phone:	6175693600
Entered_by:	Not reported

A13 **PASSIOS ELEMENTARY SCHOOL** **ASBESTOS** **S122903610**
Target **1025 MASS AVE** **N/A**
Property **LUNENBURG, MA**

Site 13 of 13 in cluster A

Actual: **546 ft.**

ASBESTOS:

Name:	PASSIOS ELEMENTARY SCHOOL
Address:	1025 MASS AVE
City,State,Zip:	LUNENBURG, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	08/11/2012
End Date:	08/17/2012
Date Entered:	Not reported
Entry Date:	07/31/2012
Quantity Materical Removed SF:	30.00
Quantity Material Removed LF:	.00
Project Description:	Trns
AR Tracking ID:	161225
Super Lic Number:	AS035702
Monitor Lic Number:	AM060919
Lab Lic Number:	AA000132
Year:	2012
Sticker Number:	100154739
Form Type:	ANF-001
Fee Status:	Exempt
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	PASSIOS SCHOOL
Occupied:	0
Contractor:	AC000709
Contract Type:	Off
Hours:	Week days: 6AM 6PM Week end: 6AM 6PM
Project Type:	Renv
Abatement Process:	Fcontain
Location:	Indoors
Decon Process:	3 CHAMBER WASH BUCKET
Disposal Methods:	6 MILL DOUBLE BAG
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	5
Owner Name:	TOWN OF LUNENBURG
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported

PASSIOS ELEMENTARY SCHOOL (Continued) **S122903610**

Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	AERO TEC
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	39
Certified Name:	LUIS CRUZ
Cert Sign Date:	07/31/2012
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

B14 **TOWN OF LUNENBURG FIRE & POLICE** **UST** **U004217349**
SW **7 SCHOOL ST** **N/A**
1/8-1/4 **LUNENBURG, MA 01462**
0.230 mi.
1216 ft. **Site 1 of 2 in cluster B**

Relative: Higher

Actual: 575 ft.

UST:

Facility:

Name:	TOWN OF LUNENBURG FIRE & POLICE
Address:	7 SCHOOL ST
City,State,Zip:	LUNENBURG, MA 01462
Facility ID:	16660
Owner Id:	6921
Owner:	TOWN OF LUNENBURG HIGHWAY
Owner Address:	520 CHASE RD
Owner City,St,Zip:	LUNENBURG, MA 01462
Telephone:	Not reported
Description:	Government Entity
Facility address 2:	Not reported
Owner address 2:	Not reported
Latitude:	42.59452
Longitude:	-71.72523
Contact name:	Not reported
Contact address1:	Not reported
Contact address2:	Not reported
Contact city:	Not reported
Contact state:	Not reported
Contact zip:	Not reported
Contact email:	Not reported
Update:	1997-04-15 00:00:00
Update by:	Not reported
Fac status:	CLOSED

Tank ID:	1
Tank Status:	**Tank Removed**
Status Date:	07/13/1990
Date Installed:	05/06/1977
Capacity:	1000.00000
Contents:	Gasoline
Tank Usage:	Not reported
Tank Leak Detection:	Not reported

TOWN OF LUNENBURG FIRE & POLICE (Continued) **U004217349**

Pipe Leak Detection: Not reported
Latitude: Not reported
Longitude: Not reported
Tank construct: Not reported
Pipe construct: Not reported
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

B15 **AST** **S108480753**
SW **N/A**
1/8-1/4 **, MA**
0.234 mi.
1234 ft. **Site 2 of 2 in cluster B**

Relative: AST:
Higher
Actual:
575 ft.

Name: Not reported
Address: Not reported
City,State,Zip: MA
Owner Name: Not reported
Tank Type: Not reported
Class: Not reported
Stage I Type: Not reported
CARB # or System Type: Not reported
Test Cycle: Not reported
Date Form Mailed: Not reported
Test Date: Not reported
Postmark Date: Not reported
Due Date: Not reported
Form: Not reported
Form Rcvd and Complete?: Not reported
Facility ID: 22321
Tank ID: 1
Serial Number: Not reported
Tank Status: In Use
Capacity: 500
Contents: Diesel
Tank Use: Other
Tank Material: Steel
Tank Construction: 1 Wall
Tank Leak Detection: Interstitial Monitoring
Pipe Material: Flexible
Pipe Construction: 1 Wall
Pipe Leak Detection: Suction: Check Valve at Tank Only

(Continued) **S108480753**

Aboveground: Y

16
SW
1/4-1/2
0.253 mi.
1334 ft.

L & M SERVICE CENTER INC
925 MASSACHUSETTS AVE
LUNENBURG, MA 01462

LUST **U003185833**
UST **N/A**
RELEASE
ENF
Financial Assurance

Relative:
Lower

Actual:
542 ft.

LUST:

Facility:

Name:	L&M SERVICE CENTER
Address:	925 MASSACHUSETTS AVE
City,State,Zip:	LUNENBURG, MA 01462-0000
Current Status:	**LUNENBURG, MA 01462-0000**
Release Tracking Number/Current Status:	2-0016390 / TIER1D
Status Date:	09/19/2007
Source Type:	UST
Release Town:	LUNENBURG
Notification Date:	09/12/2006
Category:	120 DY
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Location Type:	COMMERCIAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	M-XYLENE
Quantity:	6.3 parts per million
Chemical:	NAPHTHALENE
Quantity:	82 parts per million

Actions:

Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	1/26/2009
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPACC
Action Date:	10/11/2017
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	10/12/2006
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPACC
Action Date:	10/19/2011

L & M SERVICE CENTER INC (Continued) **U003185833**

Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 10/29/2014
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 10/29/2019
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 10/4/2018
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 11/7/2013
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 2/17/2009
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 3/14/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 5/12/2010
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 6/9/2009
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 7/24/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLFLD
Action Date: 9/11/2007
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/12/2006
Response Action Outcome: Not reported

L & M SERVICE CENTER INC (Continued) **U003185833**

Action Type: FTLI
Action Status: APPREC
Action Date: 9/12/2012
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 9/13/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 9/13/2018
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 9/15/2014
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 9/17/2019
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 9/18/2017
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 9/19/2011
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/21/2006
Response Action Outcome: Not reported

UST:

Facility:
Name: L & M SERVICE CENTER INC
Address: 925 MASSACHUSETTS AVE
City,State,Zip: LUNENBURG, MA 01462
Facility ID: 16655
Owner Id: 28307
Owner: L & M SERVICE CENTER INC
Owner Address: 925 MASSACHUSETTS AVE
Owner City,St,Zip: LUNENBURG, MA 01462
Telephone: Not reported
Description: Retail Motor Vehicle Fuel
Facility address 2: Not reported
Owner address 2: Not reported
Latitude: Not reported

L & M SERVICE CENTER INC (Continued) **U003185833**

Longitude:	Not reported
Contact name:	Not reported
Contact address1:	Not reported
Contact address2:	Not reported
Contact city:	Not reported
Contact state:	Not reported
Contact zip:	Not reported
Contact email:	Not reported
Update:	2015-07-09 00:00:00
Update by:	Not reported
Fac status:	OPEN

Tank ID:	1
Tank Status:	**Tank Temporarily Out**
Status Date:	03/08/2005
Date Installed:	04/30/1981
Capacity:	10000.00000
Contents:	Gasoline
Tank Usage:	Motor Vehi
Tank Leak Detection:	In-Tank Monitoring System
Pipe Leak Detection:	Annual Automatic Line Leak Detection Test
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Single-walled metal tank (cathodic protection required)
Pipe construct:	Double-walled non-corrodible material (No corrosion protection required)
Ptype:	Not reported
Number of compartment:	Not reported
Pipe install date:	Not reported
Pipe leak install date:	Not reported
Submersible sump:	N
Submersible sump install date:	Not reported
Turbine sump:	N
Turbine sump sensor:	N
Intermediate sump:	N
Intermediate sump sensor:	N
Spill bucket installed date:	Not reported
Spill bucket sensor:	N
Overfill protect install:	Not reported
Overfill protect type:	Not reported
Automatic line leak detect:	Not reported
Tank corrosion type:	Field Constructed Impressed Current System
Leak corrosion type:	Not reported

Tank ID:	2
Tank Status:	**Tank Temporarily Out**
Status Date:	03/08/2005
Date Installed:	04/30/1981
Capacity:	10000.00000
Contents:	Gasoline
Tank Usage:	Motor Vehi
Tank Leak Detection:	In-Tank Monitoring System
Pipe Leak Detection:	Annual Automatic Line Leak Detection Test
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Single-walled metal tank (cathodic protection required)

L & M SERVICE CENTER INC (Continued) **U003185833**

Pipe construct: Double-walled non-corrodible material (No corrosion protection required)
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Field Constructed Impressed Current System
Leak corrosion type: Not reported

Tank ID: 3
Tank Status: **Tank Temporarily Out**
Status Date: 03/08/2005
Date Installed: 10/10/1988
Capacity: 4000.00000
Contents: Diesel
Tank Usage: Motor Vehi
Tank Leak Detection: In-Tank Monitoring System
Pipe Leak Detection: Annual Automatic Line Leak Detection Test
Latitude: Not reported
Longitude: Not reported
Tank construct: Double-walled metal tank (cathodic protection required)
Pipe construct: Double-walled non-corrodible material (No corrosion protection required)
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Field Constructed Impressed Current System
Leak corrosion type: Not reported

Tank ID: 4
Tank Status: **Tank Removed**
Status Date: 10/14/1988
Date Installed: 04/30/1966
Capacity: 3000.00000

L & M SERVICE CENTER INC (Continued) **U003185833**

Contents: Waste Oil
Tank Usage: Not reported
Tank Leak Detection: Not reported
Pipe Leak Detection: Not reported
Latitude: Not reported
Longitude: Not reported
Tank construct: Not reported
Pipe construct: Not reported
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 5
Tank Status: Tank Removed
Status Date: 11/01/1980
Date Installed: 04/30/1966
Capacity: 4000.00000
Contents: Gasoline
Tank Usage: Not reported
Tank Leak Detection: Not reported
Pipe Leak Detection: Not reported
Latitude: Not reported
Longitude: Not reported
Tank construct: Not reported
Pipe construct: Not reported
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

L & M SERVICE CENTER INC (Continued) **U003185833**

Release:

Name:	L&M SERVICE CENTER
Address:	925 MASSACHUSETTS AVE
City,State,Zip:	LUNENBURG, MA 01462-0000
Release Tracking Number/Current Status:	2-0016390 / TIER1D
Primary ID:	Not reported
Official City:	LUNENBURG
Notification:	09/12/2006
Category:	120 DY
Status Date:	09/19/2007
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	1/26/2009
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPACC
Action Date:	10/11/2017
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	10/12/2006
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPACC
Action Date:	10/19/2011
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPACC
Action Date:	10/29/2014
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPACC
Action Date:	10/29/2019
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPACC
Action Date:	10/4/2018
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPACC
Action Date:	11/7/2013
Response Action Outcome:	Not reported

L & M SERVICE CENTER INC (Continued) **U003185833**

Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	2/17/2009
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPACC
Action Date:	3/14/2013
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPACC
Action Date:	5/12/2010
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPREC
Action Date:	6/9/2009
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	7/24/2007
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLFLD
Action Date:	9/11/2007
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	9/12/2006
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPREC
Action Date:	9/12/2012
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPREC
Action Date:	9/13/2013
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPREC
Action Date:	9/13/2018
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPREC
Action Date:	9/15/2014
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPREC

L & M SERVICE CENTER INC (Continued) **U003185833**

Action Date: 9/17/2019
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 9/18/2017
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 9/19/2011
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/21/2006
Response Action Outcome: Not reported

Chemicals:
Chemical: M-XYLENE
Quantity: 6.3 parts per million
Chemical: NAPHTHALENE
Quantity: 82 parts per million
Location Type: COMMERCIAL
Source: UST

ENFORCEMENT:
Name: L&M SERVICE CENTER, INC.
Address: 925 MASSACHUSETTS AVE
City,State,Zip: LUNENBURG, MA 01462-0000
Region: CERO
DEP Region: CERO
DEP Program: 3t
DEP Bureau: BWSC
Program: BWSC
Program Id: RTN2-0016390
High Or Low Level Enforcement: LLE
FMF #: 0
Comptroller Billing Name: Not reported
Town Where Violation Occurred: Not reported
Date Executed: 02/17/2009
ENF #: NON-CE-09-3T047-Q1
Document Type: NON
AG Ref (Y/N): Not reported
Doc Archived (Y/N): Not reported
EJ Community (Y/N): Not reported
Regional Comment: Not reported
Final Payment Due Date: Not reported
ACOP $: Not reported
PAN $: Not reported
EMS (Y/N): Not reported
EMS$: Not reported
SEP (Y/N): Not reported
SEP $: Not reported
Demand $: Not reported
Suspended $: Not reported

L & M SERVICE CENTER INC (Continued) **U003185833**

Ownership:	Commercially Owned
Name:	L&M SERVICE CENTER, INC.
Address:	925 MASSACHUSETTS AVE
City,State,Zip:	LUNENBURG, MA 01462-0000
Region:	CERO
DEP Region:	CERO
DEP Program:	3t
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	RTN2-0016390
High Or Low Level Enforcement:	LLE
FMF #:	0
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	01/26/2009
ENF #:	NON-CE-09-3T047-Q2
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

MA Financial Assurance 2:

Name:	L & M SERVICE CENTER INC
Address:	925 MASSACHUSETTS AVE
City,State,Zip:	LUNENBURG, MA 01462
Facility Id:	16655
Description:	Private

17
SSE
1/4-1/2
0.341 mi.
1799 ft.

ROBINSON RESIDENCE
65 ROLLING ACRES RD
LUNENBURG, MA 01462

SHWS **S105124879**
RELEASE **N/A**

Relative:
Lower

Actual:
513 ft.

SHWS:

Name:	ROBINSON RESIDENCE
Address:	65 ROLLING ACRES RD
City,State,Zip:	LUNENBURG, MA 01462-0000
Facility ID:	2-0013855
Source Type:	UNKNOWN
Release Town:	LUNENBURG
Notification Date:	06/14/2001
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO

ROBINSON RESIDENCE (Continued) **S105124879**

Status Date:	06/10/2002
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Oil

Release:

Name:	ROBINSON RESIDENCE
Address:	65 ROLLING ACRES RD
City,State,Zip:	LUNENBURG, MA 01462-0000
Release Tracking Number/Current Status:	2-0013855 / RAO
Primary ID:	Not reported
Official City:	LUNENBURG
Notification:	06/14/2001
Category:	TWO HR
Status Date:	06/10/2002
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	10/17/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	2/5/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	4/30/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	4/5/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	6/10/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	6/10/2002

ROBINSON RESIDENCE (Continued) **S105124879**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/10/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/14/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 6/14/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/14/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 6/14/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/14/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/15/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/18/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 6/20/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

ROBINSON RESIDENCE (Continued) **S105124879**

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 6/21/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/21/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/22/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/12/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 7/13/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/6/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 7/6/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 8/13/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/13/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 8/2/2002

ROBINSON RESIDENCE (Continued) **S105124879**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 9/17/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 10 gallons
Location Type: RESIDNTIAL
Source: UNKNOWN

---

18 CHASE RD **SHWS S102507377**
ENE 1 NORTHFIELD RD **RELEASE N/A**
1/4-1/2 LUNENBURG, MA 01462
0.395 mi.
2083 ft.

Relative: Lower
Actual: 436 ft.

SHWS:
Name: CHASE RD
Address: 1 NORTHFIELD RD
City,State,Zip: LUNENBURG, MA 01462-0000
Facility ID: 2-0011552
Source Type: VEHICLE
Release Town: LUNENBURG
Notification Date: 01/02/1997
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 03/11/1997
Phase: Not reported
Response Action Outcome: A1
Oil Or Haz Material: Oil

Release:
Name: CHASE RD
Address: 1 NORTHFIELD RD
City,State,Zip: LUNENBURG, MA 01462-0000
Release Tracking Number/Current Status: 2-0011552 / RAO
Primary ID: Not reported
Official City: LUNENBURG
Notification: 01/02/1997
Category: TWO HR
Status Date: 03/11/1997
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)

CHASE RD (Continued) **S102507377**

Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/16/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	1/2/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/2/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/2/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	3/11/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/11/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	50 gallons
Location Type:	ROADWAY
Source:	VEHICLE

---

19 **TRANSFORMER MODF RELEASE** **SHWS** **S111739389**
WSW **870 MASSACHUSETTS AVENUE** **RELEASE** **N/A**
1/4-1/2 **LUNENBURG, MA**
0.421 mi.
2224 ft.

Relative:
Lower

Actual:
528 ft.

SHWS:

Name:	TRANSFORMER MODF RELEASE
Address:	870 MASSACHUSETTS AVENUE
City,State,Zip:	LUNENBURG, MA
Facility ID:	2-0018514
Source Type:	TRANSFORM
Release Town:	LUNENBURG
Notification Date:	03/04/2012
Category:	TWO HR
Associated ID:	Not reported

TRANSFORMER MODF RELEASE (Continued) **S111739389**

Current Status:	RAO
Status Date:	05/22/2012
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Not reported

Release:

Name:	TRANSFORMER MODF RELEASE
Address:	870 MASSACHUSETTS AVENUE
City,State,Zip:	LUNENBURG, MA
Release Tracking Number/Current Status:	2-0018514 / RAO
Primary ID:	Not reported
Official City:	LUNENBURG
Notification:	03/04/2012
Category:	TWO HR
Status Date:	05/22/2012
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/4/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	3/4/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/24/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	5/2/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	5/22/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit

TRANSFORMER MODF RELEASE (Continued) **S111739389**

Action Date: 8/15/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: MINERAL OIL DIELECTRIC FLUID
Quantity: 10 gallons
Location Type: ROADWAY
Source: TRANSFORM

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20 North 1/2-1 0.622 mi. 3284 ft.
ARCIPRETE RESIDENCE
287 NORTHFIELD RD
LUNENBURG, MA 01462
SHWS RELEASE **S108347848 N/A**

Relative: Lower
Actual: 531 ft.

SHWS:
Name: ARCIPRETE RESIDENCE
Address: 287 NORTHFIELD RD
City,State,Zip: LUNENBURG, MA 01462-0000
Facility ID: 2-0016516
Source Type: PIPE
Release Town: LUNENBURG
Notification Date: 12/26/2006
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 07/20/2010
Phase: PHASE V
Response Action Outcome: A2
Oil Or Haz Material: Oil

Release:
Name: ARCIPRETE RESIDENCE
Address: 287 NORTHFIELD RD
City,State,Zip: LUNENBURG, MA 01462-0000
Release Tracking Number/Current Status: 2-0016516 / RAO
Primary ID: Not reported
Official City: LUNENBURG
Notification: 12/26/2006
Category: TWO HR
Status Date: 07/20/2010
Phase: PHASE V
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

ARCIPRETE RESIDENCE (Continued) **S108347848**

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/3/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/31/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 1/7/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 1/7/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 1/7/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/26/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 10/30/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 11/13/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 11/13/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/2/2009

ARCIPRETE RESIDENCE (Continued) **S108347848**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: RMRINT
Action Date: 11/2/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/4/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 12/14/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/18/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 12/18/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 12/18/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 12/18/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 12/19/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level II - Audit Inspection
Action Date: 12/19/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

ARCIPRETE RESIDENCE (Continued) **S108347848**

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 12/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDDO
Action Date: 12/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 12/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDDO
Action Date: 12/27/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/28/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 2/11/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/18/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 2/18/2010

ARCIPRETE RESIDENCE (Continued) **S108347848**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Work Started
Action Date: 2/18/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/18/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 2/18/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: RMRFIN
Action Date: 2/18/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 2/18/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 2/18/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 2/18/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 2/2/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 2/21/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

ARCIPRETE RESIDENCE (Continued) **S108347848**

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/21/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 2/25/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level II - Audit Inspection
Action Date: 2/25/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 4/26/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 4/26/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 4/29/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 4/29/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 4/29/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/30/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 4/30/2008

ARCIPRETE RESIDENCE (Continued) **S108347848**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 4/7/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Revised Statement or Transmittal Received
Action Date: 4/7/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 1B Classification
Action Date: 4/7/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Public Comment Period Initiated on Submittal
Action Date: 4/8/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/11/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 5/14/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/15/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 6/1/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/4/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

ARCIPRETE RESIDENCE (Continued) **S108347848**

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	6/4/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 5
Action Status:	Action Status or AUL Terminated
Action Date:	7/20/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	7/20/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	9/2/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	BWS02
Action Status:	APPROV
Action Date:	Not reported
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	10 gallons
Location Type:	WATERBODY
Location Type:	RESIDNTIAL
Source:	PIPE

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21 **TOWNSEND HARBOR RD PROPERTY** **SHWS** **S101856457**
ENE **79 TOWNSEND HARBOR RD** **RELEASE** **N/A**
1/2-1 **LUNENBURG, MA 01462**
0.745 mi.
3934 ft.

Relative:
Lower

Actual:
404 ft.

SHWS:

Name:	TOWNSEND HARBOR RD PROPERTY
Address:	79 TOWNSEND HARBOR RD
City,State,Zip:	LUNENBURG, MA 01462-0000
Facility ID:	2-0000084
Source Type:	DRUMS
Release Town:	LUNENBURG
Notification Date:	08/24/1988
Category:	NONE
Associated ID:	Not reported
Current Status:	RAO
Status Date:	11/01/2000
Phase:	Not reported
Response Action Outcome:	A2

TOWNSEND HARBOR RD PROPERTY (Continued) **S101856457**

Oil Or Haz Material: Oil

Release:
Name: TOWNSEND HARBOR RD PROPERTY
Address: 79 TOWNSEND HARBOR RD
City,State,Zip: LUNENBURG, MA 01462-0000
Release Tracking Number/Current Status: 2-0000084 / RAO
Primary ID: Not reported
Official City: LUNENBURG
Notification: 08/24/1988
Category: NONE
Status Date: 11/01/2000
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Tier Classification
Action Status: Tier 1A Classification
Action Date: 1/20/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/1/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Tier 1A or Priority Submittal Approved
Action Date: 11/30/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Tier 1A or Priority Submittal Approved
Action Date: 2/20/1990
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Permit Extension Received
Action Date: 4/12/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 1A Classification
Action Date: 5/19/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

TOWNSEND HARBOR RD PROPERTY (Continued) **S101856457**

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/19/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 5/19/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: TREGS
Action Status: BWSC04
Action Date: 5/19/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/24/1988
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 8/24/1988
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BWS20
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: VOCS
Quantity: Not reported
Location Type: OPENSPACE
Source: DRUMS

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22 NE 1/2-1 0.865 mi. 4568 ft. **HICKORY HILLS LAKE** **SHWS S106029934**
52 BIRCH ISLAND WAY **LAST N/A**
LUNENBURG, MA 01462 **RELEASE**

Relative: Lower
Actual: 367 ft.

SHWS:
Name: RIMPAS RESIDENCE
Address: 52 BIRCH ISLAND WAY
City,State,Zip: LUNENBURG, MA 01462-0000
Facility ID: 2-0016276
Source Type: Not reported
Release Town: LUNENBURG
Notification Date: 06/09/2006
Category: 120 DY

HICKORY HILLS LAKE (Continued) **S106029934**

Associated ID:	Not reported
Current Status:	RAO
Status Date:	11/07/2006
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Oil

LAST:

Name:	HICKORY HILLS LAKE
Address:	52 BIRCH ISLAND WAY
City,State,Zip:	LUNENBURG, MA 01462-0000
Release Tracking Number/Current Status:	2-0014913 / RAO
Source Type:	AST
Release Town:	LUNENBURG
Notification Date:	09/14/2003
Category:	TWO HR
Associated ID:	2-0014913
Status Date:	11/07/2006
Phase:	PHASE II
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	10 gallons
Location Type:	RESIDNTIAL
Location Type:	WATERBODY
Source:	AST

Actions:

Action Type:	Immediate Response Action
Action Status:	Modified Revised or Updated Plan Received
Action Date:	1/20/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	1/20/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Modified Revised or Updated Plan Received
Action Date:	1/21/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	1/21/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	1/25/2006

HICKORY HILLS LAKE (Continued) **S106029934**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/1/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/1/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/10/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 10/16/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/2/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/20/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/20/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 10/20/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/20/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

HICKORY HILLS LAKE (Continued) **S106029934**

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 10/22/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 10/22/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Revised Statement or Transmittal Received
Action Date: 11/1/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 11/12/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Level I - Technical Screen Audit
Action Date: 11/16/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 11/16/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 11/27/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level III - Comprehensive Audit
Action Date: 11/30/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/7/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 11/7/2006

HICKORY HILLS LAKE (Continued) **S106029934**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 12/3/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 12/3/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 12/7/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/25/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/6/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 3/4/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 7/25/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/29/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 8/1/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

HICKORY HILLS LAKE (Continued) **S106029934**

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 8/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/3/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 9/14/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/14/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/14/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/15/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/16/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 9/19/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Name: HICKORY HILLS LAKE
Address: 52 BIRCH ISLAND WAY
City,State,Zip: LUNENBURG, MA 01462-0000
Release Tracking Number/Current Status: 2-0014913 / RAO
Primary ID: 2-0014913
Official City: LUNENBURG
Notification: 09/14/2003

HICKORY HILLS LAKE (Continued) **S106029934**

Category: TWO HR
Status Date: 11/07/2006
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 1/20/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/20/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 1/21/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/21/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/25/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/1/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/1/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/10/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

HICKORY HILLS LAKE (Continued) **S106029934**

Action Type: RLFA
Action Status: FOLFLD
Action Date: 10/16/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/2/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/20/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/20/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 10/20/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/20/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 10/22/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 10/22/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Revised Statement or Transmittal Received
Action Date: 11/1/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 11/12/2003

HICKORY HILLS LAKE (Continued) **S106029934**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Level I - Technical Screen Audit
Action Date: 11/16/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 11/16/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 11/27/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level III - Comprehensive Audit
Action Date: 11/30/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/7/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 11/7/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 12/3/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 12/3/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 12/7/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

HICKORY HILLS LAKE (Continued) **S106029934**

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/25/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/6/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 3/4/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 7/25/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/29/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 8/1/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 8/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/3/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 9/14/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/14/2003

HICKORY HILLS LAKE (Continued) **S106029934**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/14/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/15/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/16/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 9/19/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 10 gallons
Location Type: RESIDNTIAL
Location Type: WATERBODY
Source: AST

Name: RIMPAS RESIDENCE
Address: 52 BIRCH ISLAND WAY
City,State,Zip: LUNENBURG, MA 01462-0000
Release Tracking Number/Current Status: 2-0016276 / RAO
Primary ID: Not reported
Official City: LUNENBURG
Notification: 06/09/2006
Category: 120 DY
Status Date: 11/07/2006
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/20/2004
Response Action Outcome: Not reported

Action Type: Tier Classification

HICKORY HILLS LAKE (Continued) **S106029934**

Action Status: Tier 2 Classification
Action Date: 10/20/2004
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Revised Statement or Transmittal Received
Action Date: 11/1/2004
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 11/16/2004
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 11/22/2010
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 11/27/2006
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Level III - Comprehensive Audit
Action Date: 11/30/2010
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/7/2006
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/7/2006
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 11/7/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 11/7/2006
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 6/15/2006
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/21/2006

HICKORY HILLS LAKE (Continued) **S106029934**

Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/9/2006
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 6/9/2006
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/9/2006
Response Action Outcome: Not reported

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 0.25 inches

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23 West 1/2-1 0.890 mi. 4699 ft. **LUNENBERG FIRE DEPARTMENT** **SHWS S109489487**
655 MASSACHUSETTS AVE **RELEASE N/A**
LUNENBURG, MA

Relative: Higher
Actual: 547 ft.

SHWS:
Name: LUNENBERG FIRE DEPARTMENT
Address: 655 MASSACHUSETTS AVE
City,State,Zip: LUNENBURG, MA
Facility ID: 2-0017280
Source Type: TANKER
Release Town: LUNENBURG
Notification Date: 10/07/2008
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 12/05/2008
Phase: Not reported
Response Action Outcome: A2
Oil Or Haz Material: Oil

Release:
Name: LUNENBERG FIRE DEPARTMENT
Address: 655 MASSACHUSETTS AVE
City,State,Zip: LUNENBURG, MA
Release Tracking Number/Current Status: 2-0017280 / RAO
Primary ID: Not reported
Official City: LUNENBURG
Notification: 10/07/2008
Category: TWO HR
Status Date: 12/05/2008
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

LUNENBERG FIRE DEPARTMENT (Continued) **S109489487**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	10/16/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	10/16/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	10/20/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	10/20/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	10/20/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/7/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	10/7/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/5/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/5/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

LUNENBERG FIRE DEPARTMENT (Continued) **S109489487**

Chemicals:
- Chemical: #2 FUEL OIL
- Quantity: 75 gallons
- Location Type: MUNICIPAL
- Source: TANKER

Count: 4 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
LUNENBURG	S102555429	ROADWAY RELEASE	LANCASTER AVE	01462	SHWS, RELEASE
LUNENBURG	S126024465	HYDRAULIC OIL TO ROADWAY	LEOMINSTER RD	01462	SHWS, RELEASE
LUNENBURG	S112146169	LAFARGE BLDG MATERIALS	541 LEOMINSTER SHIRLEY RD	01462	SHWS, RELEASE
LUNENBURG	S102084255	NO LOCATION AID	MASSACHUSETTS AVE	01462	SHWS, RELEASE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/15/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 30

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/14/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/22/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

SHWS: Site Transition List

Contains information on releases of oil and hazardous materials that have been reported to DEP.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 06/25/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 1

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

LF PROFILES: Landfill Profiles Listing

This spreadsheet describes landfills that have actively accepted waste or have closed under MassDEP Solid Waste Regulations first adopted in 1971 (310 CMR 16.00 and 310 CMR 19.00). The list does not include landfills that closed before 1971 (and which never had a MassDEP permit or approval), or for which agency data is incomplete.

Date of Government Version: 07/01/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 12/14/2015
Number of Days to Update: 48

Source: Department of Environmental Protection
Telephone: 617-292-5868
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

SWF/LF: Solid Waste Facility Database/Transfer Stations

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 01/14/2020
Date Data Arrived at EDR: 04/03/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 76

Source: Department of Environmental Protection
Telephone: 617-292-5989
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Annually

State and tribal leaking storage tank lists

LAST: Leaking Aboveground Storage Tank Sites

Sites within the Releases Database that have a AST listed as its source.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 06/25/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 1

Source: Department of Environmental Protection
Telephone: 617-292-5500
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

LUST: Leaking Underground Storage Tank Listing
Sites within the Leaking Underground Storage Tank Listing that have a UST listed as its source.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 06/25/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 1
Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/10/2019
Date Data Arrived at EDR: 12/05/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 67
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/15/2019
Date Data Arrived at EDR: 12/17/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 55
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/02/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/04/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 72

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 02/01/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

UST: Summary Listing of all the Tanks Registered in the State of Massachusetts
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 01/06/2020
Date Data Arrived at EDR: 03/04/2020
Date Made Active in Reports: 05/11/2020
Number of Days to Update: 68

Source: Department of Fire Services, Office of the Public Safety
Telephone: 617-556-1035
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Quarterly

AST: Aboveground Storage Tank Database
Registered Aboveground Storage Tanks.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78

Source: Department of Public Safety
Telephone: 617-556-1035
Last EDR Contact: 04/14/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: No Update Planned

AST 2: Aboveground Storage Tanks
Aboveground storage tanks

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 06/25/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 1

Source: Department of Fire Services
Telephone: 978-567-3181
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/10/2019
Date Data Arrived at EDR: 12/05/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 67

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/02/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 72

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/04/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 85

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Sites With Activity and Use Limitation

Activity and Use Limitations establish limits and conditions on the future use of contaminated property, and therefore allow cleanups to be tailored to these uses.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 06/25/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 1

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS 2: Potential Brownfields Listing

A listing of potential brownfields site locations in the state.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 07/31/2019
Date Made Active in Reports: 09/25/2019
Number of Days to Update: 56

Source: Department of Environmental Protection
Telephone: 617-556-1007
Last EDR Contact: 05/01/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

BROWNFIELDS: Completed Brownfields Covenants Listing

Under Massachusetts law, M.G.L. c. 21E is the statute that governs the cleanup of releases of oil and/or hazardous material to the environment. The Brownfields Act of 1998 amended M.G.L. c. 21E by establishing significant liability relief and financial incentives to spur the redevelopment of brownfields, while ensuring that the Commonwealth's environmental standards are met. Most brownfields are redeveloped with the benefit of liability protections that operate automatically under M.G.L. c. 21E.

Date of Government Version: 04/05/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/10/2017
Number of Days to Update: 68

Source: Office of the Attorney General
Telephone: 617-963-2423
Last EDR Contact: 05/01/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Annually

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176
Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 05/01/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Quarterly

PFAS: PFAS Contaminated Sites Listing
Detection of Per- and Polyfluoroalkyl Substances (PFAS) in drinking water.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 79
Source: Department of Environmental Protection
Telephone: 617-292-6770
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

Local Land Records

LIENS: Liens Information Listing
A listing of environmental liens.

Date of Government Version: 03/07/2018
Date Data Arrived at EDR: 03/09/2018
Date Made Active in Reports: 06/21/2018
Number of Days to Update: 104
Source: Department of Environmental Protection
Telephone: 617-292-5628
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 02/27/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/23/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

RELEASE: Reportable Releases

Contains information on all releases of oil and hazardous materials that have been reported to DEP

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 06/25/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 1

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

MA SPILLS: Historical Spill List

The Spills Database was the release notification tracking system for spills that occurred prior to October 1, 1993. This information should be considered to be primarily of historical interest since all of the listed spills have either been cleaned up or assigned new tracking numbers and moved to the Reportable Releases or Sites Transition List databases.

Date of Government Version: 09/30/1993
Date Data Arrived at EDR: 12/03/2003
Date Made Active in Reports: 12/31/2003
Number of Days to Update: 28

Source: Department of Environmental Protection
Telephone: 617-292-5720
Last EDR Contact: 12/03/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 12/11/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/08/2013
Number of Days to Update: 36

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 03/10/1998
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/05/2013
Number of Days to Update: 61

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/28/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 85

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/04/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/08/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 79

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 10/23/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 84

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/05/2019
Date Data Arrived at EDR: 11/20/2019
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 149

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/15/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 34

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 70

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 10/25/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 82

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 42

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/05/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/01/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/08/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/17/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 49

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/07/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 04/29/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/11/2020
Date Data Arrived at EDR: 02/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 86

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 03/31/2020
Date Data Arrived at EDR: 04/01/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 50

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 02/28/2020
Date Made Active in Reports: 05/22/2020
Number of Days to Update: 84

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/05/2020
Date Data Arrived at EDR: 03/06/2020
Date Made Active in Reports: 05/29/2020
Number of Days to Update: 84

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/19/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 86

Source: EPA
Telephone: (617) 918-1111
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 04/04/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 85

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/19/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Quarterly

AIRS: Permitted Facilities Listing

A listing of Air Quality permit applications.

Date of Government Version: 04/10/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78

Source: Department of Environmental Protection
Telephone: 617-292-5789
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

ASBESTOS: Asbestos Notification Listing

Asbestos sites

Date of Government Version: 02/28/2020
Date Data Arrived at EDR: 03/04/2020
Date Made Active in Reports: 05/11/2020
Number of Days to Update: 68

Source: Department of Environmental Protection
Telephone: 617-292-5982
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

DRYCLEANERS: Regulated Drycleaning Facilities

A listing of Department of Environmental Protection regulated drycleaning facilities that use perchloroethylene under the Environmental Results Program.

Date of Government Version: 01/06/2020
Date Data Arrived at EDR: 03/04/2020
Date Made Active in Reports: 05/11/2020
Number of Days to Update: 68

Source: Department of Environmental Protection
Telephone: 617-292-5633
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

ENFORCEMENT: Enforcement Action Cases

A listing of enforcement action cases tracked by Department of Environmental Protection programs, including Solid Waste and Hazardous Waste.

Date of Government Version: 04/17/2020
Date Data Arrived at EDR: 04/20/2020
Date Made Active in Reports: 07/07/2020
Number of Days to Update: 78

Source: Department of Environmental Quality
Telephone: 617-292-5979
Last EDR Contact: 04/17/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 12/01/2010
Date Data Arrived at EDR: 12/23/2010
Date Made Active in Reports: 02/03/2011
Number of Days to Update: 42

Source: Department of Environmental Protection
Telephone: 617-292-5970
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for underground storage tanks. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 01/06/2020
Date Data Arrived at EDR: 03/04/2020
Date Made Active in Reports: 05/11/2020
Number of Days to Update: 68

Source: Office of State Fire Marshal
Telephone: 978-567-3100
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

Financial Assurance 3: Financial Assurance Information listing

Information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 04/17/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 59

Source: Department of Environmental Protection
Telephone: 617-292-5970
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

GWDP: Ground Water Discharge Permits

The Ground Water Discharge Permits datalayer (formerly known as Groundwater Discharge Points) is a statewide point dataset containing approximate locations of permitted discharges to groundwater.

Date of Government Version: 04/01/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/14/2020
Number of Days to Update: 77

Source: MassGIS
Telephone: 617-556-1150
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

HW GEN: List of Massachusetts Hazardous Waste Generators

Permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities.

Date of Government Version: 03/13/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/03/2020
Number of Days to Update: 71

Source: Department of Environmental Protection
Telephone: 617-292-5500
Last EDR Contact: 06/23/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Semi-Annually

MERCURY: Mercury Product Recyling Drop-Off Locations Listing

A listing of locations, collecting and recycling for mercury-added products. Mercury is toxic to the human nervous system, as well as fish and animals. Mercury can enter the body either through skin absorption or through inhalation of mercury vapors. At room temperature, small beads of mercury will vaporize.

Date of Government Version: 05/07/2018
Date Data Arrived at EDR: 05/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 31

Source: Department of Environmental Protection
Telephone: 617-292-5632
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

NPDES: NPDES Permit Listing
Listing of treatment plants in Massachusetts that hold permits to discharge to groundwater.

Date of Government Version: 01/07/2020
Date Data Arrived at EDR: 02/11/2020
Date Made Active in Reports: 04/21/2020
Number of Days to Update: 70
Source: Department of Environmental Protection
Telephone: 508-767-2781
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Varies

TIER 2: Tier 2 Information Listing
A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/25/2019
Date Made Active in Reports: 07/16/2019
Number of Days to Update: 82
Source: Massachusetts Emergency Management Agency
Telephone: 508-820-2019
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Annually

TSD: TSD Facility
List of Licensed Hazardous Waste Treatment, Storage Disposal Facilities (TSDFs) in Massachusetts.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 79
Source: Department of Environmental Protection
Telephone: 617-292-5580
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

UIC: Underground Injection Control Listing
A list of UIC registration data and their locations

Date of Government Version: 09/26/2019
Date Data Arrived at EDR: 09/27/2019
Date Made Active in Reports: 12/02/2019
Number of Days to Update: 66
Source: Department of Environmental Protection
Telephone: 617-566-1172
Last EDR Contact: 04/30/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Varies

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29
Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 07/01/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120
Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55
Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/08/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 01/30/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 39

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/12/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 04/29/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/14/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/09/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/04/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

THOMAS C. PASSIOS ELEMENTARY SCHOOL
1025 MASSACHUSETTS AVE
LUNENBURG, MA 01462

TARGET PROPERTY COORDINATES

Latitude (North):	42.597455 - 42° 35' 50.84''
Longitude (West):	71.721884 - 71° 43' 18.78''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	276687.5
UTM Y (Meters):	4719491.5
Elevation:	546 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5646215 SHIRLEY, MA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

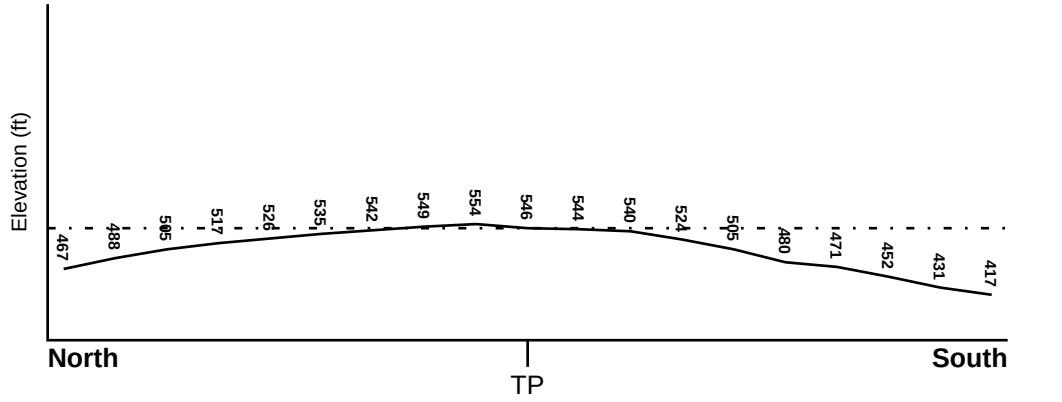
TOPOGRAPHIC INFORMATION

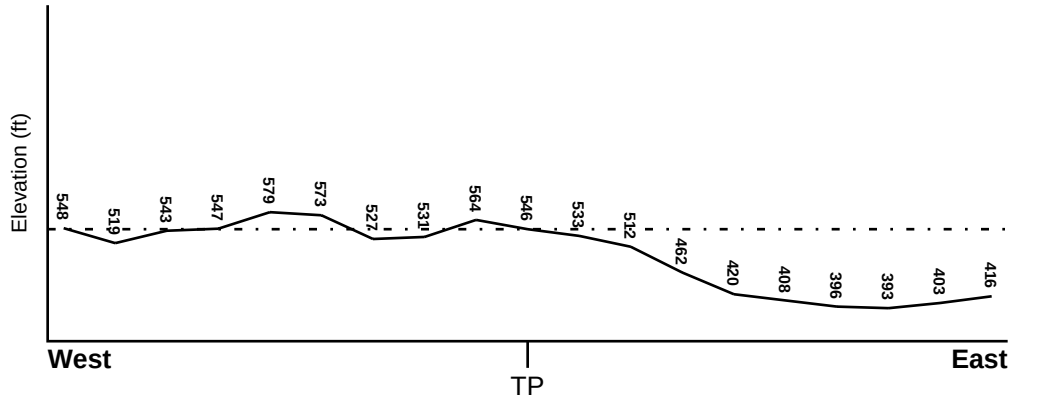
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

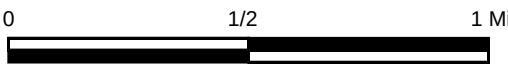
TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General ESE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES







Target Property Elevation: 546 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
2503150003B	FEMA Q3 Flood data

Additional Panels in search area:	FEMA Source Type
2503150002B	FEMA Q3 Flood data
25017C0177E	FEMA FIRM Flood data
2503150004B	FEMA Q3 Flood data
2503150005B	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
SHIRLEY	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

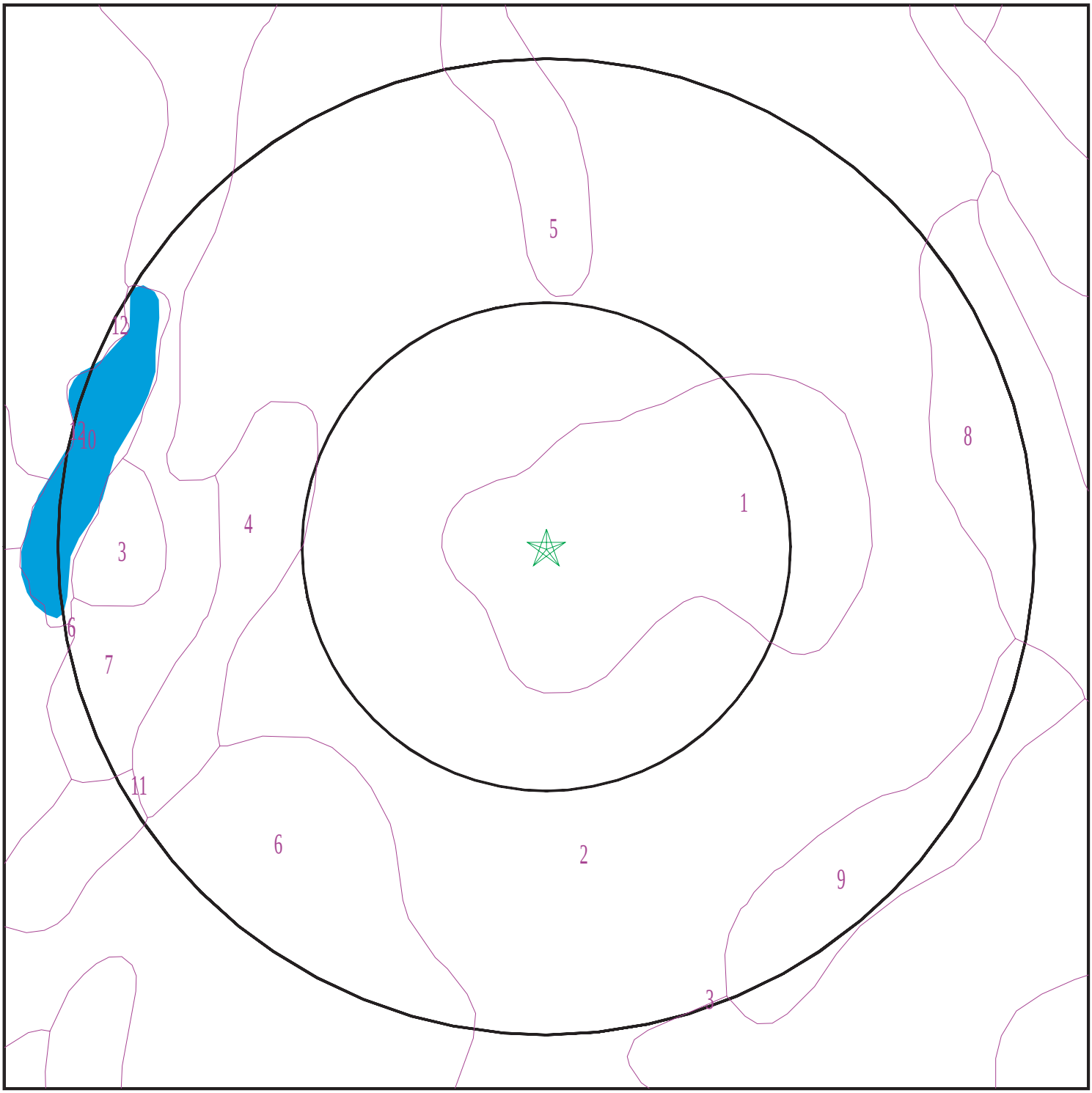
Era:	Paleozoic
System:	Silurian
Series:	Silurian
Code:	Se *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Eugeosynclinal Deposit

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 6122043.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Thomas C. Passios Elementary School	CLIENT:	The LiRo Group
ADDRESS:	1025 Massachusetts Ave Lunenburg MA 01462	CONTACT:	Sophia Waxenberg
		INQUIRY #:	6122043.2s
LAT/LONG:	42.597455 / 71.721884	DATE:	July 15, 2020 10:34 am

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Paxton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Not reported

Soil Drainage Class:
Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	5 inches	27 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5
2	0 inches	5 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5
3	27 inches	59 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Map ID: 2

Soil Component Name: Woodbridge

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5
2	9 inches	22 inches	sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5
3	22 inches	59 inches	sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Map ID: 3

Soil Component Name: Woodbridge

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5
2	9 inches	22 inches	sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	22 inches	59 inches	sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Map ID: 4

Soil Component Name: Woodbridge

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5
2	9 inches	22 inches	sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5
3	22 inches	59 inches	sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Map ID: 5

Soil Component Name: Ridgebury

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 23 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5
2	9 inches	22 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5
3	22 inches	59 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5

Soil Map ID: 6

Soil Component Name: Paxton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5
2	5 inches	27 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	27 inches	59 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Map ID: 7

Soil Component Name: Scarboro

Soil Surface Texture: mucky fine sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Very poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	12 inches	mucky fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 4.5
2	12 inches	18 inches	loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 4.5
3	18 inches	20 inches	sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 4.5
4	20 inches	59 inches	gravelly sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 4.5

Soil Map ID: 8

Soil Component Name: Paxton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	5 inches	27 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5
2	0 inches	5 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5
3	27 inches	59 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Map ID: 9

Soil Component Name: Ridgebury

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 23 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5
2	9 inches	22 inches	gravelly fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	22 inches	59 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5

Soil Map ID: 10

Soil Component Name: Water

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 11

Soil Component Name: Udorthents

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 12

Soil Component Name: Chatfield

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sandy loam	Not reported	Not reported	Max: 1 Min: 0	Max: Min:
2	3 inches	29 inches	fine sandy loam	Not reported	Not reported	Max: 1 Min: 0	Max: Min:
3	29 inches	33 inches	unweathered bedrock	Not reported	Not reported	Max: 1 Min: 0	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
2	USGS40000478419	1/4 - 1/2 Mile North
3	USGS40000478521	1/2 - 1 Mile North
4	USGS40000478520	1/2 - 1 Mile NE
5	USGS40000478503	1/2 - 1 Mile NE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

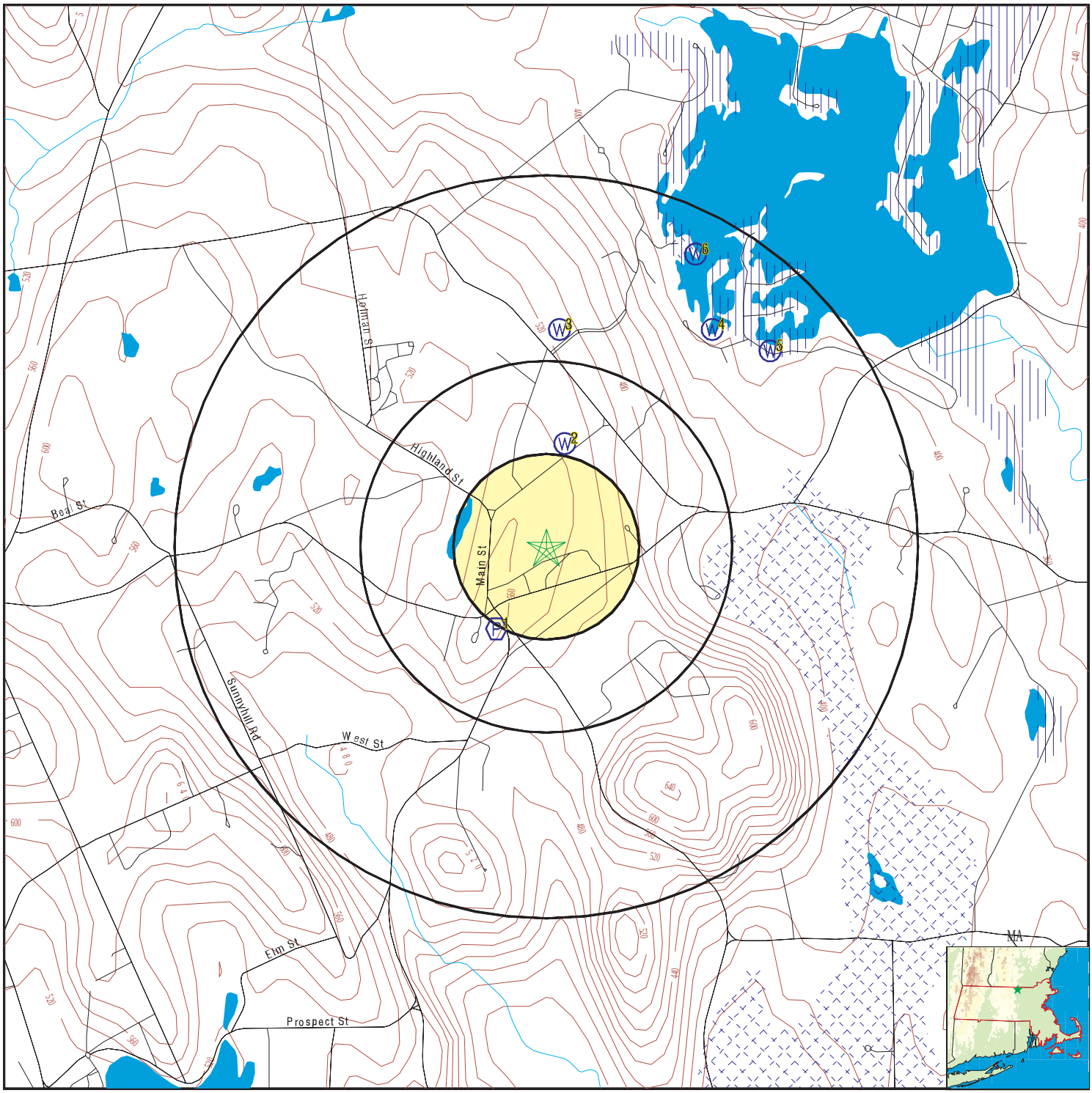
MAP ID	WELL ID	LOCATION FROM TP
1	MA2162006	1/4 - 1/2 Mile SSW

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
6	MA9000000003635	1/2 - 1 Mile NNE

PHYSICAL SETTING SOURCE MAP - 6122043.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

0 1/4 1/2 1 Miles

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

- Potentially Productive Aquifers
- Not Potentially Productive Aquifers
- DEP Approved Zone IIs
- EPA Designated Sole Src. Aq.

SITE NAME:	Thomas C. Passios Elementary School	CLIENT:	The LiRo Group
ADDRESS:	1025 Massachusetts Ave Lunenburg MA 01462	CONTACT:	Sophia Waxenberg
LAT/LONG:	42.597455 / 71.721884	INQUIRY #:	6122043.2s
		DATE:	July 15, 2020 10:34 am

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
SSW
1/4 - 1/2 Mile
Higher

FRDS PWS **MA2162006**

Epa region:	01	State:	MA
Pwsid:	MA2162006	Pwsname:	POWELLS FAMILY RESTAURANT
Cityserved:	Not Reported	Stateserved:	MA
Zipserved:	Not Reported	Fipscounty:	25027
Status:	Closed	Retpopsrvd:	25
Pwssvcconn:	1	Psource longname:	Groundwater
Pwstype:	TNCWS	Owner:	Local_Govt
Contact:	POWELLS FAMILY RESTAURANT	Contactorgname:	Not Reported
Contactphone:	978-537-2883	Contactaddress1:	259 LEOMINSTER AND SHIRLEY RD
Contactaddress2:	Not Reported	Contactcity:	LUNENBURG
Contactstate:	MA	Contactzip:	014620000
Pwsactivitycode:	I		
PWS ID:	MA2162006	PWS type:	Mailing
PWS name:	POWELL'S FAMILY RESTAURANT		
PWS address:	259 LEOMINSTER & SHIRLEY ROAD		
PWS city:	LUNENBURG	PWS state:	MA
PWS zip:	01462	PWS ID:	MA2162006
Activity status:	Active	Date system activated:	9304
Date system deactivated:	Not Reported	Retail population:	00000025
System name:	POWELL'S FAMILY RESTAURANT		
System address:	259 LEOMINSTER & SHIRLEY ROAD		
System city:	LUNENBURG	System state:	MA
System zip:	01462		
Population served:	Under 101 Persons	Treatment:	Untreated
Latitude:	423539	Longitude:	0714330

2
North
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000478419**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-L4W 78	Type:	Well
Description:	Not Reported	HUC:	01070004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1930
Well Depth:	20	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

3
North
1/2 - 1 Mile
Lower

FED USGS **USGS40000478521**

Organization ID:	USGS-MA
Organization Name:	USGS Massachusetts Water Science Center

Monitor Location:	MA-L4W 38	Type:	Well
Description:	Not Reported	HUC:	01070004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Bedrock
Aquifer Type:	Not Reported	Construction Date:	1965
Well Depth:	165	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

4
NE **FED USGS** **USGS40000478520**
1/2 - 1 Mile
Lower

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-L4W 47	Type:	Well
Description:	Not Reported	HUC:	01070004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1953
Well Depth:	10	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

5
NE **FED USGS** **USGS40000478503**
1/2 - 1 Mile
Lower

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-L4W 76	Type:	Well
Description:	Not Reported	HUC:	01070004
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1962
Well Depth:	15	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

6
NNE **MA WELLS** **MA9000000003635**
1/2 - 1 Mile
Lower

PWS ID:	2162000	Site Name:	GPW 6 HICKORY HILLS
Type:	Community Groundwater Well		
Facility Name:	Not Reported	SubBasin:	NASHUA
Basemap:	DTQ	Accuracy Estimate (ft):	500
Feature Type:	GW	Location Method:	MAP
Primary Location Source:	MS_LMTQ	Secondary Location Source:	Not Reported
Tertiary Location Source:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Source ID:	2162000-06G	PWS Name:	LUNENBURG WATER DISTRICT
Source Name:	GPW 6 HICKORY HILLS	PWS Status:	A
Source Status:	I	PWS Class:	COM
Source Availability:	INACT		
Well Name:	GPW 6 HICKORY HILLS	Purveyor:	LUNENBURG WATER DISTRICT
Basin:	NASHUA	Region:	2

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: MA Radon

Radon Test Results

County	% of sites>4 pCi/L	Median
WORCESTER	38	2.8

Federal EPA Radon Zone for WORCESTER County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 01462

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	9.700 pCi/L	0%	100%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	2.700 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Massachusetts Geographic Information System (MassGIS) Datalayers
Source: Executive Office of Environmental Affairs
Telephone:

Public Water Supply Database

Telephone:
The Public Water Supply datalayer contains the locations of public community surface and groundwater supply sources and public non-community supply sources as defined in 310 CMR 22.00.

Areas of Critical Environmental Concern

Telephone:
The Areas of Critical Environmental Concern (ACEC) datalayer shows the location of areas that have been designated ACECs by the Secretary of Environmental Affairs. ACEC designation requires greater environmental review of certain kinds of proposed development under state jurisdiction within the ACEC boundaries. The ACEC Program is administered by the Department of Environmental Management (DEM) on behalf of the Secretary of Environmental Affairs. The Massachusetts Coastal Zone Management (MCZM) Office managed the original Coastal ACEC Program from 1978 to 1993, and continues to play a key role in monitoring coastal ACECs. Procedures for ACEC designation and the general policies governing the effects of designation are contained in the ACEC regulations (301 CMR 12.00). The ACEC datalayer has been compiled by MCZM and DEM and includes both coastal and inland areas.

EPA Designated Sole Source Aquifers

Telephone:
The Sole Source Aquifer datalayer was compiled by the Department of Environmental Protection (DEP) Division of Water Supply (DWS). Seven Sole Source Aquifers have been designated by the US Environmental Protection Agency (EPA) for Massachusetts. A Sole Source Aquifer (SSA) is an aquifer designated by US EPA as the sole or principal source of drinking water for a given aquifer service area; that is, an aquifer which is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should that aquifer become contaminated. The aquifers were defined by an EPA hydrogeologist.

Aquifers

Telephone:
MassGIS produced an aquifer datalayer composed of 20 individual panels, generally based on the boundaries of the major drainage basins. Areas of high and medium yield were mapped. This datalayer includes polygon attribute coding to help in the identification of areas in which cleanup of hazardous waste sites must meet drinking water standards, as defined in the Massachusetts Contingency Plan (MCP) (310 CMR 40.00000).

Non-Potential Drinking Water Source Areas

Telephone:
Non-Potential Drinking Water Source Areas (NPDWSA) are regulatory in nature representing one of many considerations used in determining the standards to which ground water must be cleaned in the event of a release of oil or hazardous material. NPDWSAs are not based on existing water quality and do not indicate poor ambient conditions.

Telephone:

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER STATE DATABASE INFORMATION

RADON

State Database: MA Radon
Source: Department of Health
Telephone: 413-586-7525
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

Appendix B

Sanborn Maps

Thomas C. Passios Elementary School
1025 Massachusetts Ave
Lunenburg, MA 01462

Inquiry Number: 6122043.3
July 15, 2020

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

07/15/20

Site Name:

Thomas C. Passios Elementary
1025 Massachusetts Ave
Lunenburg, MA 01462
EDR Inquiry # 6122043.3

Client Name:

The LiRo Group
3 Aerial Way
Syosset, NY 11791
Contact: Sophia Waxenberg

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by The LiRo Group were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 708A-403C-AC2C

PO # NA

Project NA

Maps Provided:

1946
1936

Sanborn® Library search results

Certification #: 708A-403C-AC2C

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✓ Library of Congress
- ✓ University Publications of America
- ✓ EDR Private Collection

The Sanborn Library LLC Since 1866™

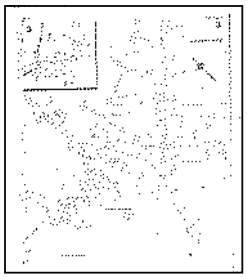
Limited Permission To Make Copies

The LiRo Group (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Sanborn Sheet Key

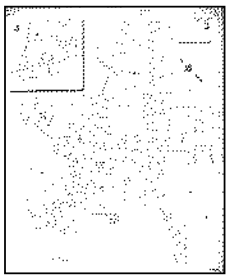
This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1946 Source Sheets



Volume 1, Sheet 3
1946

1936 Source Sheets

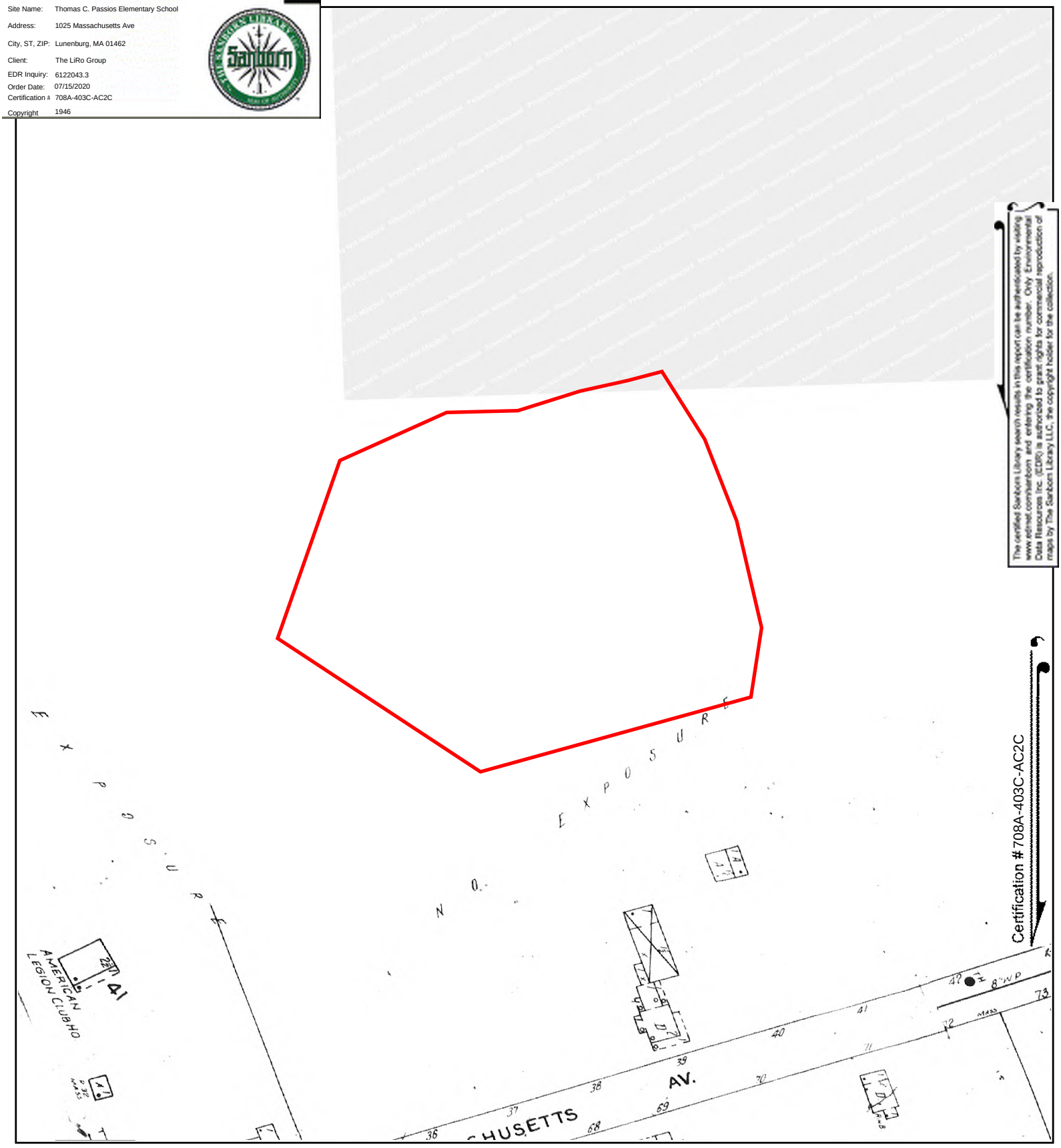


Volume 1, Sheet 3
1936

Certified Sanborn® Map

1946

Site Name: Thomas C. Passios Elementary School
Address: 1025 Massachusetts Ave
City, ST, ZIP: Lunenburg, MA 01462
Client: The LiRo Group
EDR Inquiry: 6122043.3
Order Date: 07/15/2020
Certification #: 708A-403C-AC2C
Copyright: 1946



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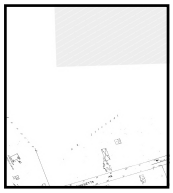
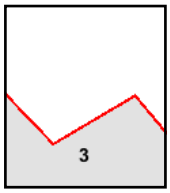
Certification #708A-403C-AC2C

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600





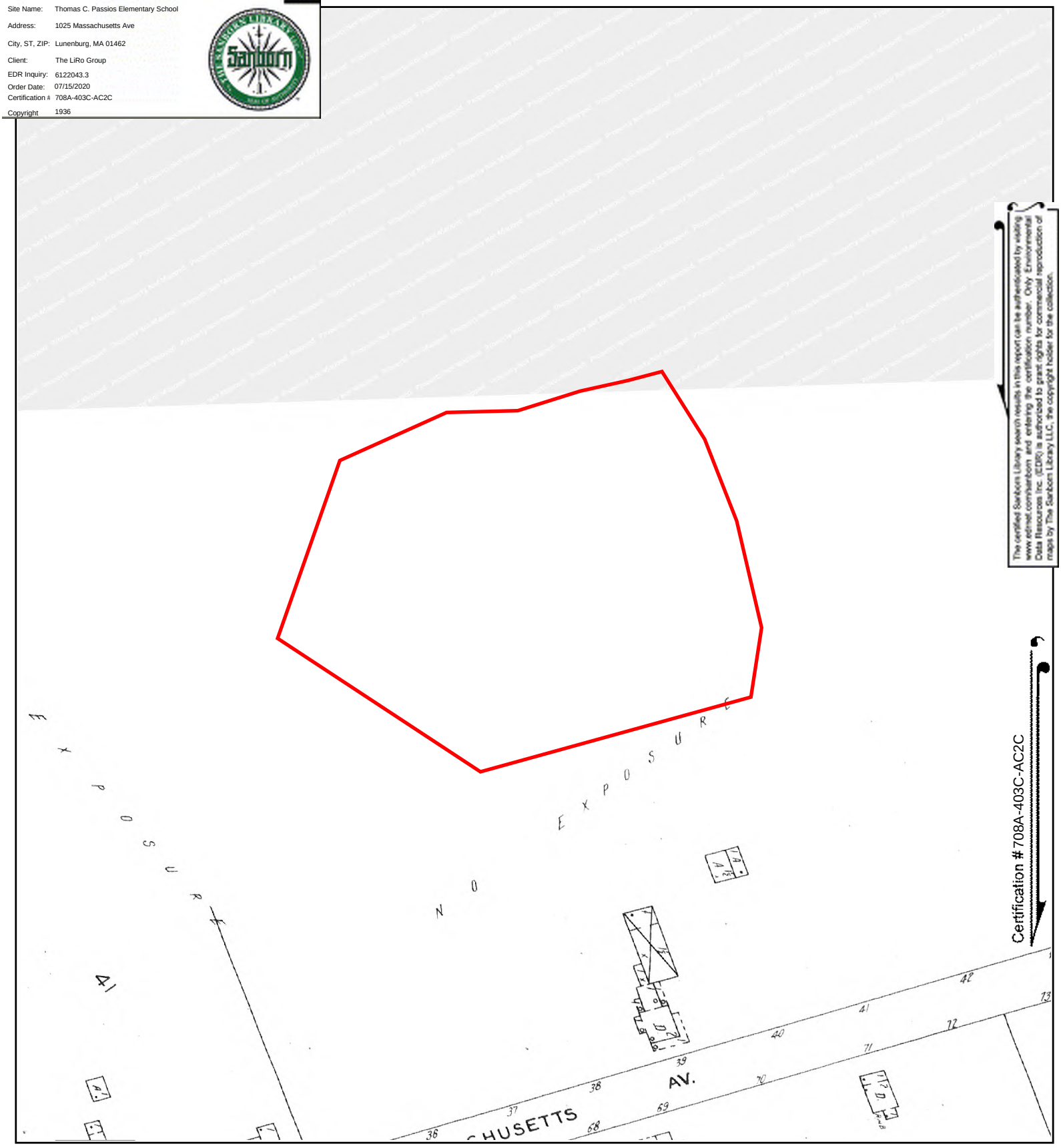
Volume 1, Sheet 3

N

Certified Sanborn® Map

1936

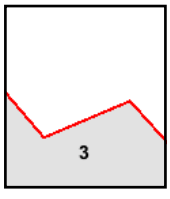
Site Name: Thomas C. Passios Elementary School
Address: 1025 Massachusetts Ave
City, ST, ZIP: Lunenburg, MA 01462
Client: The LiRo Group
EDR Inquiry: 6122043.3
Order Date: 07/15/2020
Certification #: 708A-403C-AC2C
Copyright: 1936



This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

Volume 1, Sheet 3



Appendix C

Aerial Maps

Thomas C. Passios Elementary School

1025 Massachusetts Ave

Lunenburg, MA 01462

Inquiry Number: 6122043.8

July 15, 2020

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

07/15/20

Site Name:

Thomas C. Passios Elementary
1025 Massachusetts Ave
Lunenburg, MA 01462
EDR Inquiry # 6122043.8

Client Name:

The LiRo Group
3 Aerial Way
Syosset, NY 11791
Contact: Sophia Waxenberg

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2008	1"=500'	Flight Year: 2008	USDA/NAIP
1995	1"=500'	Acquisition Date: March 29, 1995	USGS/DOQQ
1985	1"=500'	Flight Date: March 16, 1985	USDA
1980	1"=500'	Flight Date: September 11, 1980	USDA
1975	1"=500'	Flight Date: October 28, 1975	USGS
1969	1"=500'	Flight Date: September 13, 1969	USGS
1963	1"=500'	Flight Date: April 29, 1963	USGS
1938	1"=500'	Flight Date: November 10, 1938	USGS

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

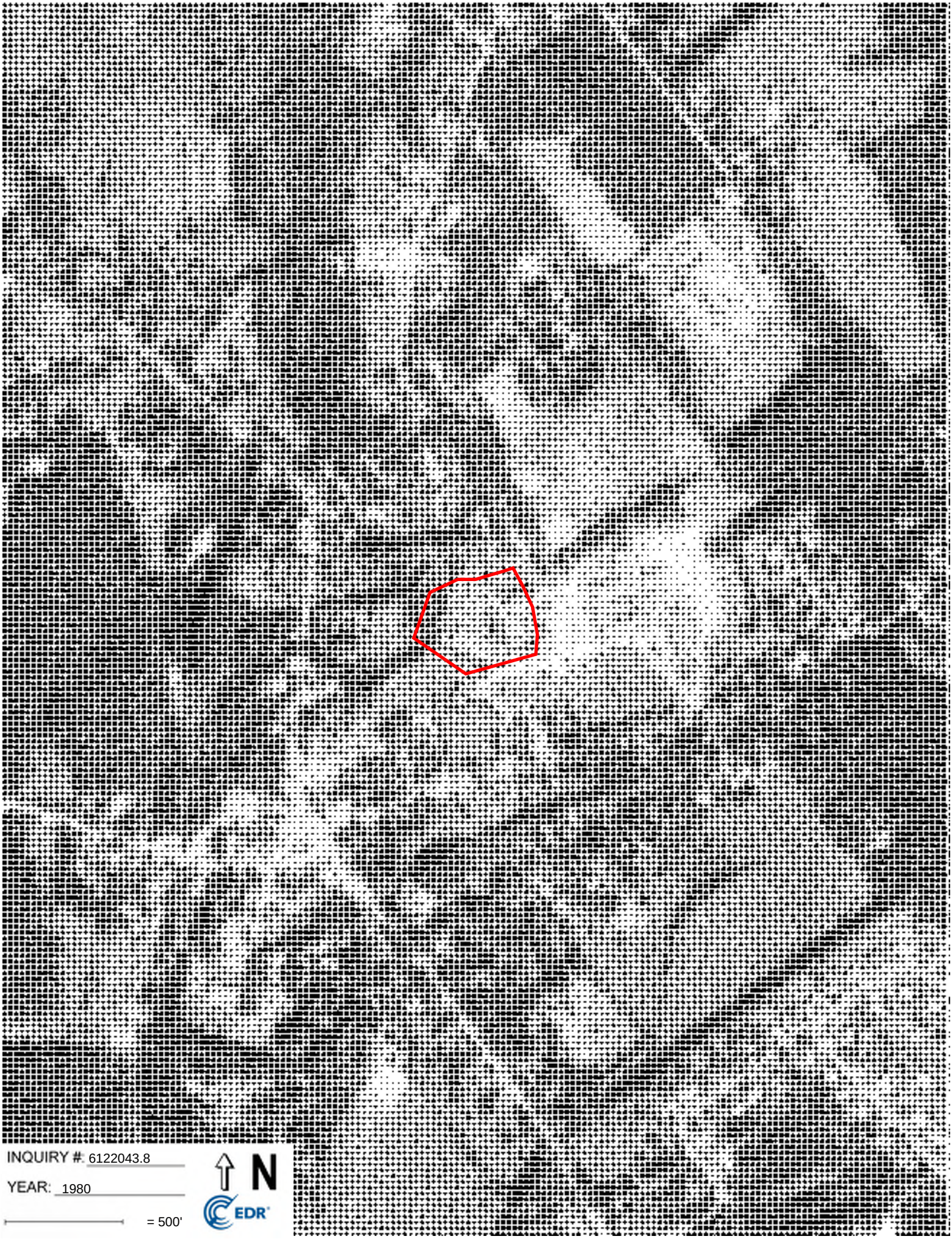

INQUIRY #: 6122043.8
YEAR: 2016
= 500'
N
EDR


INQUIRY #: 6122043.8
YEAR: 2012
= 500'
N
EDR


INQUIRY #: 6122043.8
YEAR: 2008
= 500'
N
EDR


INQUIRY #: 6122043.8
YEAR: 1995
= 500'
N
EDR
Subject boundary not shown because it exceeds image extent or image is not georeferenced.


INQUIRY #: 6122043.8
YEAR: 1985
= 500'
N
EDR


INQUIRY #: 6122043.8
YEAR: 1980
= 500'
N
EDR


INQUIRY #: 6122043.8
YEAR: 1975
= 500'
N
EDR


INQUIRY #: 6122043.8
YEAR: 1969
= 500'
N
EDR

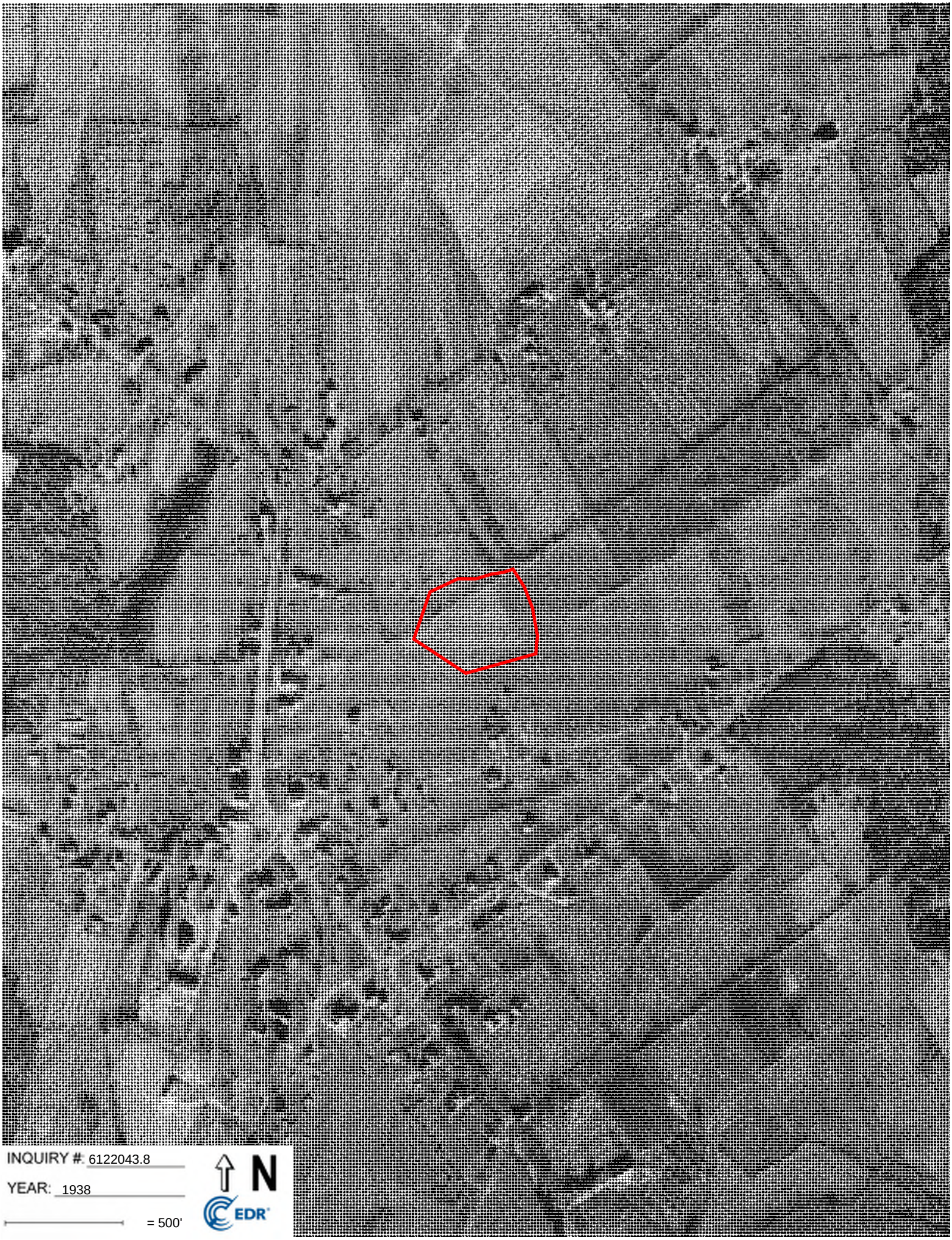
INQUIRY #: 6122043.8

YEAR: 1963

= 500'

N

EDR



INQUIRY #: 6122043.8

YEAR: 1938

= 500'

N

EDR

Appendix D

Topographic Maps

Thomas C. Passios Elementary School
1025 Massachusetts Ave
Lunenburg, MA 01462

Inquiry Number: 6122043.4
July 15, 2020

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

07/15/20

Site Name:

Thomas C. Passios Elementary
1025 Massachusetts Ave
Lunenburg, MA 01462
EDR Inquiry # 6122043.4

Client Name:

The LiRo Group
3 Aerial Way
Syosset, NY 11791
Contact: Sophia Waxenberg

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by The LiRo Group were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA

Project: NA

Coordinates:

Latitude:	42.597455 42° 35' 51" North
Longitude:	-71.721884 -71° 43' 19" West
UTM Zone:	Zone 19 North
UTM X Meters:	276693.77
UTM Y Meters:	4719705.95
Elevation:	546.98' above sea level

Maps Provided:

2012	1936
1988	1935
1979	1893
1965	
1950	
1949	
1943	
1939	

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets

Fitchburg
2012
7.5-minute, 24000

Shirley
2012
7.5-minute, 24000

1988 Source Sheets

Fitchburg
1988
7.5-minute, 25000
Aerial Photo Revised 1980

Ayer
1988
7.5-minute, 25000
Aerial Photo Revised 1981

1979 Source Sheets

Shirley
1979
7.5-minute, 25000
Aerial Photo Revised 1975

Fitchburg
1979
7.5-minute, 25000
Aerial Photo Revised 1975

1965 Source Sheets

Shirley
1965
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1950 Source Sheets

Shirley
1950
7.5-minute, 24000

1949 Source Sheets

FITCHBURG
1949
7.5-minute, 25000

Shirley
1949
7.5-minute, 25000
Aerial Photo Revised 1947

1943 Source Sheets

Fitchburg
1943
30-minute, 125000

1939 Source Sheets

Shirley
1939
7.5-minute, 31680

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1936 Source Sheets

Groton
1936
15-minute, 62500

Fitchburg
1936
15-minute, 62500

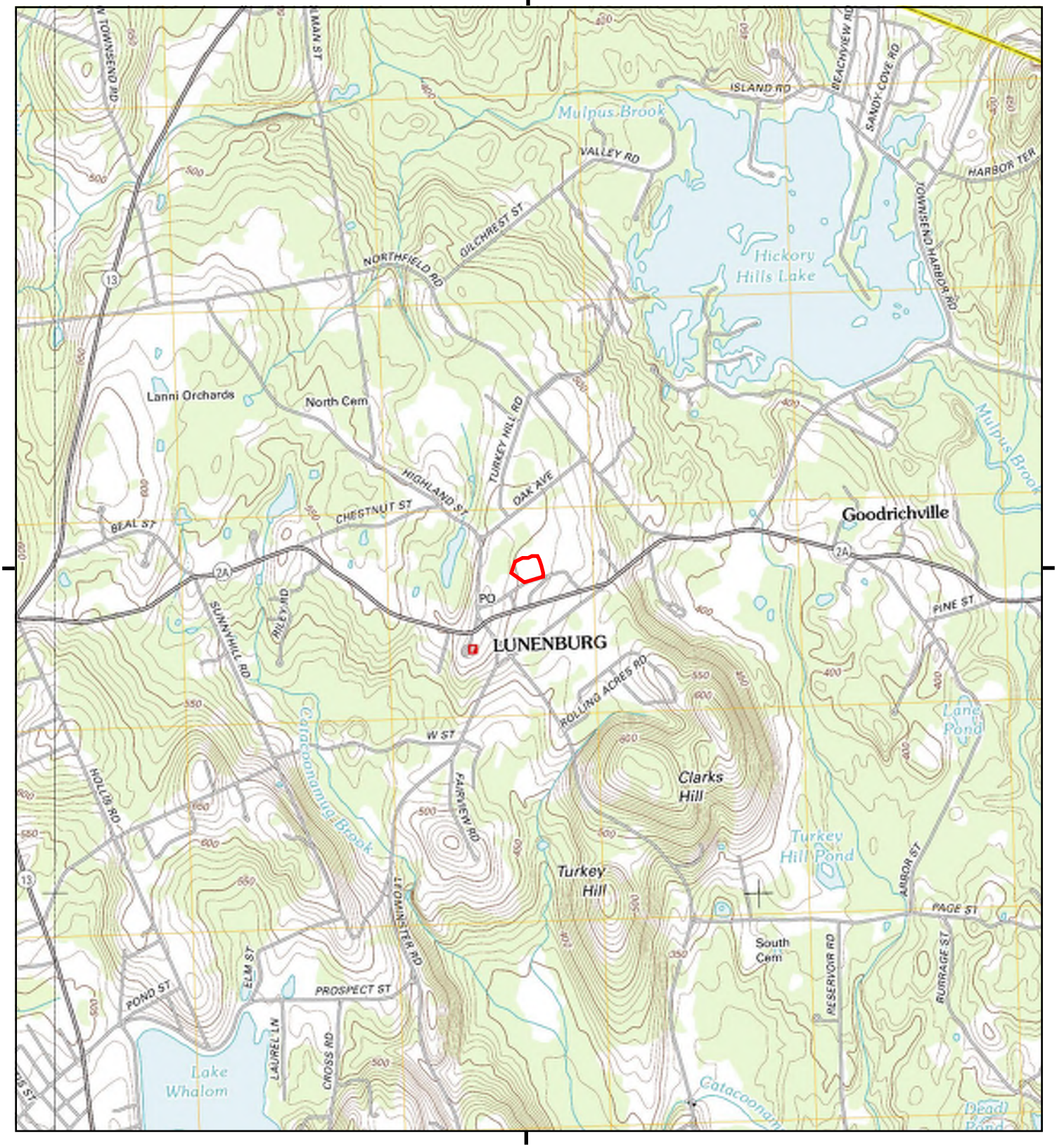
1935 Source Sheets

Shirley
1935
7.5-minute, 24000

1893 Source Sheets

Fitchburg
1893
15-minute, 62500

Groton
1893
15-minute, 62500



This report includes information from the following map sheet(s).

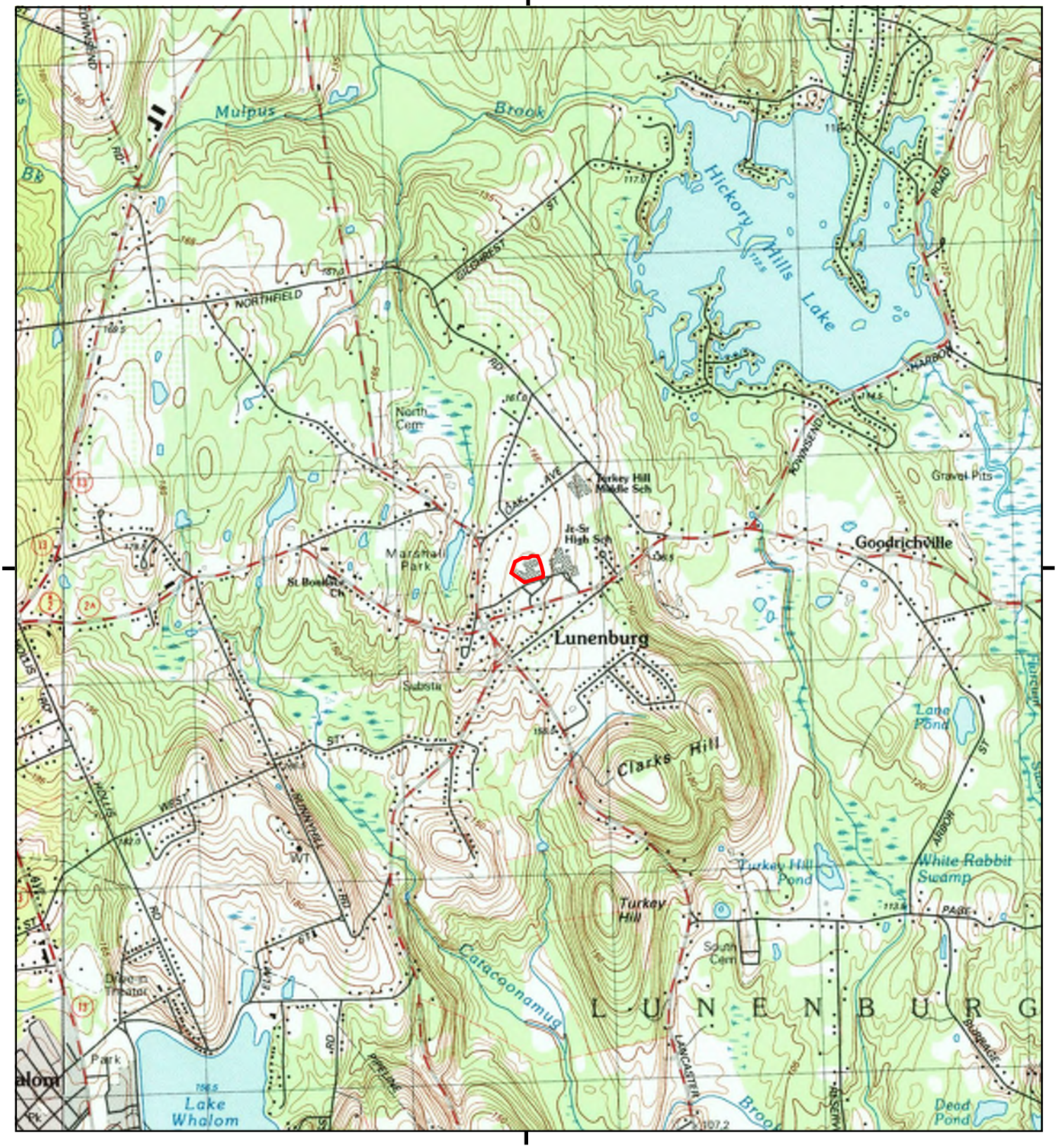
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Shirley, 2012, 7.5-minute
SW, Fitchburg, 2012, 7.5-minute

SITE NAME: Thomas C. Passios Elementary School
ADDRESS: 1025 Massachusetts Ave
Lunenburg, MA 01462
CLIENT: The LiRo Group

N



This report includes information from the following map sheet(s).

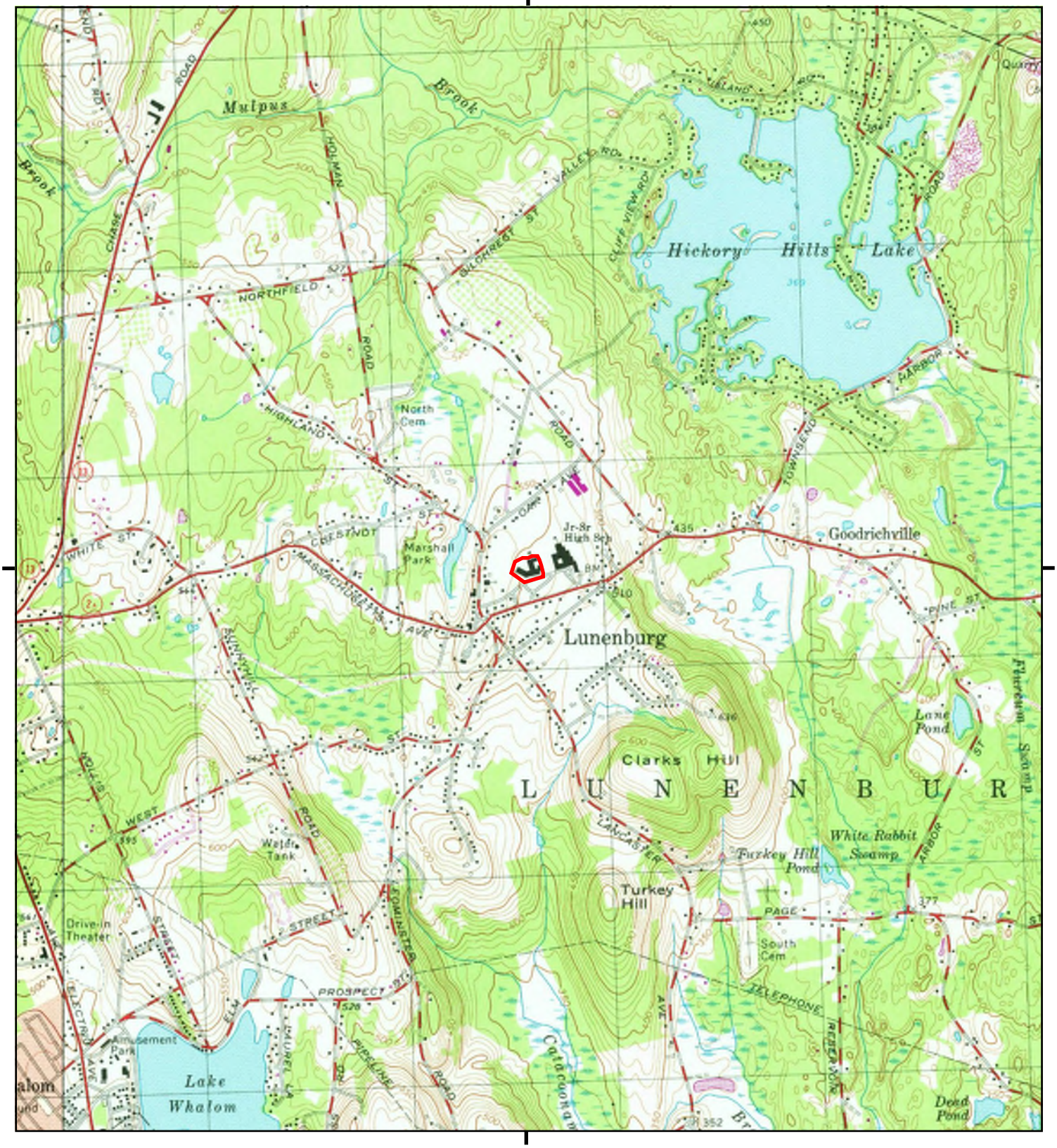
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Ayer, 1988, 7.5-minute
W, Fitchburg, 1988, 7.5-minute

SITE NAME: Thomas C. Passios Elementary School
ADDRESS: 1025 Massachusetts Ave
Lunenburg, MA 01462
CLIENT: The LiRo Group

N



This report includes information from the following map sheet(s).

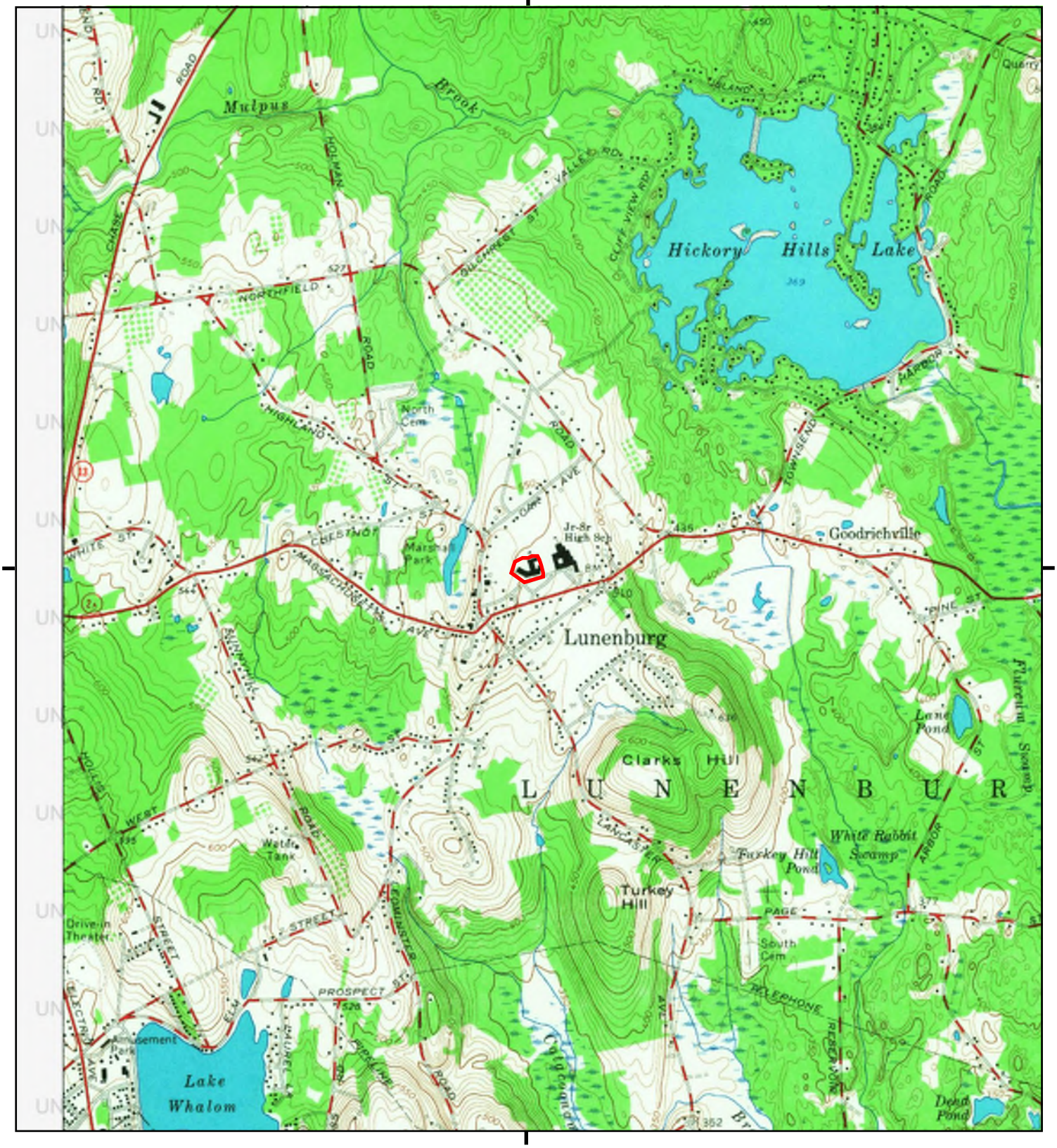
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Shirley, 1979, 7.5-minute
SW, Fitchburg, 1979, 7.5-minute

SITE NAME: Thomas C. Passios Elementary School
ADDRESS: 1025 Massachusetts Ave
Lunenburg, MA 01462
CLIENT: The LiRo Group

N



This report includes information from the following map sheet(s).

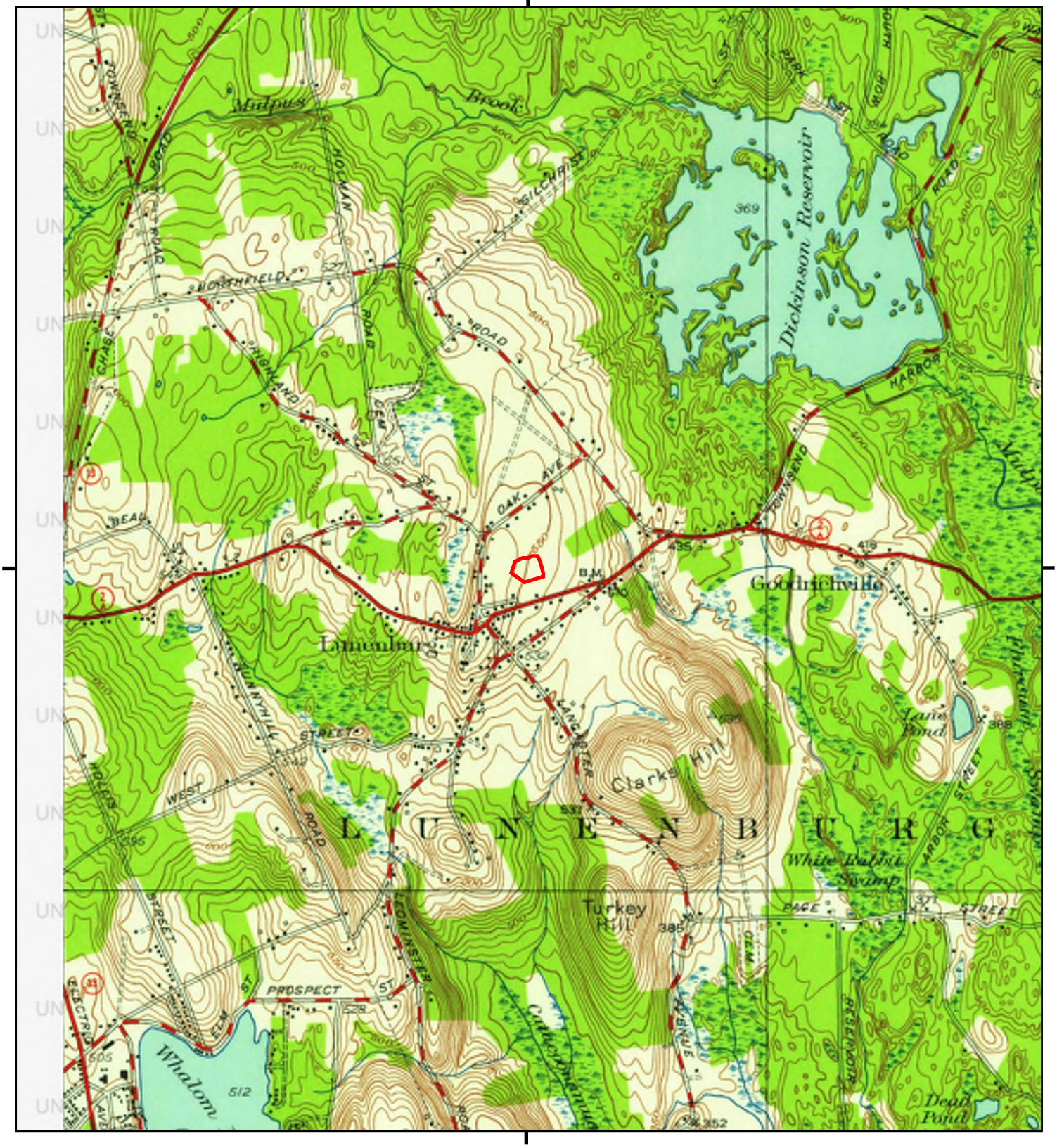
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Shirley, 1965, 7.5-minute

SITE NAME: Thomas C. Passios Elementary School
ADDRESS: 1025 Massachusetts Ave
Lunenburg, MA 01462
CLIENT: The LiRo Group

N



This report includes information from the following map sheet(s).

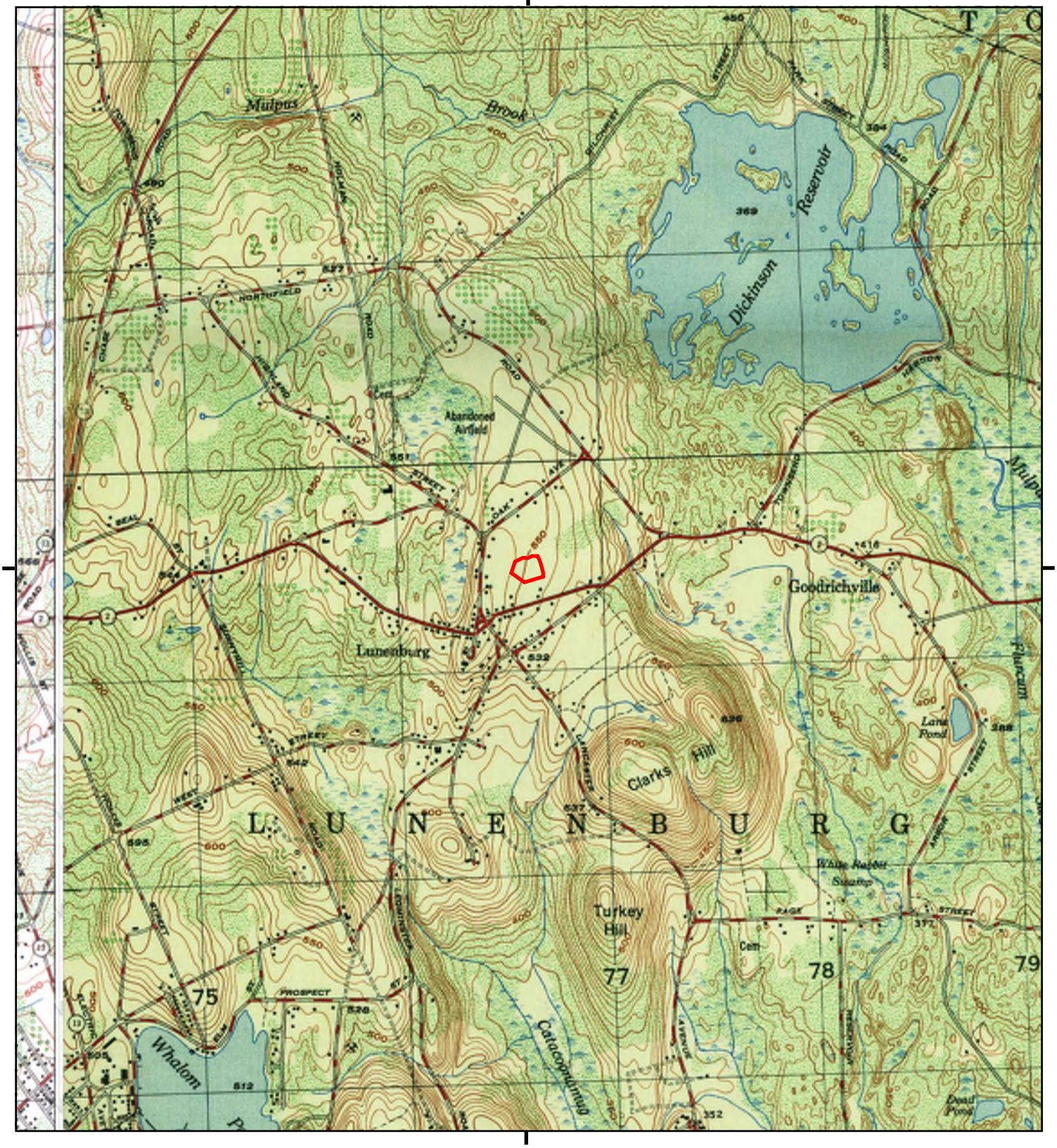
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Shirley, 1950, 7.5-minute

SITE NAME: Thomas C. Passios Elementary School
ADDRESS: 1025 Massachusetts Ave
Lunenburg, MA 01462
CLIENT: The LiRo Group

N



This report includes information from the following map sheet(s).

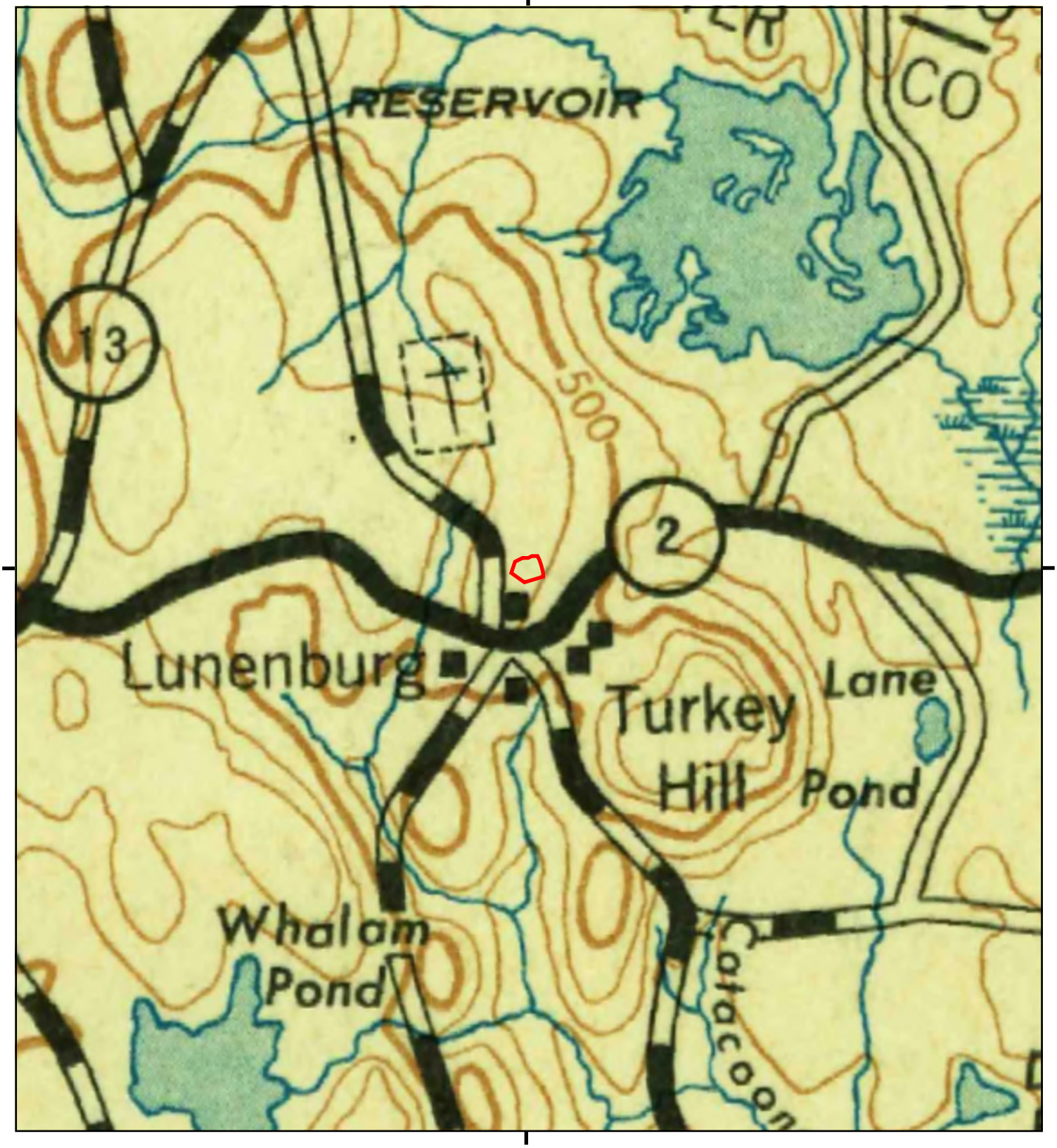
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Shirley, 1949, 7.5-minute
SW, FITCHBURG, 1949, 7.5-minute

SITE NAME: Thomas C. Passios Elementary School
ADDRESS: 1025 Massachusetts Ave
Lunenburg, MA 01462
CLIENT: The LiRo Group

N



This report includes information from the following map sheet(s).

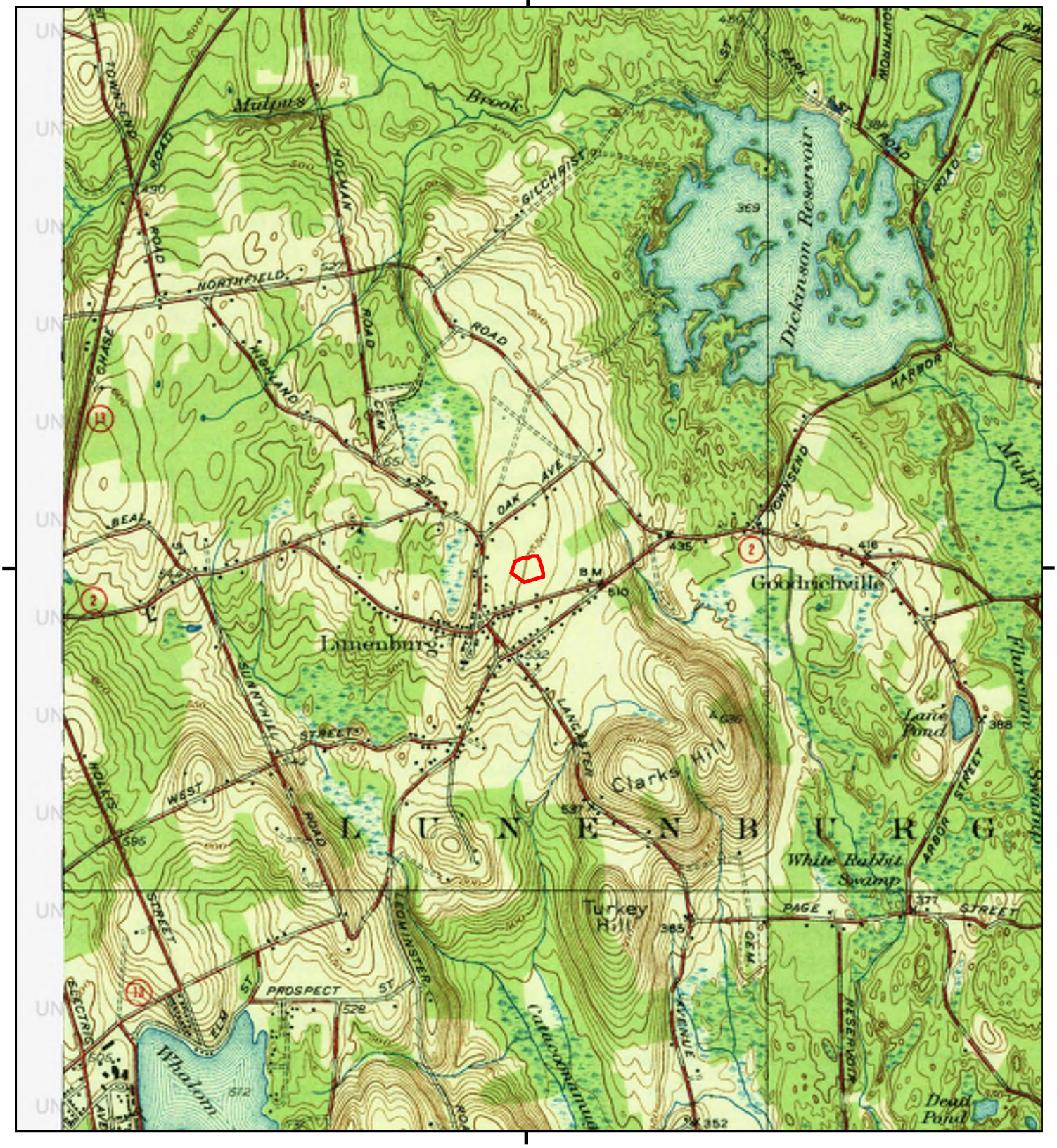
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Fitchburg, 1943, 30-minute

SITE NAME: Thomas C. Passios Elementary School
ADDRESS: 1025 Massachusetts Ave
Lunenburg, MA 01462
CLIENT: The LiRo Group

N



This report includes information from the following map sheet(s).

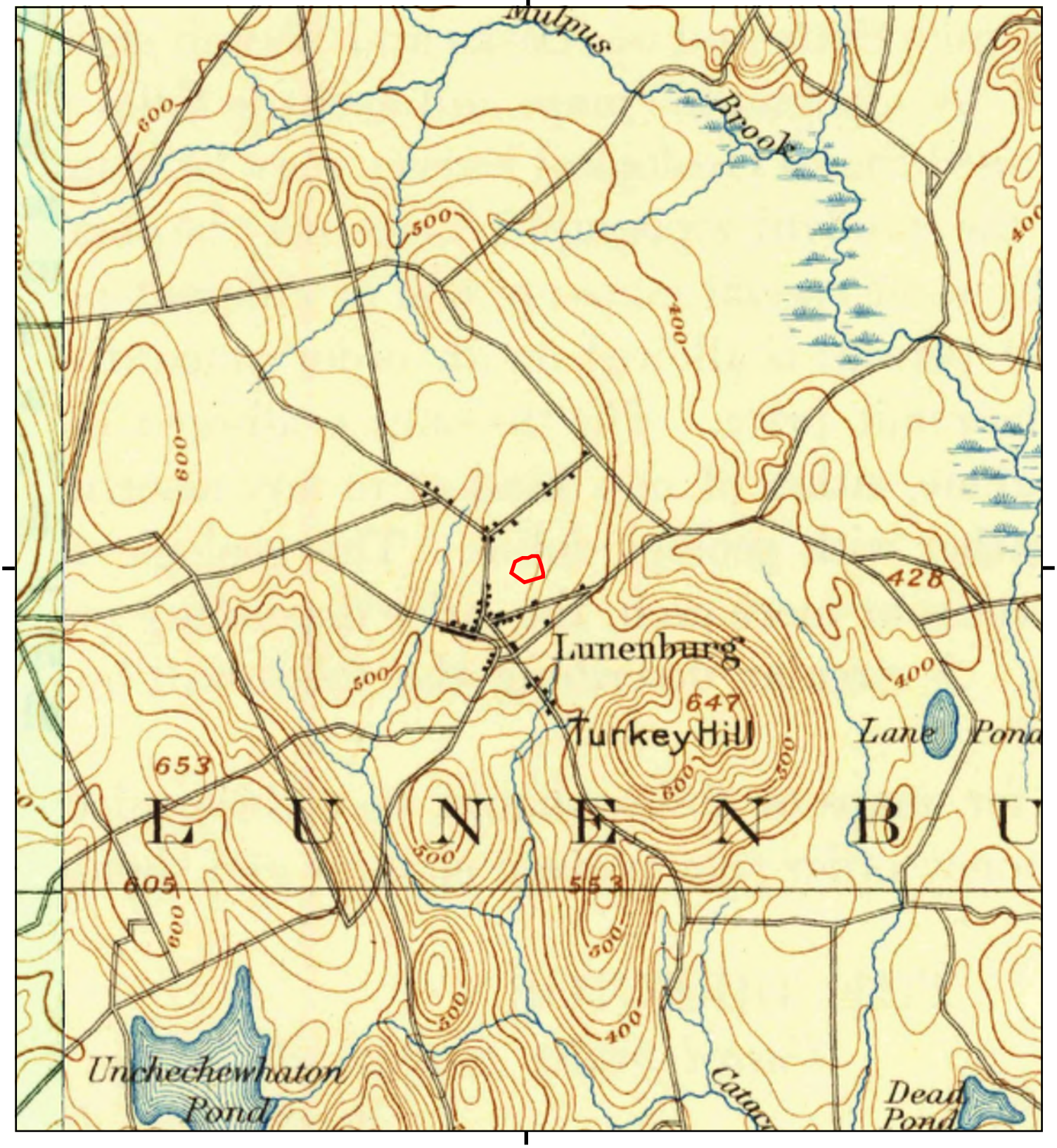
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Shirley, 1939, 7.5-minute

SITE NAME: Thomas C. Passios Elementary School
ADDRESS: 1025 Massachusetts Ave
Lunenburg, MA 01462
CLIENT: The LiRo Group

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Groton, 1936, 15-minute
W, Fitchburg, 1936, 15-minute

SITE NAME: Thomas C. Passios Elementary School
ADDRESS: 1025 Massachusetts Ave
Lunenburg, MA 01462
CLIENT: The LiRo Group

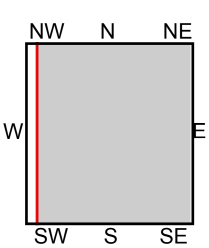
N

Historical Topo Map

1935

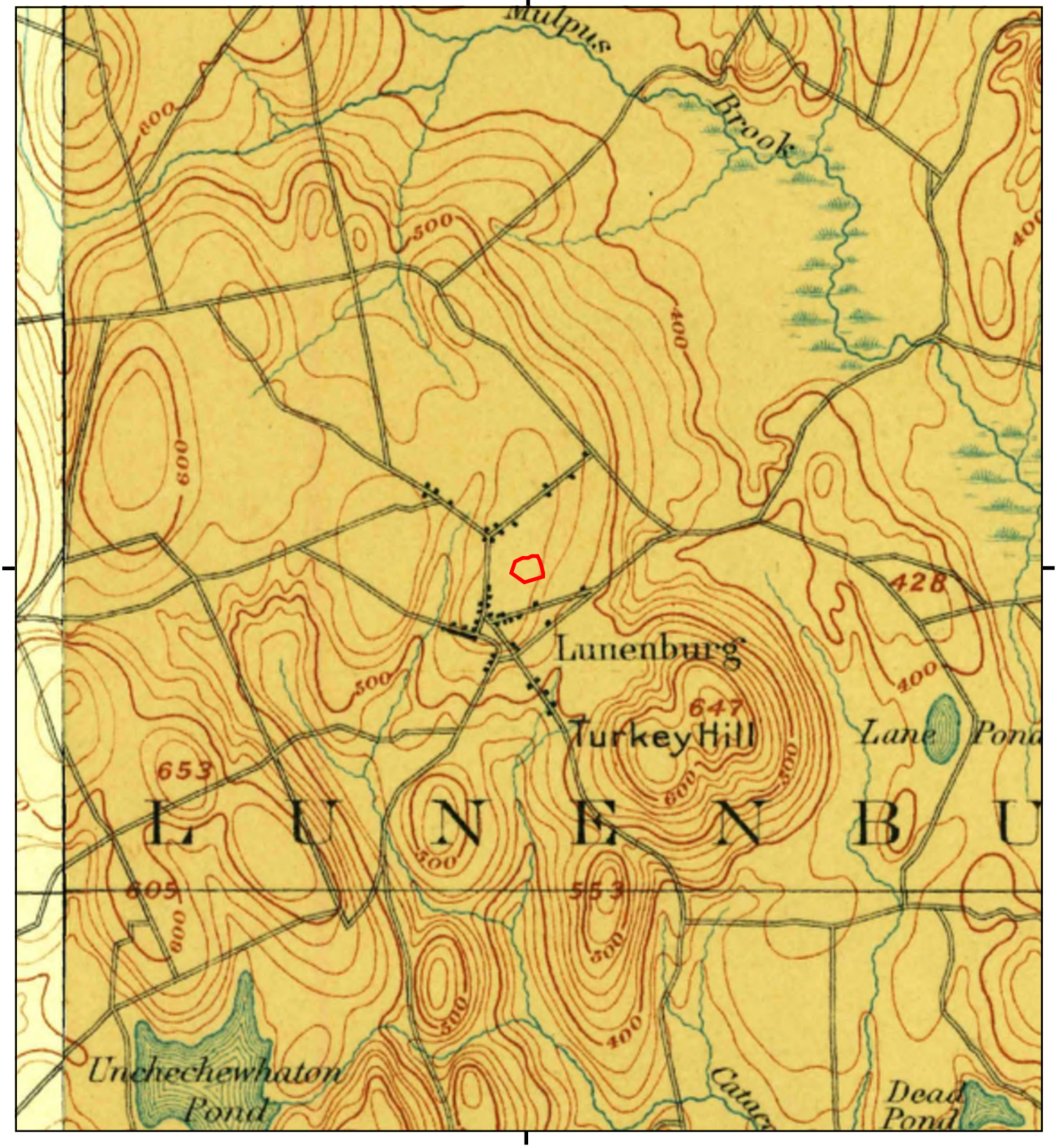
This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5



TP, Shirley, 1935, 7.5-minute

SITE NAME: Thomas C. Passios Elementary School
ADDRESS: 1025 Massachusetts Ave
Lunenburg, MA 01462
CLIENT: The LiRo Group



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Groton, 1893, 15-minute
W, Fitchburg, 1893, 15-minute

SITE NAME: Thomas C. Passios Elementary School
ADDRESS: 1025 Massachusetts Ave
Lunenburg, MA 01462
CLIENT: The LiRo Group

N

Appendix E

City Directory

Thomas C. Passios Elementary School
1025 Massachusetts Ave
Lunenburg, MA 01462

Inquiry Number: 6122043.5
July 16, 2020

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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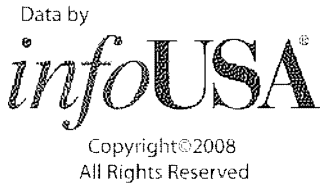

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2017	☑	☐	EDR Digital Archive
2014	☑	☐	EDR Digital Archive
2010	☑	☐	EDR Digital Archive
2005	☑	☐	EDR Digital Archive
2000	☑	☐	EDR Digital Archive
1995	☑	☐	EDR Digital Archive
1992	☑	☐	EDR Digital Archive
1987	☑	☐	Polk's City Directory
1982	☑	☐	Polk's City Directory
1977	☑	☐	Polk's City Directory
1972	☑	☐	Polk's City Directory

FINDINGS

TARGET PROPERTY STREET

1025 Massachusetts Ave
Lunenburg, MA 01462

Year	*CD Image*	*Source*

MASSACHUSETTS AVE

2017	pg A1	EDR Digital Archive
2014	pg A2	EDR Digital Archive
2010	pg A5	EDR Digital Archive
2005	pg A7	EDR Digital Archive
2000	pg A9	EDR Digital Archive
1995	pg A11	EDR Digital Archive
1992	pg A14	EDR Digital Archive
1987	pg A17	Polk's City Directory
1987	pg A18	Polk's City Directory
1987	pg A19	Polk's City Directory
1982	pg A20	Polk's City Directory
1982	pg A21	Polk's City Directory
1982	pg A22	Polk's City Directory
1982	pg A23	Polk's City Directory
1977	pg A24	Polk's City Directory
1977	pg A25	Polk's City Directory
1977	pg A26	Polk's City Directory
1977	pg A27	Polk's City Directory
1972	pg A28	Polk's City Directory
1972	pg A29	Polk's City Directory
1972	pg A30	Polk's City Directory
1972	pg A31	Polk's City Directory

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

MASSACHUSETTS AVE 2017

697	LUNENBURG FAMILY PRACTICE
712	SIEKMAN, OLIVIA A
733	PATONS LUMBER MILL
742	THE BONJOUR SCHOOL
763	SAWYERMILLERMASCIARELLI FUNERAL HO
817	SAINT BONIFACE EARLY EDUCATION & CHI
	ST BONIFACE RECTORY
	ST BONIFACE RELIGIOUS EDUCATION CTR
835	CONRADS DRIVEIN SEAFOODS
856	CREATIVE CARPENTRY
876	MARY KAY COSMETICS
909	THE HARLEY HOUSE INN
930	OKERMAN GAIL FIVE POINTS COUNSELING
945	UNITED STATES GOVERNMENT
	UNITED STATES POSTAL SERVICEUSPS
947	NORTH MIDDLESEX SAVINGS BANK
960	TOWN OF LUNENBURG
985	GARDENFORM
1025	FLLAC EDUCATIONAL COLLABORATIVE
	SHAWMUT DESIGN & CONSTRUCTION
	TOWN OF LUNENBURG
1033	THE LUNENBURG LEDGER
	TOWN OF LUNENBURG
1079	TOWN OF LUNENBURG
1249	SEELEY AUTOMOTIVE SERVICES
1255	JBTURF
1259	GLOW CHIROPRACTIC
1300	EDS SERVICE STATION

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

MASSACHUSETTS AVE 2014

697	ASHER GARY H MD
	BECHARA CHRISTOPHER MD
	GEIBEL GEORGE F MD
	IYENGAR KASTOORI MD
	LUNENBURG FAMILY PRACTICE
700	POIRIER, ROBERT D
722	CONTOIS, CHRISTOPHER G
724	POIRIER, RUSSELL W
733	PATON, ALAN R
	PATONS LUMBER MILL
742	BONJOUR SCHOOL THE
	OCCUPANT UNKNOWN,
763	MASCIARELLI, MICHAEL A
779	OCCUPANT UNKNOWN,
785	JANUSIS, MICHAEL A
810	GUERIN, BEVERLY
817	DWYER, JOHN A
	ST BONIFACE EARLY EDUCATION & CHILDC
	ST BONIFACE RELIGIOUS EDUCATION CTR
818	LEBLANC, KEVIN C
824	NUTTER, WILLIAM E
830	SCOUTEN, PERCY E
835	CONRADS DRIVEIN SEAFOODS
838	JOHNSON, CHRISTOPHER J
846	OCCUPANT UNKNOWN,
852	GAMBERDELLA, CARL R
856	ROOP, RICHARD R
860	HODELL, FRANK N
862	JOHNSON, WILLIAM W
866	MELVIN, NATHANIEL J
870	MORTIS GEORGE PLUMBING & HEATING
	SCOFIELD, STEPHANIE
871	THOMPSON, MARK J
876	DYER SALLY A
	DYER, CHARLES F
	MARY KAY COSMETICS
900	HEMP, WILLIAM H
906	BARTOLOMEU, PAULA
909	HARLEY HOUSE INN THE
	PADULA, GAYLE L
912	BECKNER, MEGAN L
	DAUPLAISE, DENNIS W
914	OCCUPANT UNKNOWN,
920	FIFE, MSNICOLE
926	DOWNEY, VICKI L
930	COLELLO, NICHOLAS J
	OKERMAN GAIL
932	NACKE, DAVID P
936	FAULKENHAM, DANIEL
944	HIRSCH, LORRI

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

MASSACHUSETTS AVE 2014 (Cont'd)

945	SERVICES UNITED STATES GOVERNMENT PO
	UNITED STATES GOVERNMENT
947	NORTH MIDDLESEX SAVINGS BANK
960	TOWN OF LUNENBURG
985	GARDENFORM
	JEWELL, SUSANNA I
990	HARRINGTON, CHRISTOPHER W
993	COLE, TANNER S
998	MCDONALD, RICHARD M
1003	DELGIUDICE, MICHAEL A
1004	CARLSON, ALBERT J
1010	MCCULLAH, SHARON K
1024	OCCUPANT UNKNOWN,
1025	FLLAC EDUCATIONAL COLLABORATIVE
	TOWN OF LUNENBURG
1030	POUTENIS, MARK V
1033	LUNENBURG LEDGER THE
	TOWN OF LUNENBURG
1036	ONFRO, DENNIS D
1044	GARVEY, BARBARA L
1054	OCCUPANT UNKNOWN,
1079	TOWN OF LUNENBURG
1084	BERTHIAUME, GREGORY D
1091	BINGHAM, DAVID A
1107	SARGENT, STEPHEN F
1112	ALGARIN, BENJAMIN P
1118	ROBERT, GARRY S
1122	NORDLINGER, FRANCIS J
1131	CAVANAGH, MICHAEL S
1147	PATON, BERTHA E
1148	RUKAS, JOHN F
1155	ELLIOTT, ROBERT C
1170	BOUCHER, BRANDON
	OCCUPANT UNKNOWN,
1172	BARNEY, STANLEY
1183	BARNEY, MARIE
1205	OCCUPANT UNKNOWN,
1232	MCADAMS, JORDAN C
	NANO, FRANK N
1234	STEELE, JAMES R
1236	OCCUPANT UNKNOWN,
1249	FIRST CLASS IMPORT
1259	GLOW CHIROPRACTIC
1264	BARNEY, JANICE
1272	HODGE, CHARLES L
1275	RAHAIM, WILLIAM R
1300	EDS SERVICE STATION
1316	SZOCIK, BENJAMIN
1320	DIONNE, EDMOND J
1325	OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

MASSACHUSETTS AVE 2014 (Cont'd)

1331 ERSKINE, DALE B

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

MASSACHUSETTS AVE 2010

697	LUNENBURG FAMILY PRACTICE
700	PORIER, D
722	OCCUPANT UNKNOWN,
724	POIRIER, ROBERT D
733	LEWIS, PAMELA A
742	OCCUPANT UNKNOWN,
763	MASCIARELLI, MICHAEL D
779	OCCUPANT UNKNOWN,
785	LECLAIR, KYLE A
790	OCCUPANT UNKNOWN,
810	GUERIN, BEVERLY
817	ST BONIFACE EARLY EDUCATION
	ST BONIFACE RELIGIOUS ED CTR
	STBONIFACE, EARLY E
818	LEBLANC, KEVIN C
824	NUTTER, WILLIAM E
835	CONRADS DRIVEIN SEAFOODS
846	MONTUORI, LAWRENCE J
852	OCCUPANT UNKNOWN,
856	CREATIVE CARPENTRY
	ROOP, RICHARD R
860	HODELL, FRANK N
862	JOHNSON, WILLIAM W
866	OCCUPANT UNKNOWN,
870	GEORGE J MORTIS PLUMBING & HTG
	SCOFIELD, DAVID
871	THOMPSON, MARK J
876	DYER, SALLY F
	MARY KAY COSMETICS
900	HEMP, WILLIAM H
906	BARTOLOMEU, PAUL
909	HARLEY HOUSE INN
	PADULA, GAYLE L
910	OCCUPANT UNKNOWN,
912	HYDE, JERRY M
914	PARKER, BARBARA
920	OCCUPANT UNKNOWN,
926	DOWNEY, VICKI L
930	COLELLO, NICHOLAS J
932	MASON, ASHLEY
936	NEWMAN, STEPHEN F
944	HIRSCH, LORRI
945	SERVICES UNITED STATES
947	NORTH MIDDLESEX SAVINGS BANK
960	BOARD OF HEALTH
	LUNENBURG PUBLIC LIBRARY
990	HARRINGTON, CHRISTOPHER W
993	OCCUPANT UNKNOWN,
998	MCDONALD, RICHARD M
1003	DELGIUDICE, MICHAEL A

MASSACHUSETTS AVE 2010 (Cont'd)

1004 CARLSON, ALBERT J
1010 OCCUPANT UNKNOWN,
1024 PRATT, NED W
1025 THOMAS C PASSIOS ELEM SCHOOL
1030 POUTENIS, MARK V
1033 LUNENBURG SCHOOL DISTRICT
PLANNING BOARD
1036 DONFRO, HOWARD D
1044 GARVEY, BARBARA A
1054 DAYKIN, PATRICK A
1079 LUNENBURG HIGH SCHOOL
1084 BERTHIAUME, GREGORY D
1091 BINGHAM, DAVID A
1107 SARGENT, STEPHEN F
1112 ALGARIN, BENJAMIN P
1118 VANELLS, MARK J
1122 NORDLINGER, FRANCIS J
1131 CAVANAGH, MICHAEL S
1147 PATON, ALAN R
1148 RUKAS, JOHN F
1155 OCCUPANT UNKNOWN,
1160 MARSDEN, STEVEN L
1170 JEFFREYS, WILLIA
OCCUPANT UNKNOWN,
1172 BARNEY, FLOYD F
1183 BARNEY, JANICE G
1205 BARNEY, THERESE A
1232 BARNEY, STANLEY W
PALMER, KELLEY L
1234 SZOCIK, EDMOND R
1236 OCCUPANT UNKNOWN,
1249 FIRST CLASS IMPORT AUTO SVC
1259 GLOW CHIROPRACTIC
1263 FLAGG, MARK
1264 BARNEY, MARIE L
1272 HODGE, CHARLES L
1275 RAHAIM, WILLIAM R
1300 EDS SERVICE STATION
1312 AFFINITY AUTO SALES
1316 DIONNE, EDMOND J
1320 DIONNE, EDMOND J
1325 MASON, RICK G
1331 OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

MASSACHUSETTS AVE 2005

700	POIRIER, DONNY
722	RYDER, JACQUELINE L
724	POIRIER, ROBERT D
733	OCCUPANT UNKNOWN,
	PATONS LUMBER MILL
742	GORMAN, JEAN
	GUILD DANCERS THE
763	MASCIARELLI, MICHAEL D
779	ARSENAULT, SARAH A
785	OCCUPANT UNKNOWN,
790	RILEY, EDWARD H
810	MILLETTE, PETER V
817	NICCOLLS, EDWARD D
818	LEBLANC, KEVIN C
830	SCOUTEN, PERCY E
835	CONRADS SHIP TO SHORE FISH
	DRIVE IN CONRADS CORP
838	JOHNSON, CHRISTOPHER J
846	MONTUORI, LAWRENCE J
852	TALLMAN, OWEN H
856	ROOP, RICHARD R
860	HODELL, FRANK H
862	JOHNSON, WILLIAM W
866	BUTLER, JESSE L
870	MORTIS, GEORGE J
871	THOMPSON, MARK J
876	DYER, SALLY A
	SALLY A DYER
900	VACHON, JEFFREY M
906	FLAHERTY, KENNETH R
909	HARLEY HO
	PADULA, GAYLE L
910	MESSIER, KAREN A
912	HYDE, JERRY M
914	ITO, RYOSUKE
919	OCCUPANT UNKNOWN,
920	KINSMAN, LISA J
926	TOWER, ROBERT B
930	COLELLO, NICHOLAS J
	OKERMAN GAIL FIVE POINTS COUNSELING
932	STEIN, ROBERT M
936	MCINTYRE, RAYMOND R
941	ARCIDI, JOSEPH M
944	HIRSCH, LORRI
990	HARRINGTON, CHRISTOPHER W
993	COLE, TANNER S
	GATSBY GROUNDS CO
998	MCDONALD, RICHARD E
1003	TOWNSEND, HAZEL D
1004	CARLSON, ALBERT J

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

MASSACHUSETTS AVE 2005 (Cont'd)

1010 MCCULLAH, KENNETH M
1024 PRATT, NED W
1030 POUTENIS, MARK V
1036 DONFRO, HOWARD D
1044 GARVEY, RICHARD J
1054 MAKI, DAVID K
1084 BERTHIAUME, GREGORY D
1091 SHAW, INGER I
1107 BYRON, MARK R
1118 XAYKOSY, PHITH
1122 NORDLINGER, FRANCIS J
1131 CAVANAGH, MICHAEL S
1147 PATON, BERNARD J
1148 RUKAS, JOHN F
1155 JARVI, WEIKKO H
1160 MARSDEN, STEVEN L
1170 JEFFREYS, WILLIAM E
WENTWORTH, NATHAN D
1172 BARNEY, FLOYD F
1183 BARNEY, JANICE D
1205 BARNEY, THERESE A
1232 PALMER, KELLEY
1234 OCCUPANT UNKNOWN,
1236 BARNEY, STANLEY W
1249 FIRST CLASS IMPORT AUTO SERVICE INC
1259 GLOW CHIROPRACTIC
1264 BOUCHER, JOYCE R
1272 HODGE, CHARLES L
1275 OCCUPANT UNKNOWN,
1300 EDS SERVICE STATION
1312 AFFINITY AUTO SALES
1316 SZOCIK, EDMOND R
1320 DIONNE, EDMOND J
1331 ERSKINE, GORDON H

Target Street	Cross Street	Source
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MASSACHUSETTS AVE 2000

697	ASHER GARY H MD
	BECK ROBERT DR
722	OCCUPANT UNKNOWN,
724	LAITINEN, BRUCE
	PETERSEN, WILLIAM
	POIRIER, ROBERT D
733	PATONS LUMBER MILL
742	GUILD DANCERS THE
	JOHNSON, ROBERT
763	MASCIARELLI, MICHAEL
779	KYAJOHNIAN, STEVEN
785	BIDDLE, MARTHA A
795	BARKER, ROBERT A
	FOURNIER, MICHAEL
	MIRON, R L
810	GARNEAU, ALDEA
817	ST BONIFACE RECTORY
	ST BONIFACE RELIGIOUS EDUCATION CENTER
818	TUCKER, ANTHONY E
824	HOGLUND, EDWIN E
830	CARRIER, JANICE P
835	CONRADS DRIVE IN SEAFOODS
	WHITE COLLAR RESIDENTIAL SERVICES INCORPORATED
838	JOHNSON, C
846	LUNENBURG OIL COMPANY
	MONTUORI LAWRENCE J
852	TALLMAN, OWEN
856	CREATIVE CARPENTRY
	ROOP, RICHARD
860	HODELL, FRANK
862	OCCUPANT UNKNOWN,
866	LACKA, DAVID B
870	MORTIS GEO PLUMBING & HEATING
	MORTIS, LYNN
871	THOMPSON, MARK
876	DYER SALLY A
	DYER, CHARLES F
900	OCCUPANT UNKNOWN,
906	FLAHERTY, KENNETH
909	PADULA, MARY L
910	OCCUPANT UNKNOWN,
912	HYDE, JERRY
914	OCCUPANT UNKNOWN,
919	CAMERON, WILLIAM
920	BINGHAM, GREGORY
925	KELLYS SERVICE STATION
	L & M SERVICE CENTER INCORPORATED
926	TOWER, RAYMOND
930	COLELLO, N
	OKERMAN GAIL PHYTHRPST

MASSACHUSETTS AVE 2000 (Cont'd)

932	STEIN, ROBERT
936	MCINTYRE, MARY C
944	ANDERSON, JAMI
	HIRSCH, JOAN
960	TOWN OF LUNENBURG RITTER MEMORIAL LIBRARY
985	GALLAGHER, FRANK M
990	HARRINGTON, ROBERT J
993	COLE, TANNER
998	MCDONALD, RICHARD
1003	VIGNALE, RITA E
1004	CARLSON, ALBERT R
1010	OCCUPANT UNKNOWN,
1024	PRATT, EDWARD W
1025	TOWN OF LUNENBURG SCHOOL DEPARTMENT
1030	SOROKA, JOHN J
1033	TOWN OF LUNENBURG PLANNING BOARD
	TOWN OF LUNENBURG SCHOOL DEPARTMENT
1036	DONFRO, DANIEL J
1044	GARVEY, RICHARD J
1054	MCCARTHY, MICHAEL S
1079	TOWN OF LUNENBURG CIVIL DEFENSE
	TOWN OF LUNENBURG SCHOOL DEPARTMENT
1084	BERTHIAUME, GREGORY
1091	SHAW, INGER
1107	BYRON, MARK R
1118	LINCOLN, CHERYL
1122	NORDLINGER, FRANCIS J
1147	PATON, BERNARD J
1148	RUKAS, JOHN
1155	JARVI, WEIKKO H
1170	JEFFREYS, WILLIAM
	WHITNEY, SEAN P
1172	BARNEY, FLOYD F
1205	BARNEY, WILBUR W
1232	PROCTER, DONALD
	STEVENS, TOM
1234	BEARCE, GEORGE
1263	LANE, ROBERT E
1264	BARNEY, MARIE L
	RODIQUENZ, JOHN M
1272	OCCUPANT UNKNOWN,
1275	OCCUPANT UNKNOWN,
1300	ED'S SERVICE STATION
1316	SZOCIK, EDMOND R
1325	MASON, GEORGE R

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

MASSACHUSETTS AVE 1995

697	ASHER, GARY H, MD
	BECK, ROBERT A, MD
	GEIBEL, GEO F, MD
	LUNENBURG FAMILY PRACTICE
	RESNICK, JEFFREY G, PODIATRST
722	ROONEY, ROBT & KIM
724	POIRIER, ROBT D
733	PATON'S LUMBER MILL
742	BROWNE, JEFFREY T
	GUILD DANCERS THE
763	MILLER, DUSTIN & LEA
779	KYAJOHNIAN, STEVEN
785	MERRIFIELD, L
795	BARKER, ROBT & MICHELE
	FOURNIER, MICHAEL & BARBARA
	MIRON, R L
810	GARNEAU, ALDEA
817	ST BONIFACE RECTORY
	ST BONIFACE RELIGIOUS EDUCATION CTR
824	HOGLUND, EDWIN E
830	CARRIER, J P
835	CONRAD'S DRIVE-IN SEAFOODS
	LEET, DAVID
	WHITE-COLLAR CLEANERS
838	JOHNSON, CHRISTOPHER & NIBAL
846	LUNENBURG OIL CO
	MONTUORI, LAWRENCE J, FUEL OIL
	MONTUORI, LAWRENCE J, FUEL OIL-RES
852	TALLMAN, OWEN
856	ANDERSON, STEVE
860	HODELL, FRANK & JUDITH
862	JOHNSON, WM JR & BARBARA
866	LACKA, DAVID B & WHITNEY A
870	MORTIS GEO PLUMBING & HEATING
	MORTIS, GEO & LYNN
	TRAVELING CLIPPER GROOM SHOP
871	THOMPSON, MARK
876	DYER, CHAS F JR & SALLY
	DYER, CHAS, JR
	DYER, SALLY A
	MARY KAY COSMETICS INDEPENDENT SALES DIRECTORS-DYER SALLY
900	AHOKAS, CURTIS M & SALLY
906	CANNON, MATT & PAT
	FLAHERTY, K & G
909	PADULA, GAYLE
	PADULA, MARL L
910	HILL, WM A
912	HYDE, GERALD M
919	AGEY, A
	CAMERON, WM & DONNA

Target Street	Cross Street	Source
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MASSACHUSETTS AVE 1995 (Cont'd)

919	FLOWER BARN THE
920	BINGHAM, GREGORY
925	KELLY'S MOTOR SALES
	KELLY'S SERVICE STATION
	U-HAUL CO-INDEPENDENT DEALERS-LUNENBURG
926	TOWER, RAYMOND
930	COLELLO, NICHOLAS
	OKERMAN, GAIL
932	STEIN, ROBT
936	MCINTYRE, ULMER R
944	ANDERSON, J & M
	HIRSCH, J
950	HALSTEAD, D
960	LUNENBURG TOWN OF-RITTER MEMORIAL LIBRARYY
985	GALLAGHER, FRANK M
990	HARRINGTON, ROBT J
993	COLE, TANNER
998	MCDONALD, RICHARD & LINDA
1003	VIGNALE, MICHAEL J
1004	CARLSON, ALBERT R, JR
1010	MC CULLAH, MARK
1024	ZALESKA, GARY
1025	LUNENBURG TOWN OF-SCHOOL DEPT-ELEMENTARY SCHOOLS-NURSEE
	LUNENBURG TOWN OF-SCHOOL DEPT-ELEMENTARY SCHOOLS-OFCC
1030	SOROKA, JOHN J
1033	LUNENBURG TOWN OF SCHOOL DEPT HIGH SCHOOL SUPTS OFC BROOKS H
	LUNENBURG TOWN OF-PLANNING BOARDD
1044	GARVEY, RICHARD J
1054	PAGE, CHESTER W
1079	FLLAC EDUCATIONAL COLLABORATIVE
	LUNENBURG TOWN OF SCHOOL DEPT HIGH SCHOOL GUIDANCE OFCC
	LUNENBURG TOWN OF SCHOOL DEPT HIGH SCHOOL TURKEY HILL MIDDLE
	LUNENBURG TOWN OF-CIVIL DEFENSEE
	LUNENBURG TOWN OF-SCHOOL DEPT-HIGH SCHOOL-ATHLETIC DEPTT
	LUNENBURG TOWN OF-SCHOOL DEPT-HIGH SCHOOL-HIGH SCHOOL FOOD S
	LUNENBURG TOWN OF-SCHOOL DEPT-HIGH SCHOOLL
1084	BERTHIAUME, GREGORY & KARIN
	O'BRIEN, STEVE & KIM
1091	ROBINSON, ALFRED D
1107	BYRON, MARK R & ANDREA
1118	LINCOLN, C
1122	NORDLINGER, FRANCIS J
	RISDON, GALES
1131	BREED, CONNIE S
1148	RUKAS, JOHN
1155	JARVI, WEIKKO H
1160	KEMP, WM
1170	JEFFREYS, WM
	JEFFREYS, WM & SHIRLEY
	WHITNEY, SEAN P

Target Street	Cross Street	Source
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MASSACHUSETTS AVE 1995 (Cont'd)

1172 BARNEY, FLOYD F
1183 BARNEY, MICHAEL G
1205 BARNEY, WILBUR W
1232 NANO, FRANK & SANDRA
1234 BEARCE, LORI & GEO
1264 BARNEY, MARIE L
BOUCHER, J
1272 HODGE, CHAS L, 3RD
1275 JARVELA, FRED A
1300 ED'S SERVICE STATION
1312 RABOIN MARC AUTO SALES
1316 SZOCIK, EDMOND R
1325 MASON, GEO R

Target Street	Cross Street	Source
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MASSACHUSETTS AVE 1992

697	ASHER, GARY H, MD
	BECK, ROBERT A, MD
	GEIBEL, GEO F, MD
	HOUSKA, ROBERT B, MD
	LUNENBURG FAMILY PRACTICE INC
	RESNICK, JEFFREY G, PODIATRST
724	DUNHAM, DANL
	POIRIER, ROBT D
733	PATON'S LUMBER MILL
742	CUPP, T L
	GUILD DANCERS THE
763	CHOBAN, GEORGE & JANIS
779	BACON, J
795	BARKER, ROBT & MICHELE
	BEDARD, MARK S
	FOURNIER, MICHAEL & BARBARA
	LEBLANC, RICHARD & ROBYN
810	GARNEAU, ALDEA
817	DIGERONIMO, MICHAEL A
	ST BONIFACE
	ST BONIFACE RECTORY
	ST BONIFACE RELIGIOUS EDUCATION CTR
818	TUCKER, ANTHONY JR & MONIQUE
824	HOGLUND, EDWIN E
830	MARINO, JAS P
835	LEET, DAVID
	WHITE-COLLAR CLEANERS
838	FELDEISEN & RIDDLE ATTORNEYS AT LAW
	FELDEISEN, ROSEANN E, ATTY
	RIDDLE, JUNE S, ATTY
	WHITE, RICHARD J ATTORNEY AT LAW
846	LUNENBURG OIL CO
	MONTUORI, LAWRENCE J, FUEL OIL
	MONTUORI, LAWRENCE J, FUEL OIL-RES
852	TALLMAN, OWEN
856	ANDERSON, STEVE
860	ROBERTS, BRIAN F
862	JOHNSON, WM JR & BARBARA
866	LACKA, DAVID B & WHITNEY A
870	MORTIS GEO PLUMBING & HEATING
	MORTIS, GEO & LYNN
	TRAVELING CLIPPER GROOM SHOP
876	DYER SALLY A
	DYER, CHAS F JR & SALLY
	DYER, CHAS, JR
900	AHOKAS, CURTIS M & SALLY
906	MATHEWS, DONALD M
909	PADULA, GAYLE
	PADULA, M
	PADULA, MARY L, J OF P

Target Street	Cross Street	Source
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MASSACHUSETTS AVE 1992 (Cont'd)

912	HYDE, GERALD M
919	CAMERON, WM & DONNA
	FILIAU, STEVEN
	FLOWER BARN THE
920	BINGHAM, GREGORY
925	KELLY'S MOTOR SALES
	KELLY'S SERVICE STATION
	U-HAUL CO-NEIGHBORHOOD DEALERS
926	TOWER, RAYMOND
930	OKERMAN, GAIL
936	MCINTYRE, ULMER R
944	HIRSCH, J
945	FOSTER-HEALEY REAL ESTATE INC-LUNENBURG-OFC
947	WEST WIND ASSOC LTD
950	PEPOLI, JOS J
960	LUNENBURG TOWN OF-RITTER MEMORIAL LIBRARY
985	GALLAGHER, FRANK M
990	HARRINGTON, ROBT J
993	COLE, TANNER
998	MCDONALD, RICHARD & LINDA
1003	VIGNALE, MICHAEL J
1004	CARLSON, ALBERT R, JR
1010	MC CULLAH, MARK
1024	ZALESKA, GARY
1025	LUNENBURG TOWN OF-SCHOOL DEPT-ELEMENTARY SCHOOLS-NURSE
	LUNENBURG TOWN OF-SCHOOL DEPT-ELEMENTARY SCHOOLS-OFC
1030	SOROKA, JOHN J
1033	LUNENBURG TOWN OF SCHOOL DEPT HIGH SCHOOL SUPTS OFC BROOKS H
	LUNENBURG TOWN OF-BUILDING INSPECTOR
	LUNENBURG TOWN OF-PLANNING BOARD
1044	GARVEY, RICHARD J
1054	PAGE, CHESTER W
1079	FLLAC EDUCATIONAL COLLABORATIVE
	LUNENBURG TOWN OF SCHOOL DEPT HIGH SCHOOL GUIDANCE OFC
	LUNENBURG TOWN OF-CIVIL DEFENSE
	LUNENBURG TOWN OF-SCHOOL DEPT-HIGH SCHOOL
	LUNENBURG TOWN OF-SCHOOL DEPT-HIGH SCHOOL-ATHLETIC DEPT
	LUNENBURG TOWN OF-SCHOOL DEPT-HIGH SCHOOL-HIGH SCHOOL FOOD S
1084	O'BRIEN, CYNTHIA
	O'BRIEN, STEVE & KIM
1091	ROBINSON, ALFRED D
1107	BYRON, MARK R & ANDREA
1118	LINCOLN, C
1122	NORDLINGER, FRANCIS J
	RISDON, GALES
1131	BRADY, DENNIS M
	BREED, CONNIE S
1148	RUKAS, JOHN
1155	JARVI, WEIKKO H
1170	ELLIS, RICHARD L

MASSACHUSETTS AVE 1992 (Cont'd)

1170	KEMP, WM
	WHITNEY, SEAN P
1172	BARNEY, FLOYD F
1183	BARNEY, MICHAEL G
1199	QUINLAN DANL S, HRSESHR
1205	BARNEY, WILBUR W
1234	BEARCE, LORI & GEO
1263	LANE, ROBT
1264	BOUCHER, J
	KING, L M
1272	HODGE, CHAS L, 3RD
1275	JARVELA, FRED A
1300	ED'S SERVICE STATION
1312	STUART MOTORS INC
1316	SZOCIK, EDMOND R
1325	MASON, GEO R

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MASSACHUSETTS AVE 1987

MASON ST (B)—Contd

33 Touchette Carolyn M Mrs ◎ 939-2131
35 Mizereck Stanley J ◎ 939-8066
37 Cutting James P ◎ 939-8356

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MASSACHUSETTS AV (LUNENBURG)—FROM FITCHBURG LINE TO SHIRLEY LINE

ZIP CODE 01462
10 A-One Overhead Door (Overflow) 342-3344
12 A-One Overhead Door Co 342-3344
PLEASANT ST BEGINS
17 Hub Bowling Center 345-6111
24 Century Twenty One Denault Realty 537-2112
De Nault Construction Co 345-6188
34 Hannula Kauko N ◎ 342-2953
40 Speiser Marc H dentist 342-8686
45 Lunenberg Ford whol gro 345-1011
50 Michael's Restaurant 345-6551
53 Guertin Evelyn N Mrs ◎ 342-3989
65 Aubuchon Hardware
69 Vacant
72 Crafts Manufacturing Co 342-1717
76 Hardy Wm W ◎ 342-1717
79 Fallon Animal Clinic veterinarian 345-4429
Fallon Robt J ◎ 345-4429
83★Sanyer Wendy E 345-2951
88 Alden John Carpets & Interiors 343-4707
Mister G's Party Center Inc party supplies 345-1315
111 Flinkstrom Carl 345-2623
129 Mister Mike's Mini Mart 345-5420
Rear★Porter Earl L ◎ 345-5796
153 Hain A Lloyd ◎ 342-3192
155 Cleve's Package Store liquors 343-3842
★Shaughnessy Leo ◎
159★Kane Paul J
160 Maki Home Center building matl 343-7422
TILTON AV BEGINS
177 Yankee Meat Shop 342-1922
★Goguen Alf J
182★Dennis Clarence A
186 Montuori Ralph Construction Co
Montuori Ralph W ◎ 343-4079
199 Chapdelaine Truck Center Inc truck repr & sls 345-0621
228 Acme Floor Covering Inc 345-5541
236 A & R Quality Kitchen Cabinet Co 343-4047
Scarale Albert F ◎ 343-4047
243 Manooshian Rose Mrs ◎ 343-3988
244 Johnson Ralph L ◎ 342-5467
254 Haaker Carl E Jr ◎ 582-6644
WHITE ST BEGINS
260 Fagnant David
308 Coach House Inn motel 582-9921
ELECTRIC AV BEGINS
332 Smith Ingeborg H ◎
354★Chartier Raymond J
358★Scerra Kath T 582-6167
362 Caswell Robt F Jr ◎ 582-7866
377 Vacant
381 Massachusetts Avenue Motors 582-4907
384 Caswell Robt F ◎ 582-6332
388★Davis Walter E 582-9019
400 Lyons Albert C Jr ◎ 582-6927
410★Chisholm David F ◎ 582-4055
412★Ward Deborah Ann 582-4964
414★Lyon Robt M ◎ 582-9234
416 Ficker Robt M 582-7315
420 Clutch & Brake sls truck parts 582-4333

Target Street	Cross Street	Source
✓	-	Polk's City Directory

MASSACHUSETTS AVE 1987

MASSACHUSETTS AV (L) —Contd

CHASE RD BEGINS
429 Vacant
436★Roberts David W ◎ 582-9311
HOLLIS RD BEGINS
442 Lamiotte Wm J ◎ 582-6771
455 Showroom Sammy's used auto 582-9977
460 Starrett Miriam G Mrs ◎ 582-6081
466 Cuddy Fredk L ◎
467 Cuddy Fredk L ◎ 582-4019
473 Andrews Danl ◎ 582-4717
474 Labonte Alf E ◎ 582-6546
493 Willie's Woolen Works 582-9411
496★Szocik Robt A 582-9698
506★Massak John G ◎
512 Delisle David ◎
520 Gauthier Alf H ◎ 582-4359
528 French Charles ◎ 582-4661
545 Szocik A C Co truck repr 582-6043
552★Dayton Michl S ◎
558 Bonner Doris M Mrs ◎ 582-6735
563★Boudreau Paul H ◎ 582-6009
566 Michaud Jean G ◎ 582-6337
568 Andres Arth W ◎ 582-4780
572 Groves Robt L ◎ 582-6124
Groves Sandra J
574 Valois David R ◎ 582-4850
576 Totty Gordon ◎ 582-7844
585★Coolidge Geo R ◎ 582-4811
612 Proctor Kevin P ◎ 582-4688
BEAL ST BEGINS
624 Economo John F ◎ 582-6518
635 Dyer Ruth C Mrs ◎ 582-4770
636 Geigner Bertha H Mrs ◎ 582-6206
★Cormier John M
SUNNY HILL RD BEGINS
654 Vowles Robt W
★Teto Steven K 582-7393
662★Tucker Timothy T ◎ 582-4769
665★Scarale Ronald A
670 Boucher Arth O ◎ 582-6266
680 Zarba Christopher ◎ 582-9583
681★Laudenbach Paul A 582-4726
★Ruttan Carol E ◎ 582-6422
724 Poirier Robt D ◎ 582-6493
733 Paton Jennie C Mrs ◎ 582-6339
742 Cloherty Michael J 582-4321

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CHESTNUT ST BEGINS
763 Sawyer & Miller Funeral Homes 345-6778
779 Bacon Jacqueline 582-4708
785★Riley Edw F ◎
790 Riley Edw H Jr 582-6056
792 Stone Farm Package Store liquors 582-6056
793 Vacant
795★Hebert Franklin J Jr 582-9078
810 Garneau Aldea 582-6391
817 Saint Boniface's R C Church
Saint Boniface's R C Rectory 582-4008
Moran Edw J Rev 582-4008
818 Clark Peter L ◎ 582-7230
824 Hoglund Edwin E ◎ 582-4963
830 Davies Lauren W ◎ 582-6082
835 Conrad's Drive In restr 582-6115
Conrad Dennis O 582-6115
838 May Anna H ◎ 582-6402
846 Montuori Lawrence J ◎ 582-7793
852 Tallman Owen H ◎ 582-9640
860 Roberts Brian F ◎ 582-4212
866 Goodnow Robt S
870 Laine Veikko A ◎ 582-7286
Rear Johnson Wm W Jr ◎ 582-9093
Rear Mortis Geo J ◎ 582-4983
871 Thompson Normand J ◎ 582-6470
876 Dyer Charles F Jr ◎ 582-6223
906 Mathews Donald M ◎ 582-7787
909 Harley Frances E

Target Street	Cross Street	Source
✓	-	Polk's City Directory

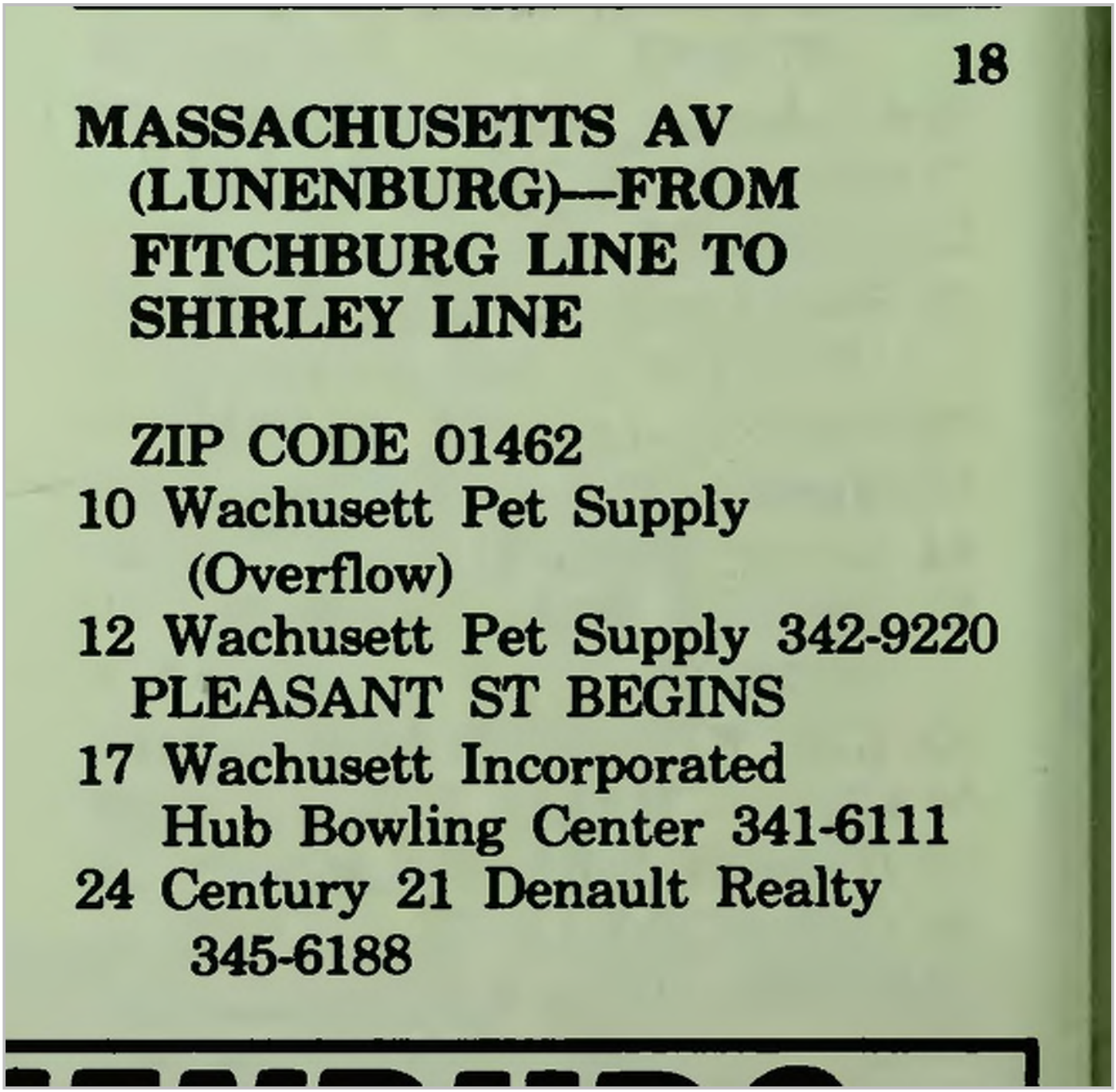
MASSACHUSETTS AVE 1987

MASSACHUSETTS AV (L) —Contd

Padula Leo M ◎ 582-6355
910★Mirkovic Lee 582-7536
912★Riordan Francis J ◎ 582-9619
★Cofran R Mark
919★Cameron Wm M ◎ 582-6658
★Cameron Maxwell M 582-9302
920 Ahokas Curtis M ◎ 582-6625
925 Kelly Service Station gas sta 582-9357
926 Hartman G Pamela Mrs ◎ 582-7800
930 Collello Geo J ◎ 582-6182
932 Powell Cynthia Mrs ◎ 582-7842
936 Mc Intyre U Raymond ◎ 582-4832
944 Hirsch Joan F Mrs ◎ 582-4866
945 Foster-Healey Real Estate 582-4311
950 Pepoli Joseph J ◎ 582-6995
SCHOOL ST BEGINS
MAIN ST BEGINS
960 Lunenburg Ritter Memorial Library 582-7817
LEOMINSTER RD BEGINS
985 Gallagher Frank M ◎ 582-4506
990 Harrington Robt J ◎ 582-4570
993★Meyer Gertrude 582-6580
998 Mc Donald Richd E ◎ 582-6293
1003★Vignale Rita E ◎ 582-6905
1004 Carlson Albert R ◎ 582-4891
1010 Mc Cullah Mark B ◎ 582-4258
1024★Zaleska Gary T 582-9259
MEMORIAL DR BEGINS
1025 Passios Thos C Elementary School 582-6232
Lunenburg Town Nurses Ofc 582-9042
1030 Soroka John J ◎ 582-4697
1033 Lunenburg Planning Board
Lunenburg School Committee
Lunenburg School Dept 582-7711
Brooks House School (overflow lunenburg sch dept) 582-7711
1036 D'Onfro Howard D ◎ 582-6947
1044 Garvey Richd J ◎ 582-6141
1054 Page Evelyn M Mrs ◎ 582-6156
1079 Lunenburg Jr-Sr High School 582-9941
Town Civil Defense 582-4630
1084 Smith Leroy C ◎
1091★Robinson Alf D ◎
WHITING ST ENDS
1107 Jamnback Tygo A ◎
1112 Mulligan Richd F ◎ 582-6833
1118 Dennihan Janice M ◎
1122 Hardy Pauline D Mrs ◎ 582-9948
HILLSIDE DR BEGINS
1131 Gaffney Edice F Mrs ◎ 582-7275
1147 Paton Bernard J sch bus contr ◎ 582-6170
1148★Rukas John F ◎ 582-9452
1155 Jarvi Weikko ◎ 582-4715
1170★Whitney Sean P 582-9608
Kemp Wm L W ◎ 582-6165
1172 Barney Floyd F ◎ 582-6571
1183 Barney Stanley W ◎
1199★Quinlan Danl S 582-6114
1205 Barney Wilbur W ◎ 582-6367
NORTHFIELD RD BEGINS
1229 Vacant
1232 Valiton Mickl J 582-6551
Therriault Sandra R Mrs 582-6321
1234★Womble Curtis R
1263 Lane Robt E ◎ 582-4766
1264 Barney Marie L ◎ 582-9263
1272 Hodge Charles L III ◎ 582-6848
1275 Jarvela Helvi M Mrs ◎ 582-6177

Target Street	Cross Street	Source
✓	-	Polk's City Directory

MASSACHUSETTS AVE 1982



18

MASSACHUSETTS AV
(LUNENBURG)--FROM
FITCHBURG LINE TO
SHIRLEY LINE

ZIP CODE 01462
10 Wachusett Pet Supply
(Overflow)
12 Wachusett Pet Supply 342-9220
PLEASANT ST BEGINS
17 Wachusett Incorporated
Hub Bowling Center 341-6111
24 Century 21 Denault Realty
345-6188

Target Street	Cross Street	Source
✓	-	Polk's City Directory

MASSACHUSETTS AVE 1982

MASSACHUSETTS AV (L) —Contd

De Nault Construction Co 345-6188
27 Vacant
34 Hannula Kauko N ◎ 342-2953
40 Speiser Marc H dentist 342-8686
45 Lunenberg Ford whol gro 345-1011
50 Vacant
53 Guertin Evelyn N Mrs 342-3989
65 Aubuchon Hardware
69 Grondin Raymond ◎ 342-0736
72 Crafts Manufacturing Co 342-1717
76 Hardy Wm W ◎
79 Fallon Animal Clinic veterinarian 345-4429
Fallon Robt J ◎ 345-4429
83★Chevalier Wayne R 345-2977
88 Arel Wallpaper Co pnt & wallpaper 342-3704
Alden John Carpets & Interiors 343-4707
Mister G's Party Center party supplies 345-1315
111 Vacant
129 Wil-Mart Citgo gas sta equip 345-5420
Rear Vacant
153 Hain A Lloyd ◎ 342-3192
155 Cleve's Package Store liquors
159 Kane Paul J ◎ 343-3842
160 Maki Home Center building matl 343-7422

TILTON AV BEGINS

177 Yankee Meat & Deli 342-1922
182 Bakers Precious Metals coins 345-1839
Baker Richd P ◎ 345-1839
186 Montuori Ralph Construction Co
Montuori Ralph W ◎ 343-4079
199 Chapdelaine Truck Center Inc truck repr & sls 345-0621
228 Acme Floor Covering Inc 345-5541
236 A & R Quality Kitchen Cabinet Co 343-4047
Scarale Albert F ◎ 343-4047
243 Manooshian Rose Mrs ◎ 343-3988
244 Johnson Ralph L ◎ 342-5467
254 Haaker Carl E Jr ◎ 582-6644

WHITE ST BEGINS

260 Vacant
308 Coach House Inn motel 582-9921

ELECTRIC AV BEGINS

332 Smith Ingeborg H ◎
354 Chartier Claire J Mrs ◎
358★Scerra Kath T 582-6167
362 Caswell Robt F Jr ◎ 582-7866
377 Vacant
381 Levin Farm Equipment Co 582-4732
Vacant
384 Caswell Robt F antiques ◎ 582-6332
388★Herrick Gordon E ◎ 582-9502
400 Lyons Albert C Jr ◎ 582-6927
Vacant
410 Belliveau Norman E ◎ 582-6057
412 Elliott John W 582-4991
414 Goodnow Blanche E ◎ 582-4751
416 Ficker Robt M
420 Clutch & Brake sls truck parts 582-4333

CHASE RD BEGINS

429 Vito Inc gas sta 582-6671
436 Mobley Richd V ◎ 582-6602

HOLLIS RD BEGINS

442 Lamiotte Wm J ◎ 582-6771
455 Vacant
459 Vacant
460 Starrett Miriam G Mrs ◎ 582-6081
466★Cuddy Fredk L ◎
467 Cuddy Fredk L ◎ 582-4019

Target Street	Cross Street	Source
✓	-	Polk's City Directory

MASSACHUSETTS AVE 1982

MASSACHUSETTS AV (L)
—Contd

473 Andrews Danl ◎ 582-4717
474 Labonte Alf E ◎ 582-6546
493 Wicker Shop The ret furn 582-9588
496★Skirvin Leslie 582-6279
506 Mukku Mari ◎ 582-4616
512★Delisle David ◎
520 Gauthier Alf H ◎ 582-4359
528★Schilbach Fredk
545 Szocick A C Co truck repr 585-6043
552★Forster Lawrence ◎ 582-9545
558 Bonner Doris M Mrs ◎ 582-6735
563 Vacant
★Szocik Carol 582-4651
★Hussey Mark F 582-9393
566 Michaud Jean G ◎ 582-6337
568 Andres Arth W ◎ 582-4780
572 Groves Robt L ◎ 582-6124
672 Groves Sandra J
574 Valois David R ◎ 582-4850
576 Totty Gordon ◎ 582-7844
585★Gauthier Michl R ◎ 582-6451
603 Lunenberg House Of Pizza 582-6535
612 Courville Richd M ◎ 582-4789

BEAL ST BEGINS

624 Economo John F ◎ 582-6518
630 No Return
635 Dyer Charles F ◎ 582-4770
636 Geigner Bertha H Mrs ◎ 582-6206

SUNNY HILL RD BEGINS

654 Vowles Robt W
★Mulligan Mary E 582-4885
662 Cote Wayne D ◎
665 No Return
670 Boucher Arth O ◎ 582-6266
680★Zarba Christopher ◎ 582-9583
681★Porter Paul 582-7779
★Porter Earl L ◎ 342-7816
724 Vacant
Poirier Robt D ◎ 582-6493
733 Paton Jennie C Mrs ◎ 582-6339
742 Cloherty Michael J 582-4321

17

CHESTNUT ST BEGINS

763 Sawyer & Miller Funeral Homes 345-6778
Miller Howard J ◎ 582-6116
779★Root James H 582-4708
785 Sampson Charles W ◎ 582-6112
790 Riley Edw H Jr 582-6056
792 Stone Farm Package Store liquors
793 Seventeen Thirty House antique dealer 582-6400
795 Zaleska Gary T ◎ 582-6400
810 Garneau Aldea 582-6391
817 Saint Boniface's R C Church
Saint Boniface's R C Rectory 582-4008
★Moran Edw J Rev 582-4008
818 Rosevear Leo R ◎
824 Hoglund Edwin E ◎ 582-4963
830 Davies Lauren W ◎ 582-6082
835 Conrad's Drive In restr 582-6115
Conrad Dennis O 582-6115
838★May Anna H ◎ 582-6402
846 Montuori Lawrence J ◎ 582-7793
852★Jordan James W ◎ 582-7762
860 Roberts Brian F ◎ 582-4212
870 Laine Veikko A 582-7286
Rear★Johnson Wm W Jr ◎ 582-9093
Rear★Mortis Geo J 582-4983
871 Thompson Normand J ◎ 582-6470
876 Dyer Charles F Jr ◎ 582-6223
906 Mathews Donald M ◎ 582-7787
909 No Return
★Padula Mary
910 Whitcomb Mignon I Mrs 582-6259
912 Deming James P ◎ 582-6333

Target Street	Cross Street	Source
✓	-	Polk's City Directory

MASSACHUSETTS AVE 1982

MASSACHUSETTS AV (L) —Contd

Vacant
919 Humphreys Cath E Mrs ◎ 582-4746
920★Ahokas Curtis M ◎ 582-6532
925 Kelly Chevron gas sta 582-9357
926★Hartman Pamela Mrs ◎
930 Colello Geo J ◎ 582-6182
932 Powell Cynthia Mrs ◎
936 Mc Intyre U Raymond ◎ 582-4832
944 Hirsch Joan Mrs ◎ 582-4866
947 Foster-Healey Real Estate 582-4311
950★Koval Robt S 582-9044
SCHOOL ST BEGINS
MAIN ST BEGINS
960 Lunenburg Ritter Memorial Library 582-7817
LEOMINSTER RD BEGINS
985 Gallagher Frank M ◎ 582-4506
990 Harrington Robt J ◎ 582-4570
993★Lock Philip E ◎ 582-4228
998★Bragg Michl ◎ 582-6539
1003★Plancon Andre ◎ 582-9096
1004 Char-Al Ceramic Studio
Carlson Albert R ◎ 582-4891
1010★Mc Cullah Mark B ◎ 582-4258
1024 Leger Ronald V ◎ 582-6256
MEMORIAL DR BEGINS
1025 Passios Thos C Elementary School 582-6232
School Nurses 582-9042
1030★Sorovo John J ◎ 582-4697
1033 Lunenburg Planning Board
Lunenburg School Committee
Lunenburg School Dept 582-7711
Brooks House School (overflow lunenburg sch dept) 582-7711
1036 D'Onfro Howard D ◎ 582-6947
1044 Garvey Richd J ◎ 582-6141
1054 Page Evelyn M Mrs ◎ 582-6156
1079 Lunenburg Jr-Sr High School 582-9941
Town Civil Defense 582-4630
1084★Smith Leroy C ◎ 582-6422
1091 Steele Wm G ◎ 582-4898
WHITING ST ENDS
1107 Jamnback Tygo A ◎
1112 Mulligan Richd F ◎
1118 Dennihan Janice M ◎
1122 Hardy Pauline D Mrs ◎ 582-9948
HILLSIDE DR BEGINS
1131 Gaffney Edice F Mrs ◎ 582-7275
1147 Paton Bernard J sch bus contr ◎ 582-6170
1148 Fairbanks Warren T ◎ 582-6041
1155 Jarvi Weikko ◎ 582-4715
1170 Harrington Carl R ◎ 582-6063
Kemp Wm L W ◎ 582-6165
1172 Barney Floyd F ◎ 582-6571
1183 Barney Stanley W ◎ 582-4610
1205 Barney Wilbur W ◎ 582-6367
NORTHFIELD RD BEGINS
1229 Red Kettle The restr 582-6633
1232★Bingham Greg 582-6873
Therriault Larry K 582-6321
1263 Lane Robt E ◎ 582-4766
1264 Vacant
1272 Hodge Charles L III ◎ 582-6848
1275 Jarvela Fred A ◎ 582-6177

TOWNSEND HARBOR RD BEGINS
1283 Bergeron Eug J 582-6775
1316★Szocik Edmund R 582-9356
1325 Mason Geo R ◎ 582-4275
1330 Ed's Service Station 582-4213
1335 Lakeview Enterprises landscaping 582-7245

Target Street	Cross Street	Source
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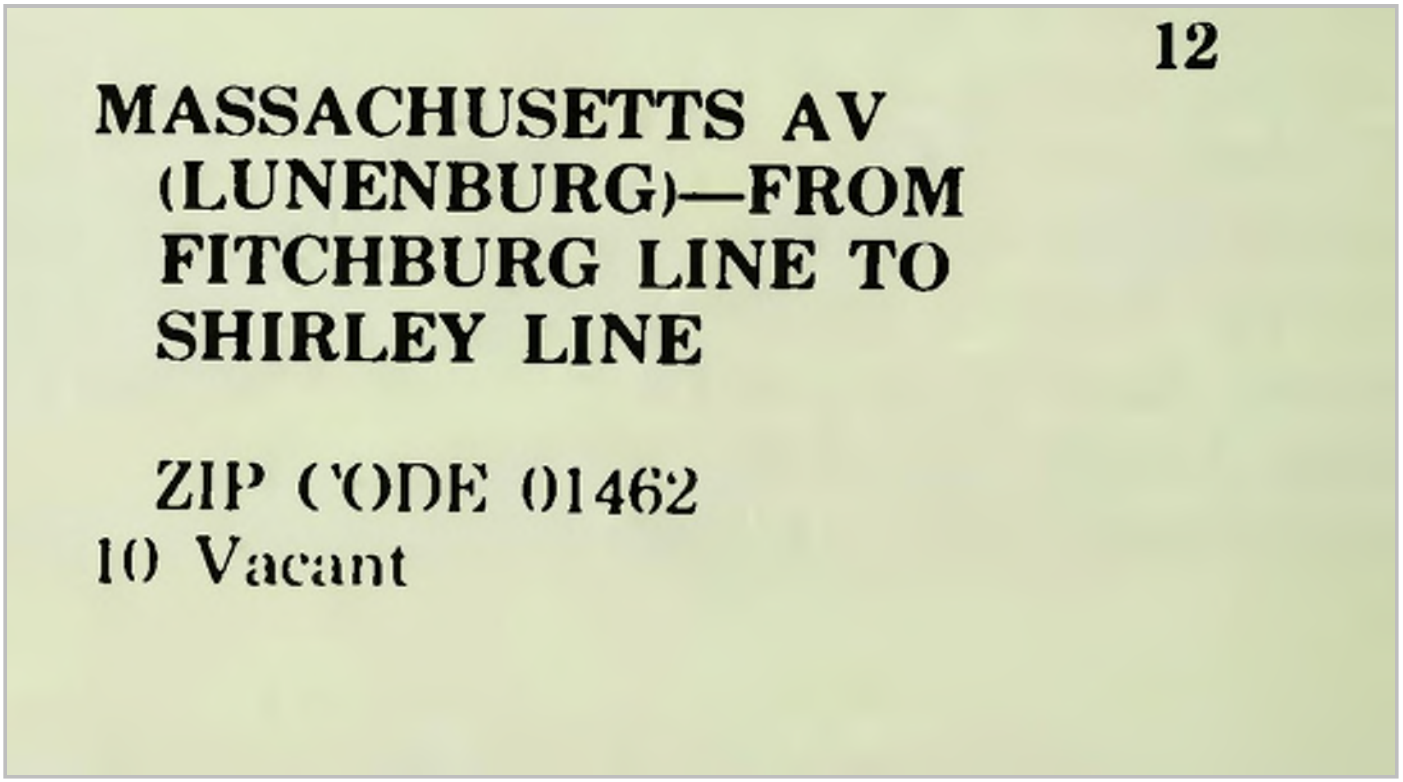
MASSACHUSETTS AVE 1977



Target Street	Cross Street	Source
✓	-	Polk's City Directory

MASSACHUSETTS AVE 1977

MASSACHUSETTS AV (L) —Contd

12 Krazy Saver
PLEASANT ST BEGINS
17 Wachusett Incorporated
Hub Bowling Center 342-2417
27 Lawrence Motor Sales Inc used cars 342-7530
34 Hannula Kauko N ◎ 342-2953
40 Speiser Marc H dentist 342-8686
45 Retailer's Food Cetner whol gro 342-0713
50 Bailey John L Ye House Of Inc restr 342-8727
53 Guertin Evelyn N Mrs 342-3989
65 Grondin Wayside Furniture 342-5217
69 Grondin Raymond ◎ 342-0736
72 Crafts Manufacturing Co 342-1717
76 Hardy Wm W ◎
79 Fallon Animal Clinic veterinarian 345-4429
Fallon Robt J ◎ 345-4429
88 Able Supply Corp hdw 342-3704
89 O'Sullivan James L 342-8016
111 Porter Hance L ◎ 342-4576
129 Vacant
Rear Porter Earl L ◎ 342-7816
153 Hain A Lloyd ◎ 342-3192
155 Cleve's Package Store liquors
159 Kane Paul J ◎ 343-3842
160 Maki Home Center roofing matl 343-7422
177 Vacant
186 Lunenburg Oil Co 342-7217
Montuori Lawrence J ◎ 342-8868
Montuori Ralph Construction Co
Montuori Ralph W ◎ 343-4079
199 Chapdelaine Truck Center Inc truck repr 342-6029
228 Acme Floor Covering Inc 345-5541
236 A & R Quality Kitchen Cabinets
Scarale Albert F ◎ 343-4047
243 Manooshian Rose Mrs ◎ 343-3988
244 Johnson Ralph L ◎ 342-5467
254 Haaker Carl E Jr ◎ 582-6644
WHITE ST BEGINS
260 Mc Cauliff Francis W Jr ◎ 582-4783
308 Coach House Inn motel 582-9921
Critchley Donald F
ELECTRIC AV BEGINS
332 Smith Helen ◎
354 Chartier Claire J Mrs ◎
358 Amadon Wm
362 Caswell Robt F Jr ◎ 582-7866
377 Vacant
381 Levin Cattle & Equipment Co 582-4732
Ayer Speed & Custom Co auto repr
384 Caswell Robt F antiques ◎ 582-6332
388 Scippione Dennis P
400 Lyons Albert C Jr ◎ 582-6927
Rosen Julia L ◎ 582-4064
410 Belliveau Norman E ◎ 582-6057
412 Bosselman Bruce W 582-4766
414 Goodnow Blanche E ◎ 582-4751
416 Bourque Judith A 582-7289
420 Vacant
CHASE RD BEGINS
429 Lunenburg Exxon gas sta 582-6671
436 Mobley Richd V ◎ 582-6602
HOLLIS RD BEGINS
442 Lamiotte Wm J ◎ 582-6771
455 Cumberland Farms
459 Vacant
460 Starrett Bradley Y ◎
Flagg Robt J
467 Cuddy Fredk L ◎ 582-4019
473 Andrews Danl ◎ 582-4717
474 La Bonte Alf E ◎ 582-6027
493 Nachusetts Business Forms Inc 582-4994
496 Vacant
506 Mukku Mari ◎
512 Moore Herbert ◎ 582-6044
520 Gauthier Alf H ◎ 582-4359
528 Miller Wayne
562 Whittemore Harry T ◎ 582-6089
558 Bonner Kenneth ◎ 582-6735
563 Szocik A C Inc excavating contrs 582-6043
Smith Thos W 582-7267

Target Street	Cross Street	Source
✓	-	Polk's City Directory

MASSACHUSETTS AVE 1977

MASSACHUSETTS AV (L) —Contd

Blain Robt E 582-6570
566 Michaud Jean G ◎ 582-6337
568 Andres Arth W ◎ 582-4780
572 Groves Robt L ◎ 582-6124
672 Groves Sandra
574 Valois David R ◎ 582-4850
576 Totty Gordon ◎ 582-7844
585 Vacant
Peri Wm J ◎ 582-6451
603 Thumpers Inc Of Lunenburg 582-9988
612 Courville Richd M ◎ 582-4789
BEAL ST BEGINS
624 Economo John F ◎ 582-6518
635 Dyer Charles F excavating contr ◎ 582-4770
Dyer David 582-4894
636 Geigner Henry J ◎ 582-6206
SUNNY HILL RD BEGINS
654 Vowles Robt W
Holtzman Joseph T 582-4924
Charkiewicz Mitchell M Jr
662 Wiinikarnen Richd A ◎
665 Manelius Karl A ◎ 582-6440
670 Boucher Arth O ◎ 582-6266
680 Torni Reino O ◎ 582-6645
681 Williams John W ◎ 582-4518
724 Barrett Mabel H Mrs 582-6234
Poirier Robt D ◎ 582-6493
733 Paton Jenny C Mrs ◎ 582-6339
742 Cloherty Michael J 582-4321
CHESTNUT ST BEGINS
763 Miller Funeral Service 345-4324
Miller Howard J ◎ 582-6116
779 Sampson Charlie W 582-6112
785 Kennedy Geo M 582-6498
790 Riley Edw H Jr 582-6056
792 Stone Farm Package Store liquors
793 Hubbard Laura R Mrs 582-6536
795 Wisel Gerald 582-6626
810 Garneau Aldea 582-6391
817 Saint Boniface's R C Church
Saint Boniface's R C Rectory 582-4008
818 Rosevear Leo R ◎ 582-6885
824 Hoglund Edwin ◎
830 Davies Lauren W ◎ 582-6082
835 Conrad's Drive In restr 582-6115
Conrad Dennis O 582-6115
838 Stuart Andrew W ◎ 582-4779
846 Lindner Kenneth R ◎ 582-4721
852 Fletcher Ralph R ◎ 582-4024
860 Roberts Brian F ◎ 582-4212
870 Steele Wm G Jr 582-7742
Rear Hutchins Edw H ◎ 582-6422
Rear Tyler Gerald E ◎ 582-6174
871 Thompson Normand J ◎ 582-6470
876 Dyer Charles F Jr ◎ 582-6223
906 Mathews Donald M ◎ 582-7787
909 Harley Frances E ◎ 582-6258
Heaton Olive E Mrs
910 Whitcomb Mignon I Mrs 582-6259
912 Deming James P ◎ 582-6333
919 Humphreys David L ◎
920 Bergier Thos 582-7280
925 Lunenburg Citgo 582-9966
926 Roux Geo J pntr contr ◎ 582-7800
930 Colello Geo J ◎ 582-6182
932 Powell Cynthia Mrs ◎
935 Foss Orrin J ◎
Vacant
936 Mc Intyre U Raymond ◎ 582-4832
937 Vacant
941 Forbes Joyce S Mrs 582-4274
944 Hirsch Paul G ◎ 582-6171
947 Vacant
950 Padula Leo M ◎ 582-6355
SCHOOL ST BEGINS
MAIN ST BEGINS
960 Ritter Memorial Library 582-7817
LEOMINSTER RD BEGINS
985 Gallagher Frank M ◎ 582-4506
990 Harrington Robt J ◎ 582-4570
993 Many Gerald L ◎ 582-4228
998 Leary Edw F ◎ 582-7739
1003 Naylor Wm H Jr ◎
1004 Carlson Albert R ◎ 582-4891
1010 Curtis Roland A ◎ 582-6155
1024 Zaleska Gary T ◎ 582-6400
MEMORIAL DR BEGINS
1025 Passios Thos C Elementary School 582-6232
School Nurses 582-6702

Target Street	Cross Street	Source
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MASSACHUSETTS AVE 1977

MASSACHUSETTS AV (L)
—Contd

1030 Culver Lila M Mrs ◎
582-4697
1033 Lunenburg Planning Board
Lunenburg School Committee
Lunenburg School Dept
582-7711
Brooks House School
582-7711
1036 D'Onfro Howard D ◎
582-6947
1044 Garvey Richd J ◎ 582-6141
1054 Page Chester W ◎ 582-6156
1079 Lunenburg Jr-Sr High
School 582-9941
1084 Cranson Kenneth G ◎
582-6958
1091 Steele Wm G ◎ 582-4898
WHITING ST ENDS
1107 Jamnback Tygo A ◎
582-7837
1112 Mulligan Richd F ◎
1118★Dennihan Janice ◎
1122 Hardy Pauline D Mrs ◎
582-9948
HILLSIDE DR BEGINS
1131 Gaffney Eddie F Mrs ◎
582-7275
1147 Paton Bernard J sch bus
contr ◎ 582-6170
1148 Poikonen Carl K 582-6872
1155 Jarvi Weikko ◎ 582-4715
1170 Harrington Carl R ◎
Kemp Wm L W ◎ 582-6165
1172 Barney Floyd F ◎ 582-6571
1183 Barney Stanley 582-4610
1205 Barney Wilbur W ◎
582-6367

Target Street	Cross Street	Source
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MASSACHUSETTS AVE 1972

MASSACHUSETTS AV (LUNENBURG)—FROM FITCHBURG LINE TO SHIRLEY LINE

ZIP CODE 01462

10 Vacant

17 Wachusett Enterprise Inc
Hub Bowling Center 342-2417

PLEASANT ST BEGINS

27 Lawrence Motor Sales Inc used cars 342-7530

34 * Hannula Kauko N ◎ 342-2953

45 Grocers Wholesale Cash & Carry whol gro 342-0713

40 Ward Matthew H ◎ 343-7094

50 Bailey John L Ye House Of Inc restr 342-2827

Target Street	Cross Street	Source
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MASSACHUSETTS AVE 1972

MASSACHUSETTS AV (L) —Contd

53 Guertin Evelyn N Mrs 342-3989
65 Grondin Wayside Furniture 342-5217
Grondin Raymond ◎ 342-0736
72 Crafts Manufacturing Co 342-1717
76 Jamnback Allan A ◎
79 Fallon Animal Clinic 345-4429
Fallon Robt J ◎ 345-4429
88 Able Supply Corp hdw 342-3704
111 Porter Hance L ◎ 342-4576
129 Joe's Citgo Station
Rear Porter Earl L ◎ 342-7816
153 Hain A Lloyd ◎ 342-3192
155 Cleve's Package Store liquors
159 Kane Paul J ◎ 343-3842
160 Maki Walter V Co Inc roofing 343-7422
177 Caisse Eldridge A ◎ 342-3692
Vacant

TILTON AV BEGINS

186 Lunenburg Oil Co 342-7217
Montuori Lawrence J ◎ 342-8868
Montuori Ralph Construction Co
Montuori Ralph W ◎ 343-4079
199 Junkala Chapdelaine Inc truck repr 342-6029
288 Acme Floor Covering 345-5541
236 Scarale Albert F furn mfg ◎ 343-4047
234 Manooshian Rose Mrs ◎ 343-3988
244 Johnson Ralph L ◎ 342-5467
254 ★ Haaker Carl E Jr ◎ 528-6644

WHITE ST BEGINS

260 Mc Cauliff Francis ◎ 582-4783
★ Mc Cauliff John
308 Coach House Inn motel 582-9921
Gregory Harold

ELECTRIC AV BEGINS

332 Smith Ingeborg Mrs ◎
354 Chartier Raymond J ◎ 582-6801
358 Bailey Wm F Jr 582-6826
370 Caswell Robt F Jr antiques 582-7866
381 Vacant
Levin Cattle & Equipment Co 582-4732
384 Caswell Robt F antiques ◎ 582-6332
386 Vacant
400 Lyons Albert C Jr ◎
410 Belliveau Norman ◎ 582-6057
Belliveau Felecien 582-6350
414 Goodnow Blanche E 582-4751
416 Mason Roland
420 Hill Top Shell Service Station gas sta 582-9991

CHASE RD BEGINS

429 Vito's Hilltop Esso gas sta
436 Vacant

HOLLIS RD BEGINS

442 Lamiotte Wm J ◎ 582-6771
450 Vacant
455 Big Union Service Station 582-9977
457 Dwyer Christine Mrs ◎ 582-6021
460 Vacant
467 Cuddy Fredk L ◎ 582-4419
473 Andrews Danl 582-4717
474 La Bonte Alf E ◎ 582-6027
496 Mukku Wilho L ◎ 582-9965
506 Mukku Mari ◎
512 Moore Herbert ◎ 582-6044
520 Gauthier Alf H ◎ 582-4785
528 Dyer Florence A
552 Whittemore Harry T ◎ 582-6089
558 ★ Bonner Kenneth ◎ 582-6735
563 Szocik A C Inc excavating contrs 582-6043
★ Hertel Timothy A 582-6791
566 ★ Michard Jean G 582-6337
Andres Arth W ◎ 582-4780
574 Totty Gordon ◎ 572-7844
Rear Groves Robt L ◎ 582-6124
Rear Pepper John W ◎ 582-6669
585 Periwinkle Beauty Salon 582-7882
Peri Wm J ◎ 582-6401
603 Buttercup Hill Steak House 582-9988
Buttercup Hill Inc Of Lunenburg

BEAL ST BEGINS

624 Kopp John ◎ 582-6221
635 Dyer Charles F excavating contr ◎ 582-4770
Dyer David 582-4894
636 Geigner Henry J ◎ 582-6206

Dial 343-7491 — 343-7492 Fitchburg, Mass. 01420

20 Putnam St. Fitchburg 01420

Target Street	Cross Street	Source
✓	-	Polk's City Directory

MASSACHUSETTS AVE 1972

MASSACHUSETTS AV (L) —Contd

654 ★ Vowler R Wilfred
★ Marriott Roy B 582-7710
Gordon Alvin D
662 Hastings Wm H ◎ 582-6317
665 Manelius Karl A ◎ 582-6440
670 Boucher Arth O ◎ 582-6206
680 Torni Reino O 582-6645
681 Burnap Harriette E
Estabrook Joy H Mrs
582-4740
724 Barrett Mabel H Mrs
582-6234
733 Paton Jenny C Mrs ◎
582-6339
742 Golden West Co carpeting
582-4644
Chesbrough Herbert H
582-4644
CHESTNUT ST BEGINS
763 ★ Miller Howard J ◎ 582-6313
779 Childress David M ◎
582-6780
785 Artist Douglas L 582-6140
790 Riley Edw H Jr ◎ 582-6056
792 Stone Farm Package Store
liquors
793 Hubbard Laura R Mrs
582-6536
810 Garneau Aldea 582-6391
807 Saint Boniface's R C Church
817 Saint Boniface's R C Rectory
582-4408
818 Rosevear Leo R ◎ 582-6885
824 Hoglund Edwin ◎
830 Davies Lauren W ◎ 582-6082
833 Conrad's Drive In restr
582-6115
835 Conrad Dennis O
838 Stuart Andrew W ◎ 582-4779
846 Lindner Kenneth R ◎
582-4721
852 Fletcher Ralph R ◎ 582-4424
860 ★ Hale Jess R ◎ 582-7867
870 ★ Beardmore Richd F Jr
582-6126
Rear Hutchins Edw H ◎ 582-6422
Rear Tyler Gerald E ◎ 582-6174
871 Thompson Normand J ◎
582-6470
876 Dyer Charles F Jr 582-6223
906 ★ Johnian R
Mathews Donald M ◎
582-7787
909 Harley Frances E ◎ 582-6258
Heaton Olive E Mrs
912 Deming James P ◎ 582-6333
Whitcomb Mignon I Mrs
582-6259
919 Vacant
920 Wallace Nellie J Mrs ◎
582-4736
925 Miller's Citgo 582-4240
926 Roux Geo J pntr contr
582-7800
930 Colello Geo J ◎ 582-6182
932 Powell Willard E ◎ 582-4713
935 Foss Orrin J ◎
936 Mc Intyre U Raymond
582-4832
937 ★ Dickinson Eliz S 582-7809
941 Vacant
944 Hirsch Paul G ◎ 582-6797
947 Lunenburg Apothecary
582-7827
950 Padula Leo M ◎ 582-6355
SCHOOL ST BEGINS
MAIN ST BEGINS
960 Ritter Memorial Library
582-7817
LEOMINSTER ST BEGINS
985 Mathews Wm E Rev 582-4057
990 Vacant
993 Fuller Richard F ◎
★ Steele Wm G Jr 582-7742
998 Leary Edw F ◎ 582-7739
1004 Carlson Albert R ◎ 582-4891
1010 Curtis Roland A ◎ 582-6155
MEMORIAL DR BEGINS
1025 Passios Thos C Elementary
School 582-6232
School Nurses 582-6702
1030 Culver Lila M ◎ 582-4697
1033 Lunenburg Planning Board
582-6121
Lunenburg School Committee

Target Street	Cross Street	Source
✓	-	Polk's City Directory

MASSACHUSETTS AVE 1972

MASSACHUSETTS AV (L)
—Contd

Lunenburg School Dept
582-7711
Brooks House School
582-7711
1036 ★ Wolfgang John F ◎
582-4401
1044 Garvey Richd J ◎ 582-6141
1054 Page Chester W ◎ 582-6156
1079 Lunenburg Jr-Sr High
School 582-9941
WHITING ST BEGINS
1084 Proctor John G mason contr
◎ 582-6501
1091 Steele Wm G ◎ 582-4898
1107 Jamnback Tygo A ◎
1112 Mulligan Richd F ◎
1118 Farris Benj C ◎ 582-6857
1122 Hardy Pauline D Mrs ◎
582-9948
Hardy Brenton
1131 Gaffney James A ◎
582-6211
HILLSIDE DR BEGINS
1147 Paton Bernard J poultry ◎
582-6170
1148 Jarvi Hilja M Mrs ◎
582-6413
1155 Jarvi Weikko ◎ 582-4715
1170 Harrington Carl R ◎
Kemp Wm L W ◎ 582-6165
1172 Barney Floyd F ◎ 582-6571
1183 ★ Rivers Gary 582-4716
1205 Barney Wilbur W ◎
582-6367

Appendix F

FOIL Requests

From: admin@foiaonline.gov
To: Waxenberg, Sophia
Subject: FOIA Request EPA-2020-005977 Modified
Date: Friday, July 24, 2020 3:42:05 PM

The FOIA request - EPA-2020-005977 description has been modified. Additional details for this item are as follows:

- Tracking Number: EPA-2020-005977
- Requester: Ms. Sophia Waxenberg
- Submitted Date: 07/24/2020
- Description: Please provide any environmental enforcement actions or violations associated with 1025 Massachusetts Avenue, Lunenburg, MA 01462.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Washington, D.C. 20460

OFFICE OF
GENERAL COUNSEL

July 28, 2020

Via FOIAonline
Sophia Waxenberg

Re: Freedom of Information Act Request – EPA-2020-005977

Dear Sophia Waxenberg:

This letter concerns the above-referenced Freedom of Information Act (FOIA) request, received by the U.S. Environmental Protection Agency (EPA) on July 24, 2020. Your request is seeking records about a specific property: "1025 Massachusetts Avenue, Lunenburg, MA 01462."

The MyProperty database below will provide you with information concerning following website link: http://www.epa.gov/myproperty/.

Because the information on a specific address is publicly available, your FOIA request for this information will be closed. Agencies are not required to provide FOIA requesters with records that fall within the proactive disclosure provision of the FOIA, subsection (a)(2), and which are already made available to the public, typically on the agency's website. *See* 5 U.S.C. § 552(a)(3); 40 C.F.R. § 2.101(c).

If no responsive records are identified for a specific property address, MyProperty will generate a "No Records Certificate." If MyProperty identifies responsive records that you cannot retrieve through MyProperty or if you need help with the MyProperty website, please contact EPA's FOIA Public Liaison at hq.foia@epa.gov or (202) 566-1667.

This letter concludes our response to your request. You may appeal this response by email at hq.foia@epa.gov, or by mail to the EPA's National FOIA Office, U.S. EPA, 1200 Pennsylvania Avenue, N.W. (2310A), Washington, DC 20460 or through FOIAonline if you are an account holder. If you are submitting your appeal by hand delivery, courier service, or overnight delivery, you must address your correspondence to 1200 Pennsylvania Avenue, N.W., Room 7309C, Washington, DC 20460.

Your appeal must be in writing, and it must be received no later than 90 calendar days from the date of this letter. The Agency will not consider appeals received after the 90-calendar-day limit. Appeals received after 5:00 p.m. EST will be considered received the next business day. The appeal letter should include the FOIA tracking number listed above. For quickest possible handling, the subject line of your email, the appeal letter, and its envelope, if applicable, should be marked "Freedom of Information Act Appeal."

Additionally, you may seek dispute resolution services from EPA's FOIA Public Liaison at hq.foia@epa.gov or (202) 566-1667, or from the Office of Government Information Services (OGIS). You may contact OGIS in any of the following ways: by mail, Office of Government Information Services, National Archives and Records Administration, Room 2510, 8601 Adelphi Road, College Park, MD 20740-6001; email, ogis@nara.gov; telephone, (202) 741-5770 or (877) 684-6448; or fax, (202) 741-5769.

Sincerely,

Nicole M. Rementer
Acting Assistant General Counsel
National FOIA Office

Related Topics: Envirofacts

FRS

FRS Facility Detail Report

PASSIOS ELEMENTARY SCHOOL

EPA Registry Id: 110024839237
1025 MASSACHUSETTS AVE
LUNENBURG, MA 014620000

Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error

Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
MASSACHUSETTS - ENVIRONMENTAL PROTECTION INTEGRATED COMPUTER SYSTEM	PASSIOS ELEMENTARY SCHOOL	419996	STATE MASTER	MA-EPICS		**EPICS**-424025 HAZARDOUS WASTE PROGRAM

Additional EPA Reports: MyEnvironment Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

No SIC Codes returned.

Facility Codes and Flags

EPA Region:	01
Duns Number:	
Congressional District Number:	03
Legislative District Number:	
HUC Code/Watershed:	01070004 / NASHUA
US Mexico Border Indicator:	
Federal Facility:	NO
Tribal Land:	NO

Alternative Names

No Alternative Names returned.

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address
OWNER	PASSIOS ELEMENTARY SCHOOL		MA-EPICS	View

National Industry Classification System Codes (NAICS)

No NAICS Codes returned.

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
OWNER	1025 MASS AVE	LUNENBURG	MA	014620000	MA-EPICS
FACILITY MAILING ADDRESS	1025 MASS AVE	LUNENBURG	MA	014620000	MA-EPICS

Contacts

No Contacts returned.

Query executed on: JUL-28-2020

Last updated on September 24, 2015

From: Higgins, Cara A (DPH)
To: Waxenberg, Sophia
Subject: FW: 7.27.20 Sophia Waxenberg 1025 Mass. Ave. Lunenburg BEH-2020-116
Date: Wednesday, July 29, 2020 8:43:46 AM
Attachments: image001.png
image002.gif

Dear Ms. Waxenberg:

My email is in regards to your public records request you made with the Bureau of Environmental Health on July 27, 2020 (BEH-2020-116). Due to the COVID-19 pandemic, it is not possible to thoroughly review all files to determine whether we have any documents responsive to your request. As such, we are requesting an extension until October 15, 2020 to fulfill your records request. Alternatively, you can withdraw your current request and resubmit once we are back fully operational. If you wish to withdraw your request, please reply to this email.

Thank you for your understanding and cooperation regarding this matter. Please contact me with any questions.

Sincerely,
Cara Higgins
Management Analyst and Public Record Liaison
Bureau of Environmental Health
MA Department of Public Health
(617) 624-5757

From: noreply@formstack.com [mailto:noreply@formstack.com]
Sent: Friday, July 24, 2020 7:49 PM
To: RAO, DPH (DPH)
Subject: DPH Public Record Request

Formstack Submission For: DPH Public Record Request
Submitted at 07/24/20 7:48 PM

Name:	Sophia Waxenberg

Organization or Company (if applicable):	LiRo Engineers, Inc.
Email:	waxenbergs@liro.com
Phone:	(973) 767-9411
Address:	100 Duffy Avenue Hicksville, NY 11801
Summary of Request:	Please provide any environmental enforcement actions, violations, or complaints associated with 1025 Massachusetts Avenue, Lunenburg, MA 01462.
Upload Full PRR Document*:	

From:	Elaine Peterson
To:	Waxenberg, Sophia
Subject:	RE: Public Records Request - 1025 Massachusetts Avenue, Lunenburg, MA 01462
Date:	Monday, July 27, 2020 8:43:18 AM
Attachments:	image001.png

Hello,
We have received your public records request and will forward it on to the pertinent departments.

Elaine M. Peterson
Town of Lunenburg
Executive Asst. to the Town Manager
17 Main St. P O Box 135
Lunenburg, MA 01462
978-582-4144
www.lunenburgma.gov

This email is for distribution of materials only, not for discussion purposes.

From: Waxenberg, Sophia <WaxenbergS@liro.com>
Sent: Thursday, July 23, 2020 3:20 PM
To: generalpr@lunenburgonline.com
Subject: Public Records Request - 1025 Massachusetts Avenue, Lunenburg, MA 01462

Good afternoon Ms. Lemieux,

Please find attached a Public Records Request Form for the following address: 1025 Massachusetts Avenue, Lunenburg, MA 01462. The request regards any environmental violations or enforcements for the Site.

Requestor's name: Sophia Waxenberg
Requestor's email: waxenbergs@liro.com

Let me know if you have any questions.

Sincerely,

Sophia Waxenberg
Environmental Engineer
Integrated Construction, Design, and Technology Solutions
100 Duffy Avenue – Suite 402 | Hicksville, NY | 11801

From: Elaine Peterson
To: Waxenberg, Sophia
Subject: FW: Public Records Request - 1025 Massachusetts Avenue, Lunenburg, MA 01462
Date: Tuesday, July 28, 2020 3:05:45 PM
Attachments: image001.png

Hi Sophia,
This concludes our inquiry for 1025 Massachusetts Avenue for any environmental concerns, violations etc.

From: Lunenburg Conservation Commission <mmarro@lunenburgonline.com>
Sent: Tuesday, July 28, 2020 2:06 PM
To: epeterson@lunenburgonline.com
Subject: Re: Public Records Request - 1025 Massachusetts Avenue, Lunenburg, MA 01462

After consulting my files, I have no records of any conservation commission actions on 1025 Mass Ave.

Thanks
Matt

Quoting Elaine Peterson <epeterson@lunenburgonline.com>:

> **Hello,**
>
> **Please review the public records request and respond directly to the requestor if there are any, and copy me as well. If there are none let me know so I know either way. Thank you.**
>
> Elaine M.
> Peterson
>
> Town of Lunenburg
>
> Executive Asst. to the Town Manager

17 Main St. P O Box 135

Lunenburg, MA 01462

978-582-4144

www.lunenburgma.gov

This email is for distribution of materials only, not for discussion purposes.

From: Waxenberg, Sophia <WaxenbergS@liro.com>
Sent: Thursday, July 23, 2020 3:20 PM
To: generalpr@lunenburgonline.com
Subject: Public Records Request - 1025 Massachusetts Avenue, Lunenburg, MA 01462

Good afternoon Ms. Lemieux,

Please find attached a Public Records Request Form for the following address: 1025 Massachusetts Avenue, Lunenburg, MA 01462. The request regards any environmental violations or enforcements for the Site.

Requestor's name: Sophia Waxenberg

Requestor's email: waxenbergs@liro.com

Let me know if you have any questions.

Sincerely,

Sophia Waxenberg
Environmental Engineer

Integrated Construction, Design, and Technology Solutions
100 Duffy Avenue – Suite 402 | Hicksville, NY | 11801

516.595.2996 [T] or 973.767.9411 [M] | www.liro.com

Matthew S. Marro
Conservation Administrator
Lunenburg Conservation Commission
960 Mass Ave
Lunenburg, MA 01462
www.lunenburgma.gov
978-582-4147 ext 431
978-314-7858 (cell)
888-435-5999 (Efax)

Waxenberg, Sophia

From: Kasper-Dunne, JoAnne (DEP) <joanne.kasper-dunne@state.ma.us>
Sent: Thursday, August 6, 2020 2:25 PM
To: Waxenberg, Sophia
Subject: Response 1 Lunenburg Request-1025 Massachusetts Avenue
Attachments: C87-79 C87-83 Lunenburg Schools.pdf; C87-83 Lunenburg School.pdf; C87-083 Lunenburg Schools.pdf

Hi Sophia. I was able to locate the files for the spills at the Lunenburg School site. I scanned as much as I could, but there are also pictures and maps that I was not able to scan in the time I had. I will try to get it done next time I am in the office, although we are not able to scan large maps and plans with our equipment.

Please let me know if you have any trouble opening these files.

Thank you and have a good day.

JoAnne Kasper-Dunne
MassDEP
CERO

From: Waxenberg, Sophia <WaxenbergS@liro.com>
Sent: Thursday, July 30, 2020 2:02 PM
To: Kasper-Dunne, JoAnne (DEP) <joanne.kasper-dunne@mass.gov>
Subject: RE: Lunenburg Request-1025 Massachusetts Avenue

JoAnne, that would be great. Thomas C. Passios Elementary School is the Site I'm inquiring about, so those must be the spill reports. Thank you for the information. Let me know what you find from storage next week.

Sincerely,
Sophia

From: Kasper-Dunne, JoAnne (DEP) <joanne.kasper-dunne@state.ma.us>
Sent: Thursday, July 30, 2020 1:37 PM
To: Waxenberg, Sophia <WaxenbergS@liro.com>
Subject: RE: Lunenburg Request-1025 Massachusetts Avenue

I did find two spills at 1033 Mass Ave in 1987. We do not have the files for those spills in our office; I will have to request that the box be returned from storage. Sometimes even then the files are not in the boxes, but I will check. We only have people in the office on Thursday afternoons to accept deliveries so it won't get here until next week. The information from the database is below for the two spills. When the box arrives next week I'll look through it.

SPILL_ID	SITE_ID	SPILL_NAME	ADDRESS	TOWN	HALF_TOWN	COUNTY	REGION	ZIP	STAFF_LEAD	FIRST_DATE	LAST_DATE	TOP_DATE	SPILL_DATE	RPORT_DATE	S_
C87-0079		THOMAS PASSIO	1033 MASS	LUNENBURG		WORCESTER		01462	SCIANNAMEO, F	2/8/1990	2/8/1990	3/5/1987	3/5/1987	3/5/1987	0 F

		S ELEMENTARY SCH.	AVE (RTE 2A)												
C87-0083		THOMAS PASSIOS ELEMENTARY SCH.	1033 MASS AVE (RTE 2A)	LUNENBURG		WORCESTER		01462	SCIANNAMEO, F	2/8/1990	2/8/1990	3/6/1987	3/6/1987	3/6/1987	

From: Waxenberg, Sophia <WaxenbergS@liro.com>
Sent: Thursday, July 30, 2020 12:29 PM
To: Kasper-Dunne, JoAnne (DEP) <joanne.kasper-dunne@mass.gov>
Subject: RE: Lunenburg Request-1025 Massachusetts Avenue

JoAnne,

According to the document I have, the spill was on March 6, 1987. It was approx. 9,000-10,000 gallons of #4 fuel oil, but the specific tank info is unknown. Apparently the DEQE was on Site to help with clean-up operations. Unfortunately, I don't have a spill number.

Also, the Site (a school) is located specifically at 1025 Massachusetts Avenue, but it is part of a campus associated with 1079 Massachusetts Avenue – not sure if the DEQE used this address instead for any reason.

Thank you,
Sophia

From: Kasper-Dunne, JoAnne (DEP) <joanne.kasper-dunne@state.ma.us>
Sent: Thursday, July 30, 2020 12:16 PM
To: Waxenberg, Sophia <WaxenbergS@liro.com>
Subject: Re: Lunenburg Request-1025 Massachusetts Avenue

I did not see this spill in our database when I checked, but I can look further. It's helpful to have the year – was there any other type of number on that letter? Most spills are designated in this way: C87-045, signifying the region (central), the year, and the spill number. It's possible that the amount of oil that spilled was determined to be below our reportable thresholds. Does it say anything about the amount spilled on that letter you have?

DEQE used to be the name of DEP, same agency.

From: "Waxenberg, Sophia" <WaxenbergS@liro.com>
Date: Thursday, July 30, 2020 at 12:01 PM
To: "Kasper-Dunne, JoAnne (DEP)" <joanne.kasper-dunne@mass.gov>
Subject: RE: Lunenburg Request-1025 Massachusetts Avenue

Hi JoAnne,

Thank you for your response. Do you happen to know what agency the Massachusetts Department of Environmental Quality Engineering falls under, if it is not the Mass DEP?

I am inquiring specifically about an oil spill that was reported for the listed address. I have a letter from the Fire Department written to the Environmental Quality Engineering department in 1987 regarding the spill, and I am in search of more information.

Best regards,
Sophia

From: Kasper-Dunne, JoAnne (DEP) <joanne.kasper-dunne@state.ma.us>
Sent: Thursday, July 30, 2020 11:37 AM
To: Waxenberg, Sophia <WaxenbergS@liro.com>
Subject: Lunenburg Request-1025 Massachusetts Avenue

Hello, Ms. Waxenburg. Staff have searched for records pertaining to enforcement actions, violations or complaints at 1025 Massachusetts Avenue and we have not found any.

Thank you and have a good day.

JoAnne Kasper-Dunne
MassDEP
CERO

Formstack Submission For: DEP Public Record Request

Submitted at 07/24/20 2:45 PM

Name:	Sophia Waxenberg
Organization or Company (if applicable):	LiRo Engineers, Inc.
Email:	waxenbergs@liro.com
Phone:	(973) 767-9411
Address:	100 Duffy Avenue Hicksville, NY 11801

Summary of Request:	Please provide any environmental enforcement actions, violations, or complaints associated with 1025 Massachusetts Avenue, Lunenburg, MA 01462.
Upload Full PRR Document*:	

Formstack, 11671 Lantern Road, Suite 300, Fishers, IN 46038

From:	Waxenberg, Sophia
To:	firepr@lunenburgonline.com
Subject:	Public Records Request - 1025 Massachusetts Avenue, Lunenburg, MA 01462
Date:	Thursday, July 23, 2020 3:22:00 PM
Attachments:	public_record_request_form_fillable_.pdf image001.png

Good afternoon Ms. Weller,

Please find attached a Public Records Request Form for the following address: 1025 Massachusetts Avenue, Lunenburg, MA 01462 (T.C. Passios School). The request regards any environmental enforcements or violations associated with the Site.

Requestor's name: Sophia Waxenberg
Requestor's email: waxenbergs@liro.com

Let me know if you have any questions.

Sincerely,

Sophia Waxenberg
Environmental Engineer

Integrated Construction, Design, and Technology Solutions
100 Duffy Avenue – Suite 402 | Hicksville, NY | 11801
516.595.2996 [T] or 973.767.9411 [M] | www.liro.com

From: jricci@lunenburgonline.com
To: Waxenberg, Sophia
Cc: JAMES RICCI
Subject: 1025 Mass. Ave Lunenburg Mass.
Date: Wednesday, July 29, 2020 3:44:45 PM
Attachments: Xerox Scan_07292020153423.pdf

This is everything we find in our files relevant to environmental issues @ the above location. You are welcome to come into our office and review anything else in the files. Any questions please call.

Thank You!

James Ricci
Captain Lunenburg Fire Dept.
Fire Prevention
655 Mass. Ave.
Lunenburg mass. 01462
978 582-4155

----- Forwarded message from scan@lunenburgonline.com -----

Date: Wed, 29 Jul 2020 15:34:40 -0400
From: scan@lunenburgonline.com
Reply-To: scan@lunenburgonline.com
Subject: Xerox Scan
To: jricci@lunenburgonline.com

Please open the scanned attachment

Number of Images: 12
Attachment File Type: PDF

Device Name: VersaLink C7020
Device Location:

----- End forwarded message -----

Appendix G

Site Reconnaissance Photo Log

Photo 1: Front view of the Thomas C. Passios Elementary School (and main entry on the south façade).

Photo 2: View of the east side of the building from the roof, facing southwest.

Photo 3: View of the southwest portion of the building.

Photo 4: View of the Electrical/Transformer Room entry door (left) and the Old Generator Room entry door (right) on the east side of the building.

Photo 5: Blue transformers in the Electrical/Transformer Room.

Photo 6: Floor drain adjacent to the blue transformers in the Electrical Room.

Photo 7: Old oil-filled switchgear equipment associated with the High School.

Photo 8: Surface staining under old oil-filled switchgear equipment associated with the High School in the Electrical Room.

Photo 9: Old oil-filled switchgear equipment associated with Passios School in the Electrical Room.

Photo 10: Surface staining under old oil-filled switchgear equipment associated with Passios School.

Photo 11: General view of the Boiler Room.

Photo 12: Boiler 1 (Viessmann) – Primary boiler for the Passios School.

Photo 13: Close-up view of the old incinerators near the old oil pump switches in the Boiler Room.

Photo 14: Paint peeling observed on the interior wall of the Boiler Room associated with the brick chimney (above the old incinerators).

Photo 15: Close-up view of the Boiler Room chimney on the east side.

Photo 16: Old oil pump switches near the incinerators in the Boiler Room.

Photo 17: Old Generator Room Storage (adjacent to the Boiler Room & Main Electrical Room) containing typical hazardous waste.

Photo 18: Old ballasts stored in the Old Generator Room.

Photo 19: Approximate location of the former 10,000-gal and 20,000-gal USTs on the east side of the Passios School.

Photo 20: Close-up view of the approximate location of the former 10,000-gal and 20,000-gal USTs on the east side of the Passios School.

Photo 21: Approximate location of the former modular classroom associated with a 275-gallon AST adjacent-west of the Passios School.

Photo 22: Stressed vegetation adjacent to the existing soil stockpile north of the Passios School.

Photo 23: Existing soil stockpile and wooded area northwest of the Passios School.

Photo 24: Gravel lot behind the Passios School, near the existing soil stockpile.

Photo 25: View of the west façade of the High School on campus.

Photo 26: View of the Thomas C. Passios School roof, facing east.

Photo 27: Generator near the Maintenance Garage on the east side of the building.

Photo 28: Natural gas piping on the side of the Maintenance Garage.

Photo 29: General view of the cafeteria in the Passios School.

Photo 30: Cafeteria ceiling.

Photo 31: General view of the gymnasium.

Photo 32: Crawlspace located in the mezzanine adjacent to the gymnasium.

Photo 33: General view of a classroom in the Passios School.

Photo 34: Damaged floor tile in Classroom 22.

Photo 35: General view of the Janitor's Shop.

Photo 36: Janitor's Shop ceiling.

Photo 37: General view of the Janitor's Closet.

Photo 38: General view of Classroom 10, with view of paint mixer drum in back of classroom near windows.

Photo 39: Close-up view of the unlabeled "line painters" in Classroom 10.

Photo 40: Athletic field across from the Brooks House.

Photo 41: Brooks House.

Photo 42: General view of the basement in the Brooks House and the old sealed-off fireplace.

Photo 43: Former location of the 275-gallon AST in the basement of the Brooks House.

Photo 44: Catch basin behind the Brooks House and view of the Lunenburg Public Library.

Appendix H

User Questionnaire

User Name: Town of Lunenburg Date: 7/17/20
User Address: 1025 Mass Ave

ASTM E1527-13 USER QUESIONNAIRE

When the "user" (the party for whom the assessment is being prepared) of the Phase I is required to help the environmental professional identify recognized environmental conditions at the property, a "User Questionnaire" is completed by the user to help gather information that may identify recognized environmental conditions at the property.

We ask that you answer the six questions below to the best of your knowledge. We understand that, in some circumstances, you may have little or no information. Still, we encourage you to complete and return the questionnaire as soon as possible. This will allow us to reflect the fact that the Questionnaire was completed when we issue our report as is required. Completion of the assessment to the new standard, when conducted in connection with the asset purchase of a real property, may entitle the user to certain federal liability protections that result from conducting "All Appropriate Inquiries" into the previous ownership and uses of a property.

(1.) Environmental liens that are filed or recorded against the *property* (40 CFR 312.25).
Did a search of *recorded land title records* (or judicial records where appropriate, see Note 1 below) identify any environmental liens filed or recorded against the *property* under federal, tribal, state or local law? No Search has been done - No Known liens.

NOTE 1—In certain jurisdictions, federal, tribal, state, or local statutes, or regulations specify that environmental liens and AULs be filed in judicial records rather than in land title records. In such cases judicial records must be searched for environmental liens and AULs.

(2.) Activity and use limitations that are in place on the *property* or that have been filed or recorded against the *property* (40 CFR 312.26(a)(1)(v) and vi)).
Did a search of *recorded land title records* (or judicial records where appropriate, see Note 1 above) identify any AULs, such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the *property* and/or have been filed or recorded against the *property* under federal, tribal, state or local law? No Search has been done. No Known Activity and use limitations -

(3.) Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).
Do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or an *adjoining property* so that you would have specialized knowledge of the chemicals and processes used by this type of business? Director of Facilities for Lunenburg Public Schools since 1998.

(4.) Relationship of the purchase price to the fair market value of the *property* if it were not contaminated (40 CFR 312.29).

Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*? N/A

(5.) Commonly known or *reasonably ascertainable* information about the *property* (40 CFR 312.30).
Are you aware of commonly known or *reasonably ascertainable* information about the *property* that would help the *environmental professional* to identify conditions indicative of releases or threatened releases? For example,
(a.) Do you know the past uses of the *property*? YES
(b.) Do you know of specific chemicals that are present or once were present at the *property*? SOMEWHAT
(c.) Do you know of spills or other chemical releases that have taken place at the *property*? 0.1 SPILL
(d.) Do you know of any environmental cleanups that have taken place at the *property*? No direct knowledge

(6.) The degree of obviousness of the presence or likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).
Based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of releases at the *property*? No

In addition, if available, please provide the following information. This information is intended to assist the *environmental professional*, but is not necessarily required to qualify for one of the *LLPs*. The information includes:

(a) the reason why the Phase I is being performed Proposed renovation

(b) the type of *property* and type of *property* transaction for example, sale, purchase, exchange, etc. Municipal, Renovation

(c) the complete and correct address for the *property* (a map or other documentation showing *property* location and boundaries is helpful) 1625 MASS AVE

(d) the scope of services desired for the Phase I (including whether any parties to the *property* transaction may have a required standard scope of services or whether any considerations beyond the requirements of Practice E1527 are to be considered)

(e) identification of all parties who will rely on the Phase I *report*

(f) identification of the site contact and how the contact can be reached

(g) any special terms and conditions which must be agreed upon by the *environmental professional*

(h) any other knowledge or experience with the *property* that may be pertinent to the *environmental professional* (for example, copies of any available prior *environmental site assessment reports*, documents, correspondence, etc., concerning the *property* and its environmental condition)

Appendix I

Professional Qualifications

Sophia Waxenberg

Environmental Engineer

Education

B.S., Energy Engineering,
The Pennsylvania State University

Minor: Environmental Engineering

Certifications, Licenses, and Registrations

OSHA 10-Hour Construction Safety

NYSDOL Asbestos Inspector

NYSDEC Erosion and Sediment Control

OSHA Confined Space Entry

Affiliations

Society of Petroleum Engineers

Years with LiRo: 2

PROFESSIONAL PROFILE

Ms. Waxenberg has over one year of environmental consulting experience working on projects involving environmental due diligence investigations (Phase I and II Environmental Site Assessments), SPDES compliance, sediment and erosion control inspections, sub-surface investigations (i.e. soil and groundwater), and asbestos re-inspections throughout the New York Metropolitan area. She has also been involved in pipe disinfections, asbestos surveys, lead-in-water sampling, bacterial water sampling, and lead-based paint inspections. Ms. Waxenberg's background includes Electrochemistry, Physics, Chemistry of Fuels, Material Analysis/Spectroscopy, Rock and Fluid Properties, and Geo-Resource Evaluation, along with academic and professional research in multiple topics (e.g. chemiluminescence, combustion, and marine renewable energy systems). Her technical writing experience includes preparation of Phase I ESA reports, final asbestos inspection reports and lead-based paint risk assessment reports. Ms. Waxenberg has reviewed, revised, and assisted in the preparation of construction drawings and specifications.

EXPERIENCE

The Federal Asbestos Hazard Emergency Response Act (AHERA) 2019 Triennial Re-Inspection, District of Yonkers, NY – LiRo provides inspection and surveillance services for over 35 schools in Yonkers as part of the Federal and EPA AHERA triennial re-inspection cycle. Ms. Waxenberg's responsibilities included managing the coordination and oversight of the field staff, updating the existing Management Plan, the review and analysis of field data, and the preparation of almost 40 AHERA reports detailing all inspection findings.

New York State Office of Parks, Recreation and Historic Preservation – Erosion and Sediment Control Inspections – Ms. Waxenberg conducts erosion and sediment control inspections at numerous locations throughout New York State, including Minnewaska State Park (Kerhonkson, NY), Shirley Chisholm State Park project (Brooklyn, NY), Croton Water Treatment Facility (Bronx, NY), and Roberto Clemente State Park (Bronx, NY). Her responsibilities include thorough weekly inspections of all the sites, monitoring storm events and adjusting the volume of inspections as needed (according to the NYSDEC Standards and Specifications for Erosion and Sediment Control). She ensures both the construction management and contractor compliance with the New York State Stormwater Pollution Prevention Plan (SWPPP). Upon completion of each inspection, Ms. Waxenberg prepares a comprehensive report detailing the extent of all erosion and sediment control deficiencies, as well as providing photographic evidence and geographical figures to keep track of any actions made to correct the deficiencies.

Private Development Client, Phase I ESA, Manhattan, NY – Ms. Waxenberg prepared a Phase I ESA for two multi-story commercial buildings in Manhattan. Ms. Waxenberg's responsibilities included the environmental site reconnaissance, review of the environmental database report and analysis of surrounding properties, interviewing of site personnel, and preparing the draft Phase I ESA report for review by the Qualified Environmental Professional (QEP).

Private Development Client, Phase I ESA, Yonkers, NY – Ms. Waxenberg prepared a Phase I ESA for a 6.5 acre site in Yonkers, which included a site reconnaissance of four buildings, interview of site personnel, and identification of potential hazards on-site as well as in the environmental database report. She organized the draft report and the respective appendices.

Sophia Waxenberg
Environmental Engineer

Private Development Client, Phase I ESA, Phase I ESA, Brooklyn, NY – Ms. Waxenberg prepared a Phase I ESA for two multi-story commercial and residential buildings in Brooklyn. Her responsibilities included the site reconnaissance, gathering information on relevant and potential environmental hazards, and reviewing the environmental database report for the final deliverables.

SCDPW, Phase I ESA, CR-16 Road Improvement Project, Yaphank, NY – As part of a road expansion project, Suffolk County Department of Public Works requested a Phase I ESA for the "taking areas" along CR-16 (road to be expanded). Ms. Waxenberg conducted the site reconnaissance, reviewed the environmental database report, and prepared a comprehensive Phase I ESA report summarizing the findings.

New York City Department of Transportation (NYCDOT), Phase I ESA, Cedarview Bridge, Staten Island – Ms. Waxenberg assisted in the preparation of the Phase I ESA draft for the NYCDOT as part of the reconstruction the Cedarview Bridge. Her responsibilities included assisting with the site reconnaissance, comprehensive review of the environmental database report, interview of site personnel, and preparing the draft Phase I ESA report for review by the QEP.

Town of Babylon, Phase II ESA, Carlls River, West Babylon, NY – Ms. Waxenberg completed a Phase II ESA to characterize soil and groundwater impacted during the Carlls' River Stormwater Wetland Restoration Project. Ms. Waxenberg followed a Phase II ESA sampling work plan, interpreted construction plans, and led the field investigation. Ms. Waxenberg sampled groundwater and soil from multiple borings, tabulated and evaluated the analytical data, and prepared the final Phase II ESA report.

New York City School Construction Authority (NYCSCA) – Industrial and Environmental Hygiene Division – Ms. Waxenberg provided field inspection services during the disinfection process for new pipe insulation throughout multiple schools in Manhattan and Brooklyn. Ms. Waxenberg conducted bacterial sampling inspections and lead-in-water sampling for schools in Manhattan. Her responsibilities included review of technical design drawings to ensure subcontractor compliance with all NYCSCA required procedures, and proper documentation of field activities throughout the duration of the job.

Town of Oyster Bay Housing Authority, Lead Inspection – Ms. Waxenberg assisted in lead-based paint assessments and inspection projects in accordance with HUD guidelines. She also helped used the XRF paint analyzer data in the determination of lead-based paint hazards and the collection of lead dust samples in apartments and room equivalents at several housing developments. She ensured using the HUD approved methodologies for randomly selecting apartments, exterior paints, and interior common areas.

Joshua B. Levine, P.E.

Senior Associate Vice President

Education
B.S.E., Environmental Engineering, Tulane University

Certifications
OSHA 40 Certified

OSHA 8 Certified

Licenses and Registrations
Registered Professional Engineer, New York

Affiliations
UCONN Connecticut Brownfields Initiative- Advisory Board

American Society of Civil Engineers

Urban Land Institute

International Council of Shopping Centers

National Society of Professional Engineers

The Retail Network

Years with LiRo: 0.5

Years at other firms: 20

PROFESSIONAL PROFILE

Mr. Levine is an environmental professional with 20 years of experience managing investigation and remediation of brownfield sites in the New York Metropolitan region. Mr. Levine has supervised remediation and closure of sites in the New York State Brownfields Cleanup Program (BCP), State Superfund Program, Spills Program, New York City Voluntary Cleanup Program, and E-designation Program. Mr. Levine has managed USEPA Class V injection well closure, Phase I and Phase II Environmental Site Assessments, and designed soil, soil vapor, and groundwater remediation systems.

LIRO EXPERIENCE

Private Development Client, Old Brookville, NY – LiRo recently completed a Phase II ESA at a 125-acre former golf course property on Long Island. Mr. Levine supervised development of the Phase II ESA sampling work plan to target potential source areas, reviewed the analytical data and Phase II ESA report to summarize the investigation findings and identify future remediation requirements.

Private Development Client, Garden City, NY – Mr. Levine managed an Indoor Air Quality (IAQ) investigation at an occupied 100-year old former aeronautical defense contractor manufacturing plant. The IAQ investigation included indoor and outdoor air sampling for VOCs, sulfides and mercaptans. Mr. Levine prepared the Investigation scope, conducted the sampling and prepared the IAQ Summary report to summarize the investigation findings and identify future recommendations.

Due Diligence Environmental Site Professional – Mr. Levine has been responsible for procuring, implementing and managing over 100 Phase I and Phase II environmental site assessments throughout the New York City Metropolitan region over the past 19 years. Mr. Levine has established a strong reputation within the New York City regional real estate market for delivering a quality due diligence work product in a timely manner to identify Recognized Environmental Conditions (RECs).

Prior Work Experience 2000-2019
Brownfields and Real Estate Services Practice Leader, Roux Associates, Inc.
Mr. Levine's titles ranged from Staff Assistant Engineer through Principal Engineer at Roux Environmental Engineering and Geology D.P.C. (fka Roux Associates, Inc). After tracking, managing, and growing the Brownfields and Real Estate Services Practice Area within Roux from its inception in 2010 to 2018, Mr. Levine lead the practice area for the company nationwide in January 2019 until his move to LiRo in June 2019. His network of clients and contacts across a variety of market sectors within the regional private real estate development community facilitated his growth as a rainmaking principal and expert in his field. He has provided webinars to the general public, continuing education presentations to the New York State Bar Association, lectured at UCONN, and provided business development presentations to clients for the following topics: navigating New York City's environmental requirements, New York State BCP and NYCOER VCP, sustainable remediation strategies, and the intersection of brownfields and opportunity zones.

BCP Site in Halletts Point, Astoria, New York – Mr. Levine was responsible for the investigation and remediation of a multi-parcel waterfront development**.** Parcels are currently enrolled in the New York State BCP and New York City Office of Environmental Remediation E- designation and Voluntary Cleanup Programs (VCP). The site was historically occupied by various commercial and industrial establishments including Manufactured Gas Plants (MGP), a lumber company, iron works, and a coal-fired electric generating station. Remedial actions include excavation of soil and rock, installation of a vapor barrier, and installation and maintenance of a sub-slab depressurization system (SSDS). Mr. Levine began providing services to the project in 2013 and the project is expected to run through 2030 with sequential remedial action and development of

the remaining parcels. Once completed, the site will consist of a mixed-use development with housing (both affordable and market-rate), retail, a waterfront esplanade, and parking.

BCP Site in Hudson Yards District, Manhattan, New York – Mr. Levine was responsible for the investigation and remediation of a 1.5-acre site enrolled in the New York State BCP. Mr. Levine managed a Track 1 Unrestricted Use Cleanup to remove hazardous mercury and lead contaminated soil from a former hatters' fur processing factory.

BCP Site in Long Island City, New York – Mr. Levine was responsible for managing the investigation and remediation of several portions of 3 acres. The site was formally used for the manufacturing and storage of disinfectants, soaps and pesticides. This project included due diligence environmental investigations (onsite and offsite) that identified a large creosote plume beneath portions of the site and 45 subsurface vaults/kettles, which contained chemicals used for the manufacturing of disinfectants, soaps and pesticides. Mr. Levine managed an in situ-waste characterization sampling program and implementation of a Remedial Action Work Plan, which included the removal and closure of the 45 subsurface vaults/kettles contents and structures, excavation of soils below grade and soil management, design, installation and operation of a recovery well and an in situ chemical oxidation (ISCO) program utilizing alkaline-activated Persulfate.

BCP Site in Manhattan. New York – Mr. Levine was responsible for management, investigation and remediation of a one-acre brownfield site containing chlorinated solvents, heavy metals and petroleum compounds in soil, soil vapor and groundwater over one city block in Manhattan, New York. This project included the implementation of a remedial investigation and completion of a Track 1 unrestricted use remediation through the New York State Brownfields Cleanup Program. Mr. Levine managed a groundwater, soil and soil vapor investigation and documented this work in a Remedial Investigation Summary Report less than one week after receipt of the analytical data. In addition, Mr. Levine prepared and submitted a BCP Application to NYSDEC within this same time frame, ultimately generating significant tax credits for the project. Due to careful attention to detail throughout the process and correspondence with NYSDEC, the BCP Application was deemed complete one day after it was submitted, expediting the process to conduct the investigation and remediation within the BCP.

Self-Storage Warehouse, Staten Island, NY – Mr. Levine was responsible for the investigation and remediation of an occupied self-storage warehouse facility in Staten Island under the jurisdiction of the NYCOER. This project was completed through the New York City Voluntary Cleanup Program and resulted in a Notice of Completion in 2013.

Retail Strip Mall, Clifton, NJ – Mr. Levine was responsible for the pilot testing, design and installation of a sub-slab depressurization system (SSDS) to mitigate chlorinated solvent soil vapor contamination beneath an existing occupied shopping mall in Clifton, New Jersey. This project was completed within strict New Jersey Department of Environmental Protection regulatory response timeframes due to the site's Immediate Environmental Concern (IEC) status.

Superfund Site in Sag Harbor, NY – Mr. Levine was responsible for the design and installation of a vapor barrier and sub-membrane depressurization system to prevent vapor intrusion into a former factory building, which was converted into a residential structure. Mr. Levine prepared design drawings and the engineering controls within the Site Management Plan that was submitted to NYSDEC. Mr. Levine developed engineering cost estimates for the construction of the vapor barrier and sub-membrane depressurization system. The active depressurization system was proven most appropriate due to the greater level of protection provided by active blower operation when compared to the cost differential between the active and passive systems. In addition, Mr. Levine developed a vacuum enhanced product recovery program to expedite the closure of the site's open NYSDEC spill numbers.

SURVEY REPORT
FOR LEAD BASED PAINT

Performed at:
Thomas C Passios Elementary School
1025 Massachusetts Avenue
Lunenberg, MA 01462

Performed for:
DAI - DiGiorgio Associates Inc.
529 Main Street - Suite 3303
Charlestown, MA 02129

Prepared by:

LiRo Engineers, Inc.
A LiRo Group Company

LIRO Engineers, Inc.
Three Aerial Way
Syosset, New York 11791
Phone: 516-938-5476 / Facsimile: 516-937-5421

LIRO Job #: 20-138-2329

OCTOBER 1, 2020

10 State Street, Suite 100
Woburn, MA 01801
Telephone 781-932-9400
Fax 781-932-6211
www.atcgroupservices.com

September 26, 2020

Mr. Christopher Zanoni
Vice President
The LiRo Group / DiGiorgio Associates, Inc.
529 Main Street, Suite 3303
Boston, Massachusetts

Subject: Representative Lead Paint Survey
Thomas C. Passios Elementary School
1025 Massachusetts Ave.
Lunenburg, Massachusetts
ATC Project No.: 5900000253

Dear Mr. Zanoni:

ATC Group Services, LLC (ATC) was requested to perform representative lead paint testing on September 17, 2020 throughout the Thomas C. Passios Elementary School located at 1025 Massachusetts Ave in Lunenburg, Massachusetts. The lead determination was performed by ATC's Lead Paint Inspector, Mr. Logan Fitzgerald. The lead paint testing was performed via X-Ray Fluorescence (XRF) Analysis, using a Heuresis Lead Paint Analyzer.

Representative Lead-Based Paint Survey

The Heuresis Lead Paint Analyzer is a complete lead paint analysis system, which quickly, accurately and non-destructively measures the concentration of Lead Paint on surfaces. The Heuresis relies on the measurement of the L-shell and K-shell X-rays to determine the amount of lead present in the painted surface. K-shell X-rays can penetrate many layers of paint and allow a good measurement of the lead content of paint to be made without being significantly affected by the thickness or number of layers of paint on the surface of the sample. L-shell X-rays have less penetration and provide a measurement of the surface level lead content of paint.

The Heuresis has the ability to analyze and compute corrections for the differences in the energy spectrums relating to different substrates. This analysis of the energy spectrum means that the lead paint reading displayed on the instrument already accounts for any substrate effects and no correction is required by the operator.

Upon arrival at the job site, a validation test was performed to assure that the instrument was operating properly. A series of three test measurements using the nominal time which was used during the inspection were taken on the NIST Paint Film Standard (SRM No. 2579) as required by the instrument's Performance Characteristic Sheet (PCS). The individual readings and an average of the three readings were recorded and compared to the standards. In all cases, the instrument was functioning within the standard deviation as defined by the manufacturer and the PCS. All validation readings were recorded in the field data of each unit where validation tests were performed. If for any reason the XRF does not pass the quality control procedures, it is ATC's policy to replace that instrument with an XRF that passes the above criteria for calibration.

The following XRF readings are in milligrams per square centimeter (mg/cm^2). Readings above 0.0 have been **bolded.** According to the United States Environmental Protection Agency (USEPA), lead containing paint (LCP) are paints which contain lead at .1 mg/cm^2 or greater. Lead based paints (LBP) are paints that contain lead at .5 mg/cm^2 or greater.

TABLE 1
LEAD PAINT TESTING RESULTS BY XRF
T.C. PASSIOS SCHOOL
LUNENBURG, MASSACHUSETTS

Location	Component	Substrate	Color	XRF RESULT (MG/CM^2)
West Wing – Room 6	Wall	Plaster	White	0.0
West Wing – Room 6	**Wall**	**Wood**	**White**	**0.2**
West Wing – Room 6	**Chair Rail**	**Wood**	**White**	**0.4**
West Wing – Room 6	**Pipe**	**Metal**	**White**	**5.2**
West Wing – Room 6	**Radiator**	**Metal**	**White**	**0.9**
West Wing – Room 6	**Window Sill**	**Wood**	**Beige**	**0.6**
West Wing – Room 6	**Window Frame**	**Wood**	**Beige**	**0.1**
West Wing – Room 6	Exterior Door	Metal	Brown	0.0
West Wing – Room 6	Closet Door	Wood	Green	0.0
West Wing – Room 6	**Interior Hallway Window Frame**	**Wood**	**White**	**6.3**
West Wing – Room 8	**Wall**	**Plaster**	**White**	**0.3**
West Wing – Room 8	**Wall**	**Wood**	**White**	**0.7**
West Wing – Room 8	**Chair Rail**	**Wood**	**White**	**0.2**
West Wing – Room 8	**Pipe**	**Metal**	**White**	**5.1**
West Wing – Room 8	**Radiator**	**Metal**	**White**	**1.0**
West Wing – Room 8	**Window Sill**	**Wood**	**Beige**	**0.6**
West Wing – Room 8	Window Frame	Wood	Beige	0.0
West Wing – Room 8	Closet Door	Wood	Blue	0.0
West Wing – Room 8	**Interior Hallway Window Frame**	**Wood**	**White**	**5.6**
West Wing – Hallway	**Ceramic Tile Wall**	**Ceramic**	**Tan**	**0.2**
West Wing – Hallway	**Radiators**	**Metal**	**Beige**	**0.1**
West Wing – Hallway	**Pipe**	**Metal**	**Beige**	**0.3**
West Wing – Hallway	**Wall**	**Plaster**	**Beige**	**0.3**
West Wing – Hallway	**Exterior Door**	**Metal**	**Red**	**0.2**
West Wing – Hallway	**Exterior Door Frame**	**Metal**	**Red**	**0.1**
West Wing – Hallway	**Exit Door Window Frame**	**Wood**	**Red**	**8.3**
Exit 2	**Exit Window Frame**	**Wood**	**Red**	**9.1**
Exit 2	**Exit Door Frame**	**Wood**	**Red**	**16.4**
Exit 2	**Door**	**Metal**	**Red**	**0.1**
Middle Wing – Room 18	Wall	Plaster	White	0.0
Middle Wing – Room 18	**Chair Rail**	**Wood**	**White**	**0.7**
Middle Wing – Room 18	**Wall**	**Wood**	**White**	**1.7**
Middle Wing – Room 18	**Pipe**	**Metal**	**White**	**0.3**
Middle Wing – Room 18	**Window Sill**	**Wood**	**White**	**0.8**
Middle Wing – Room 18	**Window Frame**	**Wood**	**White**	**0.4**
Middle Wing – Room 18	**Window Frame**	**Wood**	**Yellow**	**4.6**
Middle Wing – Room 18	**Closet Door**	**Wood**	**Blue**	**0.2**
Middle Wing – Room 15	Wall	Plaster	White	0.0
Middle Wing – Room 15	**Chair Rail**	**Wood**	**White**	**1.1**
Middle Wing – Room 15	**Wall**	**Wood**	**White**	**0.6**
Middle Wing – Room 15	**Pipe**	**Metal**	**White**	**1.0**
Middle Wing – Room 15	**Window Sill**	**Wood**	**White**	**0.5**
Middle Wing – Room 15	**Window Frame**	**Wood**	**White**	**0.5**
Middle Wing – Room 15	**Closet Door**	**Wood**	**Red**	**0.2**
Middle Wing – Room 15	**Interior Hallway Window Frame**	**Wood**	**Green**	**8.2**

Location	Component	Substrate	Color	XRF RESULT (MG/CM^2)
Middle Wing – Room 15	**Radiator**	**Metal**	**Beige**	**0.8**
Hallway	Wall	Ceramic	Tan	0.0
Hallway	**Wall**	**Plaster**	**Beige**	**0.2**
Hallway	**Pipe**	**Metal**	**Beige**	**0.4**
Hallway	**Interior Hallway Window Frame**	**Wood**	**Beige**	**5.8**
Hallway	**Radiator**	**Metal**	**Beige**	**0.1**
Hallway	**Hallway Door Frame**	**Metal**	**Red**	**0.2**
Hallway	**Hallway Doof**	**Metal**	**Red**	**0.5**
Hallway	**Hallway Window Frame**	**Wood**	**Red**	**0.8**
North Wing - Restroom	**Wall**	**Ceramic**	**Teal**	**0.1**
North Wing - Restroom	Wall	Plaster	White	0.0
North Wing - Restroom	Window Frame	Wood	White	0.0
North Wing - Restroom	**Pipe**	**Metal**	**White**	**0.2**
North Wing - Restroom	**Radiator**	**Metal**	**White**	**0.4**
North Wing – Room 21	**Wall**	**Plaster**	**White**	**0.2**
North Wing – Room 21	**Chair Rail**	**Wood**	**White**	**0.7**
North Wing – Room 21	**Wall**	**Wood**	**White**	**0.6**
North Wing – Room 21	**Pipe**	**Metal**	**White**	**0.2**
North Wing – Room 21	**Window Sill**	**Wood**	**White**	**0.3**
North Wing – Room 21	**Window Frame**	**Wood**	**White**	**0.3**
North Wing – Room 21	**Closet Door**	**Wood**	**Teal**	**3.5**
North Wing – Room 21	**Interior Hallway Window Frame**	**Wood**	**White**	**6.8**
North Wing – Room 21	**Radiator**	**Metal**	**White**	**0.7**
North Wing – Room 20	Wall	Plaster	White	0.0
North Wing – Room 20	**Chair Rail**	**Wood**	**White**	**0.5**
North Wing – Room 20	**Wall**	**Wood**	**White**	**1.8**
North Wing – Room 20	**Pipe**	**Metal**	**White**	**0.2**
North Wing – Room 20	**Window Sill**	**Wood**	**White**	**0.1**
North Wing – Room 20	**Window Frame**	**Wood**	**White**	**0.2**
North Wing – Room 20	**Radiator**	**Metal**	**White**	**0.6**
North Wing – Room 20	**Closet Door**	**Wood**	**Blue**	**1.1**
North Wing – Room 20	**Interior Hallway Window Frame**	**Wood**	**White**	**3.1**
North Wing – Hallway	**Wall**	**Ceramic**	**Beige**	**0.2**
North Wing – Hallway	**Wall**	**Plaster**	**Beige**	**0.1**
North Wing – Hallway	**Interior Hallway Window Frame**	**Wood**	**Beige**	**4.5**
North Wing – Hallway	**Pipe**	**Metal**	**Beige**	**0.3**
North Wing – Hallway	**Radiator**	**Metal**	**Beige**	**0.7**
North Wing – Hallway	**Exit Door Frame**	**Wood**	**Red**	**0.3**
North Wing – Hallway	**Exit Door Window Frame**	**Wood**	**Red**	**0.6**
South Wing - Gym	**Wall**	**Wood**	**Beige**	**0.2**
South Wing - Gym	**Door Frame**	**Wood**	**Beige**	**0.1**
South Wing - Gym	**Door**	**Wood**	**Beige**	**0.0**
South Wing - Gym	**Radiator**	**Metal**	**Beige**	**0.8**
South Wing - Gym	**Pipe**	**Metal**	**Beige**	**0.2**
South Wing - Gym	**Window Frame**	**Wood**	**Beige**	**0.5**
South Wing - Gym	Stage Wall	Sheetrock	Beige	0.0
South Wing - Gym	**Stage Frame**	**Wood**	**Beige**	**5.1**

Location	Component	Substrate	Color	XRF RESULT (MG/CM^2)
South Wing – Teacher's Work Room	Wall	Brick	Blue	0.0
South Wing – Teacher's Work Room	**Wall**	**Brick**	**Beige**	**0.2**
South Wing – Teacher's Work Room	**Door Frame**	**Metal**	**Blue**	**0.3**
South Wing – Teacher's Work Room	**Door**	**Metal**	**White**	**0.2**
South Wing – Teacher's Work Room	**Wall**	**Plaster**	**Beige**	**0.1**
South Wing – Teacher's Work Room	Wall	Wood	Blue	0.0
South Wing – Cafeteria	**Window Sill**	**Wood**	**White**	**0.7**
South Wing – Cafeteria	Window Frame	Wood	White	0.0
South Wing – Cafeteria	**Radiator**	**Metal**	**White**	**0.3**
South Wing – Cafeteria	**Closet Door**	**Wood**	**Blue**	**0.1**
South Wing – Kitchen	Wall	Plaster	White	0.0
South Wing – Kitchen	Wall	Ceramic	Red	0.0
South Wing – Kitchen	**Vent Hood**	**Metal**	**Beige**	**0.2**
Entry Foyer	**Window Frame**	**Wood**	**Red**	**5.8**
Exterior – Entrance	**Window Frame**	**Wood**	**Beige**	**13.5**
Exterior West Wing – Exit 2	**Window Frame**	**Wood**	**Beige**	**13.4**
Exterior West Wing – Exit 3	**Window Frame**	**Wood**	**Beige**	**9.8**
Exterior Northeast Corner – Exit 4	**Wall**	**CMU Block**	**Red**	**0.2**
Exterior Northeast Corner – Exit 4	**Wall**	**CMU Block**	**White**	**3.3**
Exterior Northeast Corner – Exit 4	Door Frame	Wood	Red	0.0
Exterior Northeast Corner – Exit 4	Window Frame	Wood	White	0.0
Exterior North Wing – Exit 5	**Door Frame**	**Wood**	**Off-White**	**6.8**
Exterior North Wing – Boiler Room	**Wall**	**CMU Block**	**Red**	**0.2**
Exterior East Side – Exit 7	**Door Frame**	**Wood**	**Beige**	**0.1**
Exterior East Side – Exit 7	**Wall**	**CMU Block**	**Red**	**0.2**
Roof	**Roof Panel**	**Metal**	**Brown**	**0.1**
Roof	**Clerestory Window Frame**	**Metal**	**Brown**	**2.1**
Roof	Clerestory Window Frame	Metal	White	0.0
Roof	**Gym Clerestory Window Frame**	**Metal**	**White**	**0.2**
Roof Edge	**Metal Cap**	**Metal**	**Beige**	**2.2**
Roof Edge	**Below Metal Cap**	**Wood**	**White**	**14.7**
Roof	Copper Cap	Metal	Green	0.0
1975 Addition Roof	Edge Cap	Metal	Black	0.0

Regulatory Implications

The implications of lead paint existing in a non-residential building are related to the future use of the facility and the need to impact these painted surfaces during the renovation and demolition process.

OSHA recognizes that construction type work on surfaces coated with lead-containing paint has a **potential** to expose workers to hazardous levels of lead and requires that appropriate safety and health measures be followed as stated in 29 CFR 1926.62. OSHA states that until the employer performs an exposure assessment and documents that employees are not exposed above the permissible exposure limit (PEL) of greater than 50 micrograms per cubic meter ($\mu g/m^3$) of air, the employer must treat employees as if they were exposed above the PEL for the following operations:

- Manual renovation and demolition of structures, manual scraping, manual sanding, and use of heat gun where lead-containing coatings or paints are present;
- Abrasive blasting;
- Power tool cleaning;
- Lead burning;
- Using lead-containing mortar or spray painting with lead-containing paint;
- Abrasive blasting, rivet busting, or welding, cutting, or burning on any structure where lead-containing coatings or paint are present;
- Cleanup activities where dry expendable abrasives are used; and
- Any other task the employer believes may cause exposure in excess of the PEL.

Work precautions include providing respiratory protection, protective work clothing and equipment, change areas, hand washing facilities, biological monitoring, and training until an exposure assessment has determined that the work activity will result in an exposure below the PEL. Additional requirements under this standard include a written compliance program as well as record keeping.

If you have any questions regarding the contents of this report, please call us at 781-932-9400.

Sincerely,

ATC Group Services LLC

Logan Fitzgerald
Project Manager
for ATC Group Services
Cell: 774-273-0571
Email: logan.fitzgerald@atcgs.com

Bryan Thompson
Division Manager-Building Sciences
for ATC Group Services
Office:781-932-9400
Email: bryan.thompson@atcgs.com

SURVEY REPORT
FOR ASBESTOS-CONTAINING MATERIALS

Performed at:
Thomas C Passios Elementary School
1025 Massachusetts Avenue
Lunenberg, MA 01462

Performed for:
DAI - DiGiorgio Associates Inc.
529 Main Street - Suite 3303
Charlestown, MA 02129

Prepared by:

LiRo Engineers, Inc.
A LiRo Group Company

LIRO Engineers, Inc.
Three Aerial Way
Syosset, New York 11791
Phone: 516-938-5476 / Facsimile: 516-937-5421

LIRO Job #: 20-138-2329

August 13, 2020

LiRo Engineers, Inc.
A LiRo Group Company

TABLE OF CONTENTS

APPENDICES

LiRo Engineers, Inc.
A LiRo Group Company

1.0 BACKGROUND

LIRO Engineers, Inc. (LIRO) has completed a project specific asbestos survey for the presence of asbestos-containing materials (ACM) at the following building:

Site: Thomas C Passios Elementary School
Address: 1025 Massachusetts Avenue, Lunenberg MA 01462

The inspector(s) responsible for this project are:

Bret Langlois	MA Asbestos Designer # AD900390	Exp.: 11/16/2020
(LIRO Engineers)	MA Asbestos Inspector # AI900883	Exp.: 11/16/2020

Site Visit(s): July 22 - 23, 2020

Report Date: August 13, 2020

Field Procedures and Analysis Methodology:

Asbestos:
Guidelines used for the inspection were established by the Environmental Protection Agency (EPA) in the Guidance for Controlling Asbestos Containing Materials in Buildings, Office of Pesticides and Toxic Substances, DOC #560/5-85-024, and 40 CFR Part 763, Asbestos Hazard Emergency Response Act (AHERA).

Field information was organized in accordance with the AHERA concept of homogenous area (HA). That is, suspect ACM with similar age, appearance, and texture was grouped together, sampled and assessed for condition. Bulk samples of suspect ACM were analyzed by Polarized Light Microscopy (PLM) with dispersion staining, as described in 40 CFR Part 763 and the National Emissions Standard for Hazardous Air Pollutants (NESHAPS).

ELAP has determined that analysis of non-friable organically bound materials (NOB's) is not reliably performed by PLM. Therefore, if PLM yields negative results for a non-friable material, it must be confirmed by using Transmission Electron Microscopy (TEM).

All samples were initially analyzed by using Polarized Light Microscopy. Samples which yielded a negative PLM result and which are classified as a "non-friable" material were then re-analyzed utilizing Transmission Electron Microscopy methodology.

2.0 SCOPE OF WORK

The areas inspected for asbestos-containing may be impacted by the proposed renovation work as per discussions with with client representatives. The specific areas targeted by the survey are as follows:

- Main Building - Interior - Throughout
- Main Building - Exterior - Throughout

- 1975 Building Addition - Interior - Throughout
- 1975 Building Addition - Exterior - Throughout

LIRO's inspection was characterized by a close visual inspection of all accessible areas. Suspect materials found were inspected, sampled, and inventoried for quantity, condition and friability.

3.0 SUMMARY OF FILE SEARCH

See Appendix E for File Search.

4.0 SUMMARY OF INSPECTION RESULTS

The asbestos inspection involved a thorough visual examination of all areas to be affected by the proposed project and sampling of suspect materials.

The following suspect materials were identified:

- 12"x12" Blue Floor Tile
- 12"x12" Tan With Brown Floor Tiles
- 12"x12" Tan/Pink Floor Tile
- 12"x12" White / Black Floor Tile
- 1'x1' Acoustical Ceiling Tile (Smooth)
- 1'x1' Lay-In Splined / Perforated Ceiling Tile
- 1'x1' Splined Dotted Ceiling Tile
- 1'x1' Textured Ceiling Tile
- 2'x4' Lay-In Ceiling Tile
- 9"x9" Green Floor Tile
- 9"x9" Grey Floor Tile
- 9"x9" Red Floor Tile
- 9"x9" White / Green Floor Tile
- Black Mastic of 12"x12" Blue Floor Tile
- Black Mastic of 12"x12" White / Black Floor Tile
- Black Mastic of 9"x9" Green Floor Tile
- Black Mastic of 9"x9" Grey Floor Tile
- Black Mastic of 9"x9" Red Floor Tile
- Black Mastic of 9"x9" White / Green Floor Tile
- Black Mastic of Brown Baseboard Molding
- Black Mastic of Green Baseboard Molding
- Blue Vinyl Baseboard Molding and Associated Mastic
- Brown Baseboard Molding
- Brown Fibrous Insulation Layer (Below Tar / Flashing Vapor Barrier)
- Brown Vinyl Baseboard Molding
- Brown Vinyl Baseboard Molding and Associated Mastic
- C.M.U. Block
- C.M.U. Mortar
- Ceiling Plaster
- Ceramic Floor Tile Mortar @ Bathrooms
- Ceramic Floor Tile Mortar @ Water Fountains
- Ceramic Wall & Floor Tiles
- Ceramic Wall Tile Mortar @ Water Fountains
- Concealed Waterproofing Below Grade (@ Foundation Walls)
- Concealed Waterproofing Membrane / Rust Inhibitor Coating / Tar / Flashing (Behind Facebrick)
- Exterior Brick
- Exterior Brick Mortar
- Exterior Door Frame Caulk (White)
- Exterior Door Lintel Coating (White)
- Exterior Window Frame Caulk (Grey)
- Fiberglass Insulation (Below Tar / Vapor Barrier Layer)
- Fiberglass Pipe Insulation
- Glazed Block Wall Mortar
- Granite Façade Mortar
- Granite Façade Tiles
- Granite Floor Mortar
- Granite Floor Tiles
- Gravel Layer (Below Synthetic Foam)
- Green Baseboard Molding
- Grey Caulk @ Copper Flashing
- Gypsum Wall Board / Joint Compound
- Interior Brick

- Interior Brick Mortar
- Interior C.M.U. Block
- Interior C.M.U. Mortar
- Interior Door Frame Caulk (Silver)
- Interior Long Brick
- Interior Long Brick Mortar
- Interior Window Frame Caulk (Off-White)
- Interior Window Frame Caulk -Type II (Off-White)
- Mastic of Brown Vinyl Baseboard Molding
- Orange Paper Layer (Below Brown Fibrous Insulation)
- Paper Above 1'x1' Splined Doted Ceiling Tile (No Mastic Observed)
- Perimeter / Drain / Skylight Flashing
- Perimeter Flashing
- Pipe Insulation (Within Ceiling Plenums)
- PVC Pipe Joints to Fiberglass Pipe Insulation
- Quarry Tile
- Red Coating on C.M.U.
- Red Mortar of Quarry Floor Tile
- Roof Membrane (Top Layer)
- Skylight / Drain / Mech Equipment Flashing
- Stone Wall Block
- Stone Wall Mortar
- Synthetic Foam Insulation (Below Roof Membrane Layer)
- Tar / Flashing / Vapor Barrier (Below Gravel Layer)
- Tar / Vapor Barrier (Below Synthetic Foam Insulation)
- Tar @ Copper Flashing
- Transom Window Caulk (Grey)
- Transom Window Putty (Associated with Exterior Doors)
- Vinyl Electrical Wire Insulation
- Wall Plaster
- Window Frame Caulk (White)
- Wood Deck (Bottom Layer)
- Yellow Mastic of 12"x12" Tan With Brown Floor Tiles
- Yellow Mastic of 12"x12" Tan/Pink Floor Tile

LiRo Engineers, Inc.
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TABLE 1 - ASBESTOS - SUMMARY OF INSPECTION RESULTS (SIRT)

Line #	HA #	Location	Material	# of Samples	ACM Quantity		Results	Notes
					LF	SF		
1	-	Main Building - Interior - Throughout	Wall Plaster	-	-	-	Non-ACM	As ATC AHERA Report dated 5/15/19 - See Appendix E
2	-		Ceiling Plaster	-	-	**TBD**	**ACM**	
3	-		Gypsum Wall Board / Joint Compound	-	-	-	Non-ACM	
4	-		Pipe Insulation (Within Ceiling Plenums)	-	**TBD**	**-**	**ACM**	
5	-		Cementitious Cement Board (Within Ceiling Plenums)	-	-	**TBD**	**ACM**	
6	-		Transite Cement Board (Within Ceiling Plenums)	-	-	**TBD**	**ACM**	
7	-		1'x1' Splined Dotted Ceiling Tile	-	-	-	Non-ACM	
8	-		Paper Above 1'x1' Splined Doted Ceiling Tile (No Mastic Observed)	-	-	-	Non-ACM	
9	-		2'x4' Lay-In Ceiling Tile	-	-	-	Non-ACM	
10	-		1'x1' Acoustical Ceiling Tile (Smooth)	-	**-**	**-**	Non-ACM	
11	-		1'x1' Textured Ceiling Tile	-	**-**	**-**	Non-ACM	
12	32		Ceramic Wall Tile Mortar @ Water Fountains	3	-	-	Non-ACM	
13	33		Ceramic Floor Tile Mortar @ Water Fountains	3	-	-	Non-ACM	
14	-		Ceramic Wall & Floor Tiles	-	-	-	Non-Suspect	
15	34		Ceramic Floor Tile Mortar @ Bathrooms	3	-	-	Non-ACM	
16	-		9"x9" Grey Floor Tile	-	**-**	**TBD**	**ACM**	As ATC AHERA Report dated 5/15/19 - See Appendix E
17	-		Black Mastic of 9"x9" Grey Floor Tile	-	**-**	**-**	Non-ACM	
18	-		9"x9" Red Floor Tile	-	**-**	**TBD**	**ACM**	
19	-		Black Mastic of 9"x9" Red Floor Tile	-	**-**	**-**	Non-ACM	
20	-		9"x9" Green Floor Tile	-	**-**	**TBD**	**ACM**	
21	-		Black Mastic of 9"x9" Green Floor Tile	-	**-**	**-**	Non-ACM	
22	-		9"x9" White / Green Floor Tile	-	**-**	**TBD**	**ACM**	
23	-		Black Mastic of 9"x9" White / Green Floor Tile	-	**-**	**TBD**	**ACM**	
24	-		12"x12" Blue Floor Tile	-	**-**	**-**	Non-ACM	
25	-		Black Mastic of 12"x12" Blue Floor Tile	-	**-**	**-**	Non-ACM	
26	-		Fiberglass Pipe Insulation	-	-	-	Non-Suspect	
27	-		PVC Pipe Joints to Fiberglass Pipe Insulation	-	-	-	Non-Suspect	
28	-		Vinyl Electrical Wire Insulation	-	-	-	Non-Suspect	
29	31	Main Building - Corridor @ Classroom 19	Interior Long Brick Mortar	3	-	-	Non-ACM	
30	-		Interior Long Brick	-	-	-	Non-Suspect	
31	-	Main Building - Interior - Teacher's Lounge	12"x12" Tan/Pink Floor Tile	-	**-**	**-**	Non-ACM	As ATC AHERA Report dated 5/15/19 - See Appendix E
32	-		Yellow Mastic of 12"x12" Tan/Pink Floor Tile	-	**-**	**-**	Non-ACM	

Line #	HA #	Location	Material	# of Samples	ACM Quantity		Results	Notes
					LF	SF		
33	-	Main Building - Interior - Classrooms - Throughout	Brown Baseboard Molding	-	**-**	**TBD**	**ACM Contaminated**	As ATC AHERA Report dated 5/15/19 - See Appendix E
34	-		Green Baseboard Molding	-	**-**	**TBD**	**ACM**	
35	-		Black Mastic of Brown Baseboard Molding	-	**-**	**TBD**	**ACM**	
36	-		Black Mastic of Green Baseboard Molding	-	**-**	**TBD**	**ACM**	
37	26	Main Building - Interior - Throughout	Glazed Block Wall Mortar	3	-	-	Non-ACM	
38	27		Interior Window Frame Caulk (Off-White)	3	-	-	Non-ACM	
39	28		Interior Window Frame Caulk -Type II (Off-White)	3	-	-	Non-ACM	
40	29	Main Building - Interior @ Gym / Main Entrance Lobby	Interior Door Frame Caulk (Silver)	3	-	-	Non-ACM	
41	30		Stone Wall Mortar	3	-	-	Non-ACM	
42	-		Stone Wall Block	-	-	-	Non-Suspect	
43	35	Main Building - Interior - Kitchen	Brown Vinyl Baseboard Molding and Associated Mastic	3	-	-	Non-ACM	
44	36		Red Mortar of Quarry Floor Tile	3	-	-	Non-ACM	
45	-		Quarry Tile	-	-	**-**	Non-Suspect	
46	-	Main Building - 2nd Floor - Above Teachers' Lounge	12"x12" Tan With Brown Floor Tiles	-	**-**	**-**	Non-ACM	As ATC AHERA Report dated 5/15/19 - See Appendix E
47	-		Yellow Mastic of 12"x12" Tan With Brown Floor Tiles	-	**-**	**-**	Non-ACM	
48	12	Main Building - Roof Level - @ Wall of Windows near 1975 Addition	Tar @ Copper Flashing	3	**-**	**TBD**	**ACM**	
49	13		Transom Window Caulk (Grey)	3	-	-	Non-ACM	
50	14	Main Building - Roof Level - Throughout	Grey Caulk @ Copper Flashing	3	**-**	**TBD**	**ACM**	
51	1	Main Building - Main Roof, Upper Roofs, and Lower Roofs - Throughout	Roof Membrane (Top Layer)	3	-	-	Non-ACM	
52	2		Synthetic Foam Insulation (Below Roof Membrane)	3	-	-	Non-ACM	
53	-		Gravel Layer (Below Synthetic Foam)	-	-	-	Non-Suspect	
54	3		Tar / Flashing / Vapor Barrier (Below Gravel Layer)	3	-	-	Non-ACM	
55	4		Brown Fibrous Insulation Layer (Below Tar / Flashing Vapor Barrier)	3	-	-	Non-ACM	
56	5		Orange Paper Layer (Below Brown Fibrous Insulation)	3	-	-	Non-ACM	
57	-		Wood Deck (Bottom Layer)	-	-	-	Non-Suspect	
58	6		Perimeter Flashing	3	-	-	Non-ACM	
59	7		Skylight / Drain / Mech Equipment Flashing	3	-	-	Non-ACM	

Line #	HA #	Location	Material	# of Samples	ACM Quantity		Results	Notes
					LF	SF		
60	16	Main Building - Exterior Façade - Throughout	C.M.U. Mortar	3	-	-	Non-ACM	
61	-		C.M.U. Block	-	-	-	Non-Suspect	
62	17		Exterior Door Frame Caulk (White)	3	-	**TBD**	**ACM**	
63	18		Exterior Window Frame Caulk (Grey)	3	-	-	Non-ACM	
64	19		Transom Window Putty (Associated with Exterior Doors)	3	-	-	Non-ACM	
65	20		Exterior Brick Mortar	3	-	-	Non-ACM	
66	-		Exterior Brick	-	-	-	Non-Suspect	
67	-		Concealed Waterproofing Below Grade (@ Foundation Walls)	-	-	**TBD**	**Assumed ACM**	Material is concealed and inaccessible
68	-		Concealed Waterproofing Membrane / Rust Inhibitor Coating / Tar / Flashing (Behind Facebrick)	-	-	**TBD**	**Assumed ACM**	
69	15	Main Building - Exterior Façade @ Electrical Room	Red Coating on C.M.U.	3	-	**TBD**	**ACM**	
70	21	Main Building - Exterior Façade @ Main Entrance	Granite Floor Mortar	3	-	-	Non-ACM	
71	-		Granite Floor Tiles	-	-	-	Non-Suspect	
72	22		Granite Façade Mortar	3	-	-	Non-ACM	
73	-		Granite Façade Tiles	-	-	-	Non-Suspect	
74	37	1975 Building Addition - Interior - Throughout	Gypsum Wall Board / Joint Compound	3	-	-	Non-ACM	
75	38		Blue Vinyl Baseboard Molding and Associated Mastic	3	-	-	Non-ACM	
76	39		Brown Vinyl Baseboard Molding	3	-	-	Non-ACM	
77	40		Mastic of Brown Vinyl Baseboard Molding	3	-	-	Non-ACM	
78	41		Interior C.M.U. Mortar	3	-	-	Non-ACM	
79	-		Interior C.M.U. Block	-	-	-	Non-Suspect	
80	42		Interior Brick Mortar	3	-	-	Non-ACM	
81	-		Interior Brick	-	-	-	Non-Suspect	
82	43		1'x1' Lay-In Splined / Perforated Ceiling Tile	3	-	-	Non-ACM	
83	44		2'x4' Lay-In Ceiling Tile	3	-	-	Non-ACM	
84	-		12"x12" White / Black Floor Tile	-	-	**TBD**	**ACM**	As ATC AHERA Report dated 5/15/19 - See Appendix E
85	-		Black Mastic of 12"x12" White / Black Floor Tile	-	-	-	Non-ACM	

Line #	HA #	Location	Material	# of Samples	ACM Quantity		Results	Notes
					LF	SF		
86	8	1975 Addition - Library Roof	Roof Membrane (Top Layer)	3	-	-	Non-ACM	
87	9		Synthetic Foam Insulation (Below Roof Membrane Layer)	3	-	-	Non-ACM	
88	10		Tar / Vapor Barrier (Below Synthetic Foam Insulation)	3	-	-	Non-ACM	
89	-		Fiberglass Insulation (Below Tar / Vapor Barrier Layer)	-	-	-	Non-Suspect	
90	-		Wood Deck (Bottom Layer)	-	-	-	Non-Suspect	
91	11		Perimeter / Drain / Skylight Flashing	3	**-**	**TBD**	**ACM**	
92	23	1975 Building Addition - Exterior - Throughout	Exterior Door Lintel Coating (White)	3	-	-	Non-ACM	
93	24		C.M.U. Mortar	3	-	-	Non-ACM	
94	-		C.M.U. Block	-	-	-	Non-Suspect	
95	25		Window Frame Caulk (White)	3	-	-	Non-ACM	
Total Quantity (LF / SF):					**TBD**	**TBD**		

Notes:

1 **An asbestos-containing material (ACM) is any material containing more than one percent (1%) asbestos.**

2 **Any material not listed or addressed must be assumed to be an asbestos-containing material. If any materials that are not listed are encountered, all work must cease and the material should be tested for asbestos content.**

3 **Polarized Light Microscopy (PLM) was conducted for all asbestos samples, while materials found to be Non-Organically Bound (NOB) and Non-ACM required further analysis by Transmission Electron Microscopy (TEM), as PLM can be considered inconclusive.**

5.0 CONCLUSIONS AND RECOMMENDATIONS

Asbestos-containing materials which may be affected by the scope of work have been identified by this visual inspection & suspect material testing (see Table 1 above). A follow up inspection may be necessary upon review of the final construction drawing prepared by the engineer to confirm that all scope items have been accessible.

In the event that any ACM or Presumed ACM needs to be impacted by the project. A licensed abatement contractor must perform the removal of all friable and non-friable ACM. LIRO Engineers, Inc. believes that the implementation of these recommendations will serve to best protect human health and the environment.

To assure that the removal of the aforementioned ACM is properly and effectively carried out, the following recommendations are proposed by LIRO Engineers, Inc.

A. Develop and implement a schedule that outlines the time frame for removal of asbestos-containing materials.

B. Develop complete and concise specifications to effectively deal with removal of the asbestos-containing material. These specifications should be developed to comply with all applicable Federal, State and Local regulations.

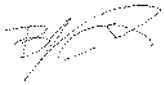
C. Retain the service of an independent testing laboratory to monitor the quality of the air before, during and after the removal work. Retain all documentation and correspondence from the removal contractor, the testing laboratory and related items in a permanent record.

6.0 AREAS NOT ACCESSIBLE

LIRO Engineers, Inc. inspected and sampled materials, which were observable and accessible to the survey team. It is possible; however, that additional suspect ACM may exist inside other concealed spaces, which were not accessible without using destructive means. Any materials that have not been tested and/or found asbestos positive must be assumed ACM. If any materials that are not listed are encountered, all work must cease and representatives from Lunenberg - T.C. Passios must be contacted immediately.

7.0 REPORT CERTIFICATIONS

LIRO Engineers, Inc. certifies that the information contained herein is based on the physical and visual inspections conducted by LIRO Engineers, Inc. and data collected during the inspection survey.



Bret Langlois
Project Manager / Inspector

LiRo Engineers, Inc.
A LiRo Group Company

APPENDIX A:

Analytical Results and Chain of Custody

OrderID: 062013093

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*lab use only*):

Company Name: LIRO Engineers	**EMSL Customer ID:**		
Street: 100 Duffy Avenue	**City:** Hicksville	**State or Province:** NY	
Zip/Postal Code: 11801	**Country:** USA	**Telephone #:** 5165826813	**Fax #:**
Report To (Name): Bret Langlois	**Please Provide Results via:** ☐ Fax ☒ Email		
email Address: Langlois B@LIRO.com	**Purchase Order Number:**		
Client Project ID: 20-138-2329	**EMSL Project ID** (*internal use only*):		
State or Province Collected: Massachusetts	**CT only** ☐ **Commercial/Taxable** ☐ **Residential/Tax Exempt**		

EMSL-Bill to: ☐ Same ☐ Different - *If bill to is different note instructions in comment. Third party billing requires written authorization from third party*

Turnaround Time (TAT) Options Please Check

☐ 3 Hour	☐ 6 Hour	☐ 24 Hour	☐ 32 Hour*	☒ 48 Hour	☐ 72 Hour	☐ 96 Hour	☐ 1 Week	☐ 2 Week

** 32 Hour TAT available for select tests only; samples must be submitted by 11:30am. Please call ahead for large projects and/or turnaround times 6 hours or less.*

PLM - Bulk (reporting limit)	TEM – Bulk
☒ PLM EPA 600/R-93/116 (<1%)	☒ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☒ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 non-friable - NY
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1- friable - NY	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB- non-friable - NY	**Other tests (please specify)**
☐ NY ELAP Method 198.8- Vermiculite Surfacing Material	
☐ OSHA ID-191 Modified	☐
☐ EMSL Standard Addition Method	

☐ **Positive Stop – Clearly Identify Homogenous Areas (HA)** **Date Sampled:** 7/20 + 7/23/20

Sampler's Name: Bret Langlois **Sampler's Signature:** BL

Sample #	HA #	Sample Location	Material Description
1	1	Lower Roof - Above Electrical Storage	Roof Membrane (Top layer)
2	↓	Main Roof - Above Main Office	↓ ↓ ↓
3	↓	Upper Roof - Above Gymnasium	
4	2	Same As 1-1	Synthetic Insulation
5	↓	↓ ↓ 2-1	↓ ↓
6	↓	↓ ↓ 3-1	

Client Sample # (s): **Total # of Samples:**

Relinquished by (Client): BL **Date:** 7/23/20 **Time:** 5:01 pm

Received by (Lab): **Date:** **Time:**

Comments/Special Instructions:

Page 1 of 7

RECEIVED
JUL 23 2020
By DS 17:10

Controlled Document – COC-01 Asbestos Bulk – R4 – 09/10/2019

7/26/20

EMSL Analytical, Inc.'s (DBA: LA Testing) Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical Inc. constitutes acceptance and acknowledgment of all terms and conditions.

7/27/2020

OrderID: 062013093

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(lab use only)*:

Additional pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
7	3	Same As 1-1	Tar/Flashing/Vapor Barrier
8	↓	2-1	↓
9	↓	3-1	↓ (Below Gravel Layer)
10	4	1-1	Brown Fibrous Insulation Layer
11	↓	2-1	↓
12	↓	3-1	↓
13	5	1-1	Orange Paper Layer (Bottom
14	↓	2-1	↓ Layer)
15	↓	3-1	↓ Above Wood Deck)
16	6	1-1	Perimeter Flashing
17	↓	2	↓
18	↓	3 ↓	↓
19	7	1	Skylight Flashing/
20	↓	2	Drain
21	↓	3 ↓	Mech Eq. ↓
22	8	1975 Addition - Library Roof	Roof Membrane (Top Layer)
23	↓	↓	↓
24	↓	↓	↓
25	9	↓	Synthetic Insulation
26	↓	↓	↓
27	↓	↓	↓

***Comments/Special Instructions:**

Page 2 of 7 pages

Controlled Document – COC-01 Asbestos Bulk – R4 – 09/10/2019

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Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(lab use only)*:

Additional pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
28	10	TAR / Vapor BARRIER	1975 Addition Library Roof
29	↓	ABOVE FIBERGLASS INS	↓
30	↓	↓	↓
31	11	1975 Addition - Library Roof	Perimeter Flashing
32	↓	↓	DRAIN Flashing
33	↓	↓	Skylight Flashing
34	12	Main Bldg - Roof Level - Wall & WINDOWS (NEAR 1975 ADDITION)	TAR @ Copper Flashing
35	↓	↓	↓
36	↓	↓	↓
37	13	↓	Transom Window (CAULK (GREY)
38	↓	↓	↓
39	↓	↓	↓
40	14	~~ARCH~~ ↓	Grey CAULK @ Copper Flashing
41	↓	Main Bldg - Roof Level @ Gym FACADE	↓
42	↓	↓	↓
43	15	Main Bldg - Ext FACADE @ Electrical Room	Red Coating on CMU
44	↓	↓	↓
45	↓	↓	↓
46	16	↓	CMU Mortar
47	↓	↓	↓
48	↓	↓	↓

***Comments/Special Instructions:**

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Controlled Document – COC-01 Asbestos Bulk – R4 – 09/10/2019

Justin Valle 7126120

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Asbestos Bulk Building Material Chain of Custody

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Sample #	HA #	Sample Location	Material Description
49	17	Main Bldg – Ext Facade –	White Exterior Door
50	↓	↓ – ↓ [Exit #3] – Exit #5	↓ Frame Caulk
51	↓	↓ – ↓ ↓	↓ ↓ ↓
52	18	Main Bldg – Ext Facade West Elev	Gray Ext. Window Frame
53	↓	↓ ↓ ↓	↓ ↓ Caulk
54	↓	↓ ↓ East Elev	↓ ↓ ↓
55	19	↓ ↓ – Main Ent.	Transom Window Putty
56	↓	↓ ↓ – Exit #3	(Associated w/ Doors)
57	↓	↓ ↓ – Exit #5	↓ ↓ ↓ ↓
58	20	↓ ↓ – Exit #3	Exterior Brick Mortar
59	↓	↓ ↓ – West Elev	↓ ↓ ↓
60	↓	↓ ↓ – East Elev	↓ ↓ ↓
61	21	↓ ↓ – Main Ent.	Granite Floor Mortar
62	↓	↓ ↓ ↓ ↓	↓ ↓ ↓
63	↓	↓ ↓ ↓ ↓	↓ ↓ ↓
64	22	↓ ↓ ↓ ↓	Granite Facade Mortar
65	↓	↓ ↓ ↓ ↓	↓ ↓ ↓
66	↓ (BBU)	↓ ↓ ↓ ↓	↓ ↓ ↓
67	~~23~~ 23	1975 Addition – Exit #4	Ext Door Lintel Coating (White)
68	↓	↓ ↓	↓ ↓ ↓
69	↓	↓ ↓	↓ ↓ ↓

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Controlled Document – COC-01 Asbestos Bulk – R4 – 09/10/2019

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Asbestos Bulk Building Material
Chain of Custody
EMSL Order Number *(lab use only)*:

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Sample #	HA #	Sample Location	Material Description
70	24	1975 Addition - Ext FACADE	CMU Mortar
71	↓	↓ ↓	↓ ↓
72	↓	↓ ↓	↓ ↓
73	25	↓ ↓	White Window Frame Caulk
74	↓	↓ ↓	↓ ↓ ↓
75	↓	↓ ↓	↓ ↓ ↓
76	26	MAIN Bldg - Corridor @ Teacher's Workroom	Glazed Block Wall
77	↓	↓ - Gymnasium	↓ ↓ Mortar
78	↓	↓ - Cafeteria	↓ ↓
79	27	- CR #2	off-white Window Frame
80	↓	- Boys SBRC Nurses office	↓ ↓ ↓ Caulk
81	↓	↓ - Cafeteria	↓ ↓ ↓
82	28	- Corridor access from	off-white Window Frame
83	↓	↓ ↓ Kitchen	↓ ↓ Caulk - Type 2
84	↓	↓ ↓ ↓ ↓	↓ ↓
85	29	↓ - Lobby Interior Door @ Gym	Silver Door Frame Caulk
86	↓	↓ ↓	↓ ↓ ↓
87	↓	↓ ↓	↓ ↓ ↓
88	30	- to Lobby Area @ Gym	Stone Wall Mortar
89	↓	↓ ↓ ↓	↓ ↓ ↓
90	↓	↓ ↓ ↓	↓ ↓ ↓

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Controlled Document – COC-01 Asbestos Bulk – R4 – 09/10/2019

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Sample #	HA #	Sample Location	Material Description
91	31	Main Bldg - Corridor CR# 19	Long Brick - Mortar
92	↓	↓	↓
93	↓	↓	↓
94	32	- Corridor @ Gym Lobby	Water Fountain Ceramic Wall Tile mortar
95	↓	↓	↓
96	↓	- between CR# 8 + 10	↓
97	33	- Corridor @ Gym Lobby	Water Fount. Ceramic F.T. mortar
98	↓	↓	↓
99	↓	↓	↓
100	34	Boys BR. near Nurse	Ceramic Floor Tile mortar
101	↓	↓	↓
102	↓	↓	↓
103	35	- Kitchen	Brown VB/M/mastic
104	↓	↓	↓
105	↓	↓	↓
106	36		Red Mortar & Red Quarry F.T.
107	↓	↓	↓
108	↓	↓	↓
109	37	1975 Addition - Library	GWB / Joint Compound
110	↓	↓	↓
111	↓	- Resource Rm	↓

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Asbestos Bulk Building Material Chain of Custody

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Sample #	HA #	Sample Location	Material Description
112	38	1975 Addition – Vestibule	Blue VBBM/Mastic
113	↓	– LIBRARY	↓
114		↓	↓
115	39	– Resource Rm	BROWN VBBM
116	↓	↓	↓
117	↓	↓	↓
118	40		Mastic of BROWN VBBM
119	↓	↓	↓
120	↓	↓	↓
121	41	– Vestibule	CMU Mortar
122	↓	– LIBRARY	↓
123	↓	↓	↓
124	42	– Vestibule	INT. BRICK Mortar
125	↓	– LIBRARY	↓
126	↓	↓	↓
127	43	– Vestibule	1'x1' Splined/Plaster Ceiling Tile
128	↓	– Resource Rm	↓
129	↓	↓	↓
130	44	– LIBRARY	2'x4' Lay in C.T.
131	↓	↓	↓
132	↓	↓	↓

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By

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EMSL Order:	062013093
Customer ID:	LIRO50A
Customer PO:	20-138-2329
Project ID:	

Attention:	Bret Langlois	**Phone:**	(516) 595-2900
	Liro Engineers, Inc.	**Fax:**	(516) 937-5421
	100 Duffy Avenue	**Received Date:**	07/23/2020 5:10 PM
	Suite 402	**Analysis Date:**	07/26/2020
	Hicksville, NY 11801	**Collected Date:**	07/22/2020
Project:	20-138-2329		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
2-4 *062013093-0004*	Lower roof-above electrical storage - Synthetic Insulation	Brown Non-Fibrous Homogeneous		60% Perlite 40% Non-fibrous (Other)	None Detected
2-5 *062013093-0005*	Main roof-above main office - Synthetic Insulation	Brown Non-Fibrous Homogeneous		65% Perlite 35% Non-fibrous (Other)	None Detected
2-6 *062013093-0006*	Upper roof-above gymnasium - Synthetic Insulation	Brown Non-Fibrous Homogeneous		62% Perlite 38% Non-fibrous (Other)	None Detected
4-10 *062013093-0010*	Lower roof-above electrical storage - Brown Fibrous Insulation Layer	Brown Fibrous Homogeneous	88% Cellulose	12% Non-fibrous (Other)	None Detected
4-11 *062013093-0011*	Main roof-above main office - Brown Fibrous Insulation Layer	Brown Fibrous Homogeneous	83% Cellulose	17% Non-fibrous (Other)	None Detected
4-12 *062013093-0012*	Upper roof-above gymnasium - Brown Fibrous Insulation Layer	Brown Non-Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected
5-13 *062013093-0013*	Lower roof-above electrical storage - Orange Paper Layer (Bottom Layer above Wood Deck)	Brown/Tan Fibrous Homogeneous	87% Cellulose	13% Non-fibrous (Other)	None Detected
5-14 *062013093-0014*	Main roof-above main office - Orange Paper Layer (Bottom Layer above Wood Deck)	Brown/Tan Fibrous Homogeneous	81% Cellulose	19% Non-fibrous (Other)	None Detected
5-15 *062013093-0015*	Upper roof-above gymnasium - Orange Paper Layer (Bottom Layer above Wood Deck)	Brown Fibrous Homogeneous	90% Cellulose	10% Non-fibrous (Other)	None Detected
9-25 *062013093-0025*	1975 Addition-Library Roof - Synthetic Insulation	Brown Non-Fibrous Homogeneous		77% Perlite 23% Non-fibrous (Other)	None Detected
9-26 *062013093-0026*	1975 Addition-Library Roof - Synthetic Insulation	Brown Non-Fibrous Homogeneous		67% Perlite 33% Non-fibrous (Other)	None Detected
9-27 *062013093-0027*	1975 Addition-Library Roof - Synthetic Insulation	Brown Non-Fibrous Homogeneous		59% Perlite 41% Non-fibrous (Other)	None Detected
15-43 *062013093-0043*	Main Bldg-Ext Façade @ Electrical Room - Red Coating on CMU	Tan/Red Non-Fibrous Homogeneous		37% Quartz 28% Ca Carbonate 26% Matrix 2% Perlite 5% Non-fibrous (Other)	2% Chrysotile

Initial report from: 07/27/2020 14:30:22

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EMSL Order:	062013093
Customer ID:	LIRO50A
Customer PO:	20-138-2329
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
15-44 *062013093-0044*	Main Bldg-Ext Façade @ Electrical Room - Red Coating on CMU	Tan/Red Non-Fibrous Homogeneous		39% Quartz 26% Ca Carbonate 25% Matrix <1% Perlite 8% Non-fibrous (Other)	2% Chrysotile
15-45 *062013093-0045*	Main Bldg-Ext Façade @ Electrical Room - Red Coating on CMU	Tan/Red Non-Fibrous Homogeneous		41% Quartz 16% Ca Carbonate 35% Matrix 6% Non-fibrous (Other)	2% Chrysotile
16-46 *062013093-0046*	Main Bldg-Ext Façade @ Electrical Room - CMU Mortar	Tan/Red Non-Fibrous Heterogeneous	3% Cellulose	36% Quartz 31% Ca Carbonate 20% Matrix 10% Non-fibrous (Other)	<1% Chrysotile
Sample contains a small amount of tan joint compound underneath paint layer.					
16-47 *062013093-0047*	Main Bldg-Ext Façade @ Electrical Room - CMU Mortar	Gray/Red Non-Fibrous Homogeneous		55% Quartz 35% Ca Carbonate 10% Non-fibrous (Other)	None Detected
16-48 *062013093-0048*	Main Bldg-Ext Façade @ Electrical Room - CMU Mortar	Tan/Red Non-Fibrous Heterogeneous		44% Quartz 34% Ca Carbonate 16% Matrix 6% Non-fibrous (Other)	<1% Chrysotile
Sample contains a small amount of tan joint compound underneath paint layer.					
20-58 *062013093-0058*	Main Bldg-Ext. Façade-Exit #3 - Exterior Brick Mortar	Gray Non-Fibrous Homogeneous		58% Quartz 36% Ca Carbonate 6% Non-fibrous (Other)	None Detected
20-59 *062013093-0059*	Main Bldg-Ext. Façade-West Elev - Exterior Brick Mortar	Gray Non-Fibrous Homogeneous		59% Quartz 36% Ca Carbonate 5% Non-fibrous (Other)	None Detected
20-60 *062013093-0060*	Main Bldg-Ext. Façade-East Elev - Exterior Brick Mortar	Gray Non-Fibrous Homogeneous		59% Quartz 36% Ca Carbonate 5% Non-fibrous (Other)	None Detected
21-61 *062013093-0061*	Main Bldg-Ext. Façade-Main Ent. - Granite Floor Mortar	Brown/Gray Non-Fibrous Homogeneous		57% Quartz 34% Ca Carbonate 9% Non-fibrous (Other)	None Detected
21-62 *062013093-0062*	Main Bldg-Ext. Façade-Main Ent. - Granite Floor Mortar	Gray Non-Fibrous Homogeneous		55% Quartz 40% Ca Carbonate 5% Non-fibrous (Other)	None Detected
21-63 *062013093-0063*	Main Bldg-Ext. Façade-Main Ent. - Granite Floor Mortar	Gray Non-Fibrous Homogeneous		58% Quartz 33% Ca Carbonate 9% Non-fibrous (Other)	None Detected
22-64 *062013093-0064*	Main Bldg-Ext. Façade-Main Ent. - Granite Façade Mortar	Gray Non-Fibrous Homogeneous		61% Quartz 34% Ca Carbonate 5% Non-fibrous (Other)	None Detected
22-65 *062013093-0065*	Main Bldg-Ext. Façade-Main Ent. - Granite Façade Mortar	Gray Non-Fibrous Homogeneous		56% Quartz 36% Ca Carbonate 8% Non-fibrous (Other)	None Detected
22-66 *062013093-0066*	Main Bldg-Ext. Façade-Main Ent. - Granite Façade Mortar	Gray Non-Fibrous Homogeneous		59% Quartz 34% Ca Carbonate 7% Non-fibrous (Other)	None Detected
23-67 *062013093-0067*	1975 Addition-Exit #4 - Ext Door Lintel Coating (White)	Various Non-Fibrous Homogeneous		50% Quartz 15% Ca Carbonate 30% Matrix 5% Non-fibrous (Other)	None Detected

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
23-68 *062013093-0068*	1975 Addition-Exit #4 - Ext Door Lintel Coating (White)	Various Non-Fibrous Homogeneous		52% Quartz 16% Ca Carbonate 27% Matrix 5% Non-fibrous (Other)	None Detected
23-69 *062013093-0069*	1975 Addition-Exit #4 - Ext Door Lintel Coating (White)	Various Non-Fibrous Homogeneous		44% Quartz 16% Ca Carbonate 31% Matrix 9% Non-fibrous (Other)	None Detected
24-70 *062013093-0070*	1975 Addition-Ext. Façade - CMU Mortar	Gray/Red Non-Fibrous Homogeneous		44% Quartz 30% Ca Carbonate 18% Matrix 8% Non-fibrous (Other)	None Detected
24-71 *062013093-0071*	1975 Addition-Ext. Façade - CMU Mortar	Gray/Red Non-Fibrous Homogeneous		42% Quartz 30% Ca Carbonate 23% Matrix 5% Non-fibrous (Other)	None Detected
24-72 *062013093-0072*	1975 Addition-Ext. Façade - CMU Mortar	Gray Non-Fibrous Homogeneous		59% Quartz 36% Ca Carbonate 5% Non-fibrous (Other)	None Detected
26-76 *062013093-0076*	Main Bldg-Corridor @ Teacher's Work Room - Glazed Block Wall Mortar	Gray Non-Fibrous Homogeneous		57% Quartz 35% Ca Carbonate 8% Non-fibrous (Other)	None Detected
26-77 *062013093-0077*	Main Bldg-Gymnasium - Glazed Block Wall Mortar	Gray Non-Fibrous Homogeneous		60% Quartz 35% Ca Carbonate 5% Non-fibrous (Other)	None Detected
26-78 *062013093-0078*	Main Bldg-Cafeteria - Glazed Block Wall Mortar	Gray Non-Fibrous Homogeneous		58% Quartz 31% Ca Carbonate 11% Non-fibrous (Other)	None Detected
30-88 *062013093-0088*	Main Bldg-Lobby Area @ Gym - Stone Wall Mortar	Gray Non-Fibrous Homogeneous		56% Quartz 34% Ca Carbonate 10% Non-fibrous (Other)	None Detected
30-89 *062013093-0089*	Main Bldg-Lobby Area @ Gym - Stone Wall Mortar	Gray Non-Fibrous Homogeneous		58% Quartz 35% Ca Carbonate 7% Non-fibrous (Other)	None Detected
30-90 *062013093-0090*	Main Bldg-Lobby Area @ Gym - Stone Wall Mortar	Gray Non-Fibrous Homogeneous		54% Quartz 39% Ca Carbonate 7% Non-fibrous (Other)	None Detected
31-91 *062013093-0091*	Main Bldg-Corridor CR #19 - Long Brick-Mortar	Gray Non-Fibrous Homogeneous		59% Quartz 33% Ca Carbonate 8% Non-fibrous (Other)	None Detected
31-92 *062013093-0092*	Main Bldg-Corridor CR #19 - Long Brick-Mortar	Gray Non-Fibrous Homogeneous		55% Quartz 40% Ca Carbonate 5% Non-fibrous (Other)	None Detected
31-93 *062013093-0093*	Main Bldg-Corridor CR #19 - Long Brick-Mortar	Gray Non-Fibrous Homogeneous		62% Quartz 33% Ca Carbonate 5% Non-fibrous (Other)	None Detected
32-94 *062013093-0094*	Main Bldg-Corridor @ Gym Lobby - Water Fountain Ceramic Wall Tile Mortar	Gray Non-Fibrous Homogeneous		60% Quartz 31% Ca Carbonate 9% Non-fibrous (Other)	None Detected
32-95 *062013093-0095*	Main Bldg-Corridor @ Gym Lobby - Water Fountain Ceramic Wall Tile Mortar	Gray Non-Fibrous Homogeneous		58% Quartz 30% Ca Carbonate 12% Non-fibrous (Other)	None Detected

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Customer PO: 20-138-2329
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
32-96 *062013093-0096*	Main Bldg-Corridor-between CR #8 & 10 - Water Fountain Ceramic Wall Tile Mortar	Gray Non-Fibrous Homogeneous		52% Quartz 41% Ca Carbonate 7% Non-fibrous (Other)	None Detected
33-97 *062013093-0097*	Main Bldg-Corridor @ Gym Lobby - Water Fount. Ceramic FT Mortar	Gray Non-Fibrous Homogeneous		50% Quartz 40% Ca Carbonate 10% Non-fibrous (Other)	None Detected
33-98 *062013093-0098*	Main Bldg-Corridor @ Gym Lobby - Water Fount. Ceramic FT Mortar	Gray Non-Fibrous Homogeneous		56% Quartz 31% Ca Carbonate 13% Non-fibrous (Other)	None Detected
33-99 *062013093-0099*	Main Bldg-Corridor @ Gym Lobby - Water Fount. Ceramic FT Mortar	Gray Non-Fibrous Homogeneous		59% Quartz 34% Ca Carbonate 7% Non-fibrous (Other)	None Detected
34-100 *062013093-0100*	Main Bldg-Boy's BR near Nurse - Ceramic Floor Tile Mortar	Gray Non-Fibrous Homogeneous		41% Quartz 32% Ca Carbonate 22% Gypsum 5% Non-fibrous (Other)	None Detected
34-101 *062013093-0101*	Main Bldg-Boy's BR near Nurse - Ceramic Floor Tile Mortar	Gray Non-Fibrous Homogeneous	<1% Cellulose	64% Quartz 31% Ca Carbonate 5% Non-fibrous (Other)	None Detected
34-102 *062013093-0102*	Main Bldg-Boy's BR near Nurse - Ceramic Floor Tile Mortar	Gray Non-Fibrous Homogeneous		58% Quartz 37% Ca Carbonate 5% Non-fibrous (Other)	None Detected
36-106 *062013093-0106*	Main Bldg-Kitchen - Red Mortar of Red Quarry F.T.	Red Non-Fibrous Homogeneous		44% Quartz 27% Ca Carbonate 29% Non-fibrous (Other)	None Detected
36-107 *062013093-0107*	Main Bldg-Kitchen - Red Mortar of Red Quarry F.T.	Red Non-Fibrous Homogeneous		49% Quartz 37% Ca Carbonate 14% Non-fibrous (Other)	None Detected
36-108 *062013093-0108*	Main Bldg-Kitchen - Red Mortar of Red Quarry F.T.	Red Non-Fibrous Homogeneous		46% Quartz 35% Ca Carbonate 19% Non-fibrous (Other)	None Detected
37-109 *062013093-0109*	1975 Addition-Library - GWB/Joint Compound	Brown/White Non-Fibrous Heterogeneous	3% Cellulose	31% Ca Carbonate 60% Gypsum 6% Non-fibrous (Other)	None Detected
37-110 *062013093-0110*	1975 Addition-Library - GWB/Joint Compound	Brown/White Non-Fibrous Heterogeneous	6% Cellulose	33% Ca Carbonate 52% Gypsum 9% Non-fibrous (Other)	None Detected
37-111 *062013093-0111*	1975 Addition-Resource Rm - GWB/Joint Compound	Brown/White Non-Fibrous Heterogeneous	5% Cellulose	30% Ca Carbonate 60% Gypsum 5% Non-fibrous (Other)	None Detected
41-121 *062013093-0121*	1975 Addition-Vestibule - CMU Mortar	Gray Non-Fibrous Homogeneous		55% Quartz 40% Ca Carbonate 5% Non-fibrous (Other)	None Detected
41-122 *062013093-0122*	1975 Addition-Library - CMU Mortar	Gray Non-Fibrous Homogeneous		57% Quartz 34% Ca Carbonate 9% Non-fibrous (Other)	None Detected
41-123 *062013093-0123*	1975 Addition-Library - CMU Mortar	Gray Non-Fibrous Homogeneous		57% Quartz 37% Ca Carbonate 6% Non-fibrous (Other)	None Detected
42-124 *062013093-0124*	1975 Addition-Vestibule - Int. Brick Mortar	Gray Non-Fibrous Homogeneous		58% Quartz 35% Ca Carbonate 7% Non-fibrous (Other)	None Detected

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
42-125 *062013093-0125*	1975 Addition-Library - Int. Brick Mortar	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
42-126 *062013093-0126*	1975 Addition-Library - Int. Brick Mortar	Gray Non-Fibrous Homogeneous		61% Quartz 31% Ca Carbonate 8% Non-fibrous (Other)	None Detected
43-127 *062013093-0127*	1975 Addition-Vestibule - 1'x1' Splined/Perforated Ceiling Tile	Gray/White Fibrous Homogeneous	55% Cellulose	6% Perlite 39% Non-fibrous (Other)	None Detected
43-128 *062013093-0128*	1975 Addition-Resource Rm - 1'x1' Splined/Perforated Ceiling Tile	Gray/White Fibrous Homogeneous	71% Cellulose	9% Perlite 20% Non-fibrous (Other)	None Detected
43-129 *062013093-0129*	1975 Addition-Resource Rm - 1'x1' Splined/Perforated Ceiling Tile	Gray/White Fibrous Homogeneous	66% Cellulose 15% Glass	7% Perlite 12% Non-fibrous (Other)	None Detected
44-130 *062013093-0130*	1975 Addition-Library - 2'x4' Layin C.T.	Gray/White Fibrous Homogeneous	65% Cellulose 11% Glass	5% Perlite 19% Non-fibrous (Other)	None Detected
44-131 *062013093-0131*	1975 Addition-Library - 2'x4' Layin C.T.	Gray/White Fibrous Homogeneous	70% Cellulose 16% Glass	8% Perlite 6% Non-fibrous (Other)	None Detected
44-132 *062013093-0132*	1975 Addition-Library - 2'x4' Layin C.T.	Gray/White Fibrous Homogeneous	68% Cellulose 14% Glass	6% Perlite 12% Non-fibrous (Other)	None Detected

Analyst(s)
Justin Valles (69)

Daniel Clarke, Asbestos Laboratory Manager
or Other Approved Signatory

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EMSL Order: 062013093
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Customer PO: 20-138-2329
Project ID:

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Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by PLM via EPA 600/R-93/116 section 2.3

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
1-1 *062013093-0001*	Lower roof-above electrical storage - Roof Membrane (Top Layer)	Black Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
1-2 *062013093-0002*	Main roof-above main office - Roof Membrane (Top Layer)	Black Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
1-3 *062013093-0003*	Upper roof-above gymnasium - Roof Membrane (Top Layer)	Black Non-Fibrous Homogeneous	100 Other	<0.25 Glass	No Asbestos Detected
3-7 *062013093-0007*	Lower roof-above electrical storage - Tar/Flashing/Vapor Barrier (Below Gravel Layer)	Black Non-Fibrous Homogeneous	99.7 Other	0.34 Glass	<0.25% Chrysotile
3-8 *062013093-0008*	Main roof-above main office - Tar/Flashing/Vapor Barrier (Below Gravel Layer)	Black Non-Fibrous Homogeneous	100 Other	<0.25 Glass	No Asbestos Detected
3-9 *062013093-0009*	Upper roof-above gymnasium - Tar/Flashing/Vapor Barrier (Below Gravel Layer)	Black Non-Fibrous Homogeneous	100 Other	<0.25 Glass <0.25 Fibrous_Other	No Asbestos Detected
6-16 *062013093-0016*	Lower roof-above electrical storage - Perimeter Flashing	Black Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
6-17 *062013093-0017*	Main roof-above main office - Perimeter Flashing	Black Non-Fibrous Homogeneous	99.7 Other	0.34 Glass	No Asbestos Detected
6-18 *062013093-0018*	Upper roof-above gymnasium - Perimeter Flashing	Black Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
7-19 *062013093-0019*	Lower roof-above electrical storage - Skylight Flashing	Black Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
7-20 *062013093-0020*	Main roof-above main office - Drain Flashing	Black Non-Fibrous Homogeneous	100 Other	<0.25 Glass	No Asbestos Detected

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Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
7-21 *062013093-0021*	Upper roof-above gymnasium - Mech EQ. Flashing	Black Non-Fibrous Homogeneous	100 Other	<0.25 Glass	No Asbestos Detected
8-22 *062013093-0022*	1975 Addition-Library Roof - Roof Membrane (Top Layer)	Black Non-Fibrous Homogeneous	100 Other	<0.25 Glass	No Asbestos Detected
8-23 *062013093-0023*	1975 Addition-Library Roof - Roof Membrane (Top Layer)	Black Non-Fibrous Homogeneous	100 Other	<0.25 Glass	No Asbestos Detected
8-24 *062013093-0024*	1975 Addition-Library Roof - Roof Membrane (Top Layer)	Black Non-Fibrous Homogeneous	100 Other	<0.25 Glass	No Asbestos Detected
10-28 *062013093-0028*	1975 Addition-Library Roof - Tar/Vapor Barrier (Above Fiberglass Ins)	Black Non-Fibrous Homogeneous	100 Other	<0.25 Fibrous_Other	No Asbestos Detected
10-29 *062013093-0029*	1975 Addition-Library Roof - Tar/Vapor Barrier (Above Fiberglass Ins)	Black Non-Fibrous Homogeneous	100 Other	<0.25 Fibrous_Other	No Asbestos Detected
10-30 *062013093-0030*	1975 Addition-Library Roof - Tar/Vapor Barrier (Above Fiberglass Ins)	Black Non-Fibrous Homogeneous	100 Other	<0.25 Glass <0.25 Fibrous_Other	No Asbestos Detected
11-31 *062013093-0031*	1975 Addition-Library Roof - Perimeter Flashing	Black Non-Fibrous Homogeneous	96.9 Other	None	3.1% Chrysotile
11-32 *062013093-0032*	1975 Addition-Library Roof - Drain Flashing	Black Non-Fibrous Homogeneous	100 Other	<0.25 Glass	No Asbestos Detected
11-33 *062013093-0033*	1975 Addition-Library Roof - Skylight Flashing	Black Non-Fibrous Homogeneous	100 Other	<0.29 Glass	No Asbestos Detected
12-34 *062013093-0034*	Main Bldg-Roof Level-Wall of Windows (Near 1975 Addition) - Tar @ Copper Flashing	Black Non-Fibrous Homogeneous	93.6 Other	None	6.4% Chrysotile
12-35 *062013093-0035*	Main Bldg-Roof Level-Wall of Windows (Near 1975 Addition) - Tar @ Copper Flashing	Black Non-Fibrous Homogeneous	96.8 Other	None	3.2% Chrysotile

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Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
12-36 *062013093-0036*	Main Bldg-Roof Level-Wall of Windows (Near 1975 Addition) - Tar @ Copper Flashing	Black Non-Fibrous Homogeneous	95.3 Other	None	4.7% Chrysotile
13-37 *062013093-0037*	Main Bldg-Roof Level-Wall of Windows (Near 1975 Addition) - Transon Window Caulk (Grey)	Black Non-Fibrous Homogeneous	100 Other	None	<0.25% Chrysotile
13-38 *062013093-0038*	Main Bldg-Roof Level-Wall of Windows (Near 1975 Addition) - Transon Window Caulk (Grey)	Black Non-Fibrous Homogeneous	99.6 Other	None	0.43% Chrysotile
13-39 *062013093-0039*	Main Bldg-Roof Level-Wall of Windows (Near 1975 Addition) - Transon Window Caulk (Grey)	Black Non-Fibrous Homogeneous	99.5 Other	None	0.47% Chrysotile
14-40 *062013093-0040*	Main Bldg-Roof Level-Wall of Windows (Near 1975 Addition) - Grey Caulk @ Copper Flashing	Gray Non-Fibrous Homogeneous	99.5 Other	None	0.54% Chrysotile
14-41 *062013093-0041*	Main Bldg-Roof Level-@ Gym Façade - Grey Caulk @ Copper Flashing	Gray Non-Fibrous Homogeneous	98.8 Other	None	1.2% Chrysotile
14-42 *062013093-0042*	Main Bldg-Roof Level-@ Gym Façade - Grey Caulk @ Copper Flashing	Gray Non-Fibrous Homogeneous	98.8 Other	None	1.2% Chrysotile
17-49 *062013093-0049*	Main Bldg-Ext. Façade-Exit #3 - White Exterior Frame Door Caulk	White/Blue Non-Fibrous Homogeneous	98.1 Other	None	1.9% Chrysotile
17-50 *062013093-0050*	Main Bldg-Ext. Façade-Exit #5 - White Exterior Frame Door Caulk	White/Blue Non-Fibrous Homogeneous	98.3 Other	None	1.7% Chrysotile
17-51 *062013093-0051*	Main Bldg-Ext. Façade-Exit #5 - White Exterior Frame Door Caulk	White/Blue Non-Fibrous Homogeneous	98.1 Other	None	1.9% Chrysotile

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Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
18-52 *062013093-0052*	Main Bldg-Ext. Façade-West Elev - Grey Ext. Window Frame Caulk	Gray/White Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
18-53 *062013093-0053*	Main Bldg-Ext. Façade-West Elev - Grey Ext. Window Frame Caulk	Gray/White Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
18-54 *062013093-0054*	Main Bldg-Ext. Façade-East Elev - Grey Ext. Window Frame Caulk	Gray/White Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
19-55 *062013093-0055*	Main Bldg-Ext. Façade-Main Ent. - Transon Window Putty (Associated w/Doors)	Gray/White Non-Fibrous Homogeneous	99.1 Other	None	0.89% Anthophyllite
19-56 *062013093-0056*	Main Bldg-Ext. Façade-Exit #3 - Transon Window Putty (Associated w/Doors)	Gray/White Non-Fibrous Homogeneous	99.5 Other	None	0.45% Anthophyllite
19-57 *062013093-0057*	Main Bldg-Ext. Façade-Exit #5 - Transon Window Putty (Associated w/Doors)	Gray/White Non-Fibrous Homogeneous	99.3 Other	None	0.68% Anthophyllite
25-73 *062013093-0073*	1975 Addition-Ext. Façade - White Window Frame Caulk	White Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
25-74 *062013093-0074*	1975 Addition-Ext. Façade - White Window Frame Caulk	White Non-Fibrous Homogeneous	100 Other	<0.25 Fibrous_Other	No Asbestos Detected
25-75 *062013093-0075*	1975 Addition-Ext. Façade - White Window Frame Caulk	White Non-Fibrous Homogeneous	100 Other	<0.25 Fibrous_Other	No Asbestos Detected
27-79 *062013093-0079*	Main Bldg-CR #2 - Off-White Window Frame Caulk	Gray Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
27-80 *062013093-0080*	Main Bldg-Boy's BR @ Nurse's Office - Off-White Window Frame Caulk	Gray Non-Fibrous Homogeneous	100 Other	<0.25 Fibrous_Other	No Asbestos Detected
27-81 *062013093-0081*	Main Bldg-Cafeteria - Off-White Window Frame Caulk	Gray/Blue Non-Fibrous Homogeneous	100 Other	<0.31 Fibrous_Other	No Asbestos Detected

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Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
28-82 *062013093-0082*	Main Bldg-Corridor across from Kitchen - Off-White Window Frame Caulk-Type 2	Gray/Blue Non-Fibrous Homogeneous	100 Other	<0.25 Glass	No Asbestos Detected
28-83 *062013093-0083*	Main Bldg-Corridor across from Kitchen - Off-White Window Frame Caulk-Type 2	Gray Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
28-84 *062013093-0084*	Main Bldg-Corridor across from Kitchen - Off-White Window Frame Caulk-Type 2	Gray Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
29-85 *062013093-0085*	Main Bldg-Interior Library Door @ Gym - Silver Door Frame Caulk	Gray Non-Fibrous Homogeneous	99.4 Other	0.55 Glass	No Asbestos Detected
29-86 *062013093-0086*	Main Bldg-Interior Library Door @ Gym - Silver Door Frame Caulk	Black Non-Fibrous Homogeneous	100 Other	<0.25 Glass	No Asbestos Detected
29-87 *062013093-0087*	Main Bldg-Interior Library Door @ Gym - Silver Door Frame Caulk	Black Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
35-103 *062013093-0103*	Main Bldg-Kitchen - Brown VBM/Mastic	Black Non-Fibrous Homogeneous	100 Other	<0.25 Fibrous_Other	No Asbestos Detected
35-104 *062013093-0104*	Main Bldg-Kitchen - Brown VBM/Mastic	Black Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
35-105 *062013093-0105*	Main Bldg-Kitchen - Brown VBM/Mastic	Blue Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
38-112 *062013093-0112*	1975 Addition-Vestibule - Blue VBBM/Mastic	Blue Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
38-113 *062013093-0113*	1975 Addition-Library - Blue VBBM/Mastic	Blue Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
38-114 *062013093-0114*	1975 Addition-Library - Blue VBBM/Mastic	Blue Non-Fibrous Homogeneous	100 Other	<0.25 Fibrous_Other	No Asbestos Detected

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Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
39-115 *062013093-0115*	1975 Addition-Resource Rm - Brown VBBM	Brown Non-Fibrous Homogeneous	100 Other	<0.25 Fibrous_Other	No Asbestos Detected
39-116 *062013093-0116*	1975 Addition-Resource Rm - Brown VBBM	Brown Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
39-117 *062013093-0117*	1975 Addition-Resource Rm - Brown VBBM	Brown Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
40-118 *062013093-0118*	1975 Addition-Resource Rm - Mastic of Brown VBBM	Tan/White Non-Fibrous Homogeneous	100 Other	<0.25 Fibrous_Other	No Asbestos Detected
40-119 *062013093-0119*	1975 Addition-Resource Rm - Mastic of Brown VBBM	Tan/White Non-Fibrous Homogeneous	100 Other	None	No Asbestos Detected
40-120 *062013093-0120*	1975 Addition-Resource Rm - Mastic of Brown VBBM	Tan/White Non-Fibrous Homogeneous	100 Other	<0.25 Fibrous_Other	No Asbestos Detected

Analyst(s)

Justin Valles (63)

Daniel Clarke, Asbestos Laboratory Manager
or other approved signatory

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Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
1-1 *062013093-0001*	Lower roof-above electrical storage - Roof Membrane (Top Layer)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1-2 *062013093-0002*	Main roof-above main office - Roof Membrane (Top Layer)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1-3 *062013093-0003*	Upper roof-above gymnasium - Roof Membrane (Top Layer)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
3-7 *062013093-0007*	Lower roof-above electrical storage - Tar/Flashing/Vapor Barrier (Below Gravel Layer)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
3-8 *062013093-0008*	Main roof-above main office - Tar/Flashing/Vapor Barrier (Below Gravel Layer)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
3-9 *062013093-0009*	Upper roof-above gymnasium - Tar/Flashing/Vapor Barrier (Below Gravel Layer)	Black Non-Fibrous Homogeneous	99.73 Other	None	0.27% Chrysotile
6-16 *062013093-0016*	Lower roof-above electrical storage - Perimeter Flashing	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
6-17 *062013093-0017*	Main roof-above main office - Perimeter Flashing	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
6-18 *062013093-0018*	Upper roof-above gymnasium - Perimeter Flashing	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
7-19 *062013093-0019*	Lower roof-above electrical storage - Skylight Flashing	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
7-20 *062013093-0020*	Main roof-above main office - Drain Flashing	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

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Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
7-21 *062013093-0021*	Upper roof-above gymnasium - Mech EQ. Flashing	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
8-22 *062013093-0022*	1975 Addition-Library Roof - Roof Membrane (Top Layer)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
8-23 *062013093-0023*	1975 Addition-Library Roof - Roof Membrane (Top Layer)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
8-24 *062013093-0024*	1975 Addition-Library Roof - Roof Membrane (Top Layer)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
10-28 *062013093-0028*	1975 Addition-Library Roof - Tar/Vapor Barrier (Above Fiberglass Ins)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
10-29 *062013093-0029*	1975 Addition-Library Roof - Tar/Vapor Barrier (Above Fiberglass Ins)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
10-30 *062013093-0030*	1975 Addition-Library Roof - Tar/Vapor Barrier (Above Fiberglass Ins)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
11-32 *062013093-0032*	1975 Addition-Library Roof - Drain Flashing	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
11-33 *062013093-0033*	1975 Addition-Library Roof - Skylight Flashing	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
13-37 *062013093-0037*	Main Bldg-Roof Level-Wall of Windows (Near 1975 Addition) - Transon Window Caulk (Grey)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
13-38 *062013093-0038*	Main Bldg-Roof Level-Wall of Windows (Near 1975 Addition) - Transon Window Caulk (Grey)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

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Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
13-39 *062013093-0039*	Main Bldg-Roof Level-Wall of Windows (Near 1975 Addition) - Transon Window Caulk (Grey)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
14-40 *062013093-0040*	Main Bldg-Roof Level-Wall of Windows (Near 1975 Addition) - Grey Caulk @ Copper Flashing	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
18-52 *062013093-0052*	Main Bldg-Ext. Façade-West Elev - Grey Ext. Window Frame Caulk	Gray/White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
18-53 *062013093-0053*	Main Bldg-Ext. Façade-West Elev - Grey Ext. Window Frame Caulk	Gray/White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
18-54 *062013093-0054*	Main Bldg-Ext. Façade-East Elev - Grey Ext. Window Frame Caulk	Gray/White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
19-55 *062013093-0055*	Main Bldg-Ext. Façade-Main Ent. - Transon Window Putty (Associated w/Doors)	Gray/White Non-Fibrous Homogeneous	99.34 Other	None	0.66% Anthophyllite
19-56 *062013093-0056*	Main Bldg-Ext. Façade-Exit #3 - Transon Window Putty (Associated w/Doors)	Gray/White Non-Fibrous Homogeneous	99.85 Other	None	0.15% Anthophyllite
19-57 *062013093-0057*	Main Bldg-Ext. Façade-Exit #5 - Transon Window Putty (Associated w/Doors)	Gray/White Non-Fibrous Homogeneous	99.32 Other	None	0.68% Anthophyllite
25-73 *062013093-0073*	1975 Addition-Ext. Façade - White Window Frame Caulk	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
25-74 *062013093-0074*	1975 Addition-Ext. Façade - White Window Frame Caulk	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
25-75 *062013093-0075*	1975 Addition-Ext. Façade - White Window Frame Caulk	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Samples analyzed by EMSL Analytical, Inc. Carle Place, NY

Initial report from: 07/27/2020 14:30:17

EMSL Analytical, Inc.
528 Mineola Avenue Carle Place, NY 11514
Tel/Fax: (516) 997-7251 / (516) 997-7528
http://www.EMSL.com / carleplacelab@emsl.com

EMSL Order: 062013093
Customer ID: LIRO50A
Customer PO: 20-138-2329
Project ID:

Attention: Bret Langlois
Liro Engineers, Inc.
100 Duffy Avenue
Suite 402
Hicksville, NY 11801
Project: 20-138-2329

Phone: (516) 595-2900
Fax: (516) 937-5421
Received Date: 07/23/2020 5:10 PM
Analysis Date: 07/26/2020 - 07/27/2020
Collected Date: 07/22/2020

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
27-79 *062013093-0079*	Main Bldg-CR #2 - Off-White Window Frame Caulk	Gray Non-Fibrous Homogeneous	100.0 Other	None	<0.1% Chrysotile
27-80 *062013093-0080*	Main Bldg-Boy's BR @ Nurse's Office - Off-White Window Frame Caulk	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
27-81 *062013093-0081*	Main Bldg-Cafeteria - Off-White Window Frame Caulk	Gray/Blue Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
28-82 *062013093-0082*	Main Bldg-Corridor across from Kitchen - Off-White Window Frame Caulk-Type 2	Gray/Blue Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
28-83 *062013093-0083*	Main Bldg-Corridor across from Kitchen - Off-White Window Frame Caulk-Type 2	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
28-84 *062013093-0084*	Main Bldg-Corridor across from Kitchen - Off-White Window Frame Caulk-Type 2	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
29-85 *062013093-0085*	Main Bldg-Interior Library Door @ Gym - Silver Door Frame Caulk	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
29-86 *062013093-0086*	Main Bldg-Interior Library Door @ Gym - Silver Door Frame Caulk	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
29-87 *062013093-0087*	Main Bldg-Interior Library Door @ Gym - Silver Door Frame Caulk	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
35-103 *062013093-0103*	Main Bldg-Kitchen - Brown VBM/Mastic	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
35-104 *062013093-0104*	Main Bldg-Kitchen - Brown VBM/Mastic	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
35-105 *062013093-0105*	Main Bldg-Kitchen - Brown VBM/Mastic	Blue Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Samples analyzed by EMSL Analytical, Inc. Carle Place, NY

Initial report from: 07/27/2020 14:30:17

EMSL Analytical, Inc.
528 Mineola Avenue Carle Place, NY 11514
Tel/Fax: (516) 997-7251 / (516) 997-7528
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Collected Date: 07/22/2020

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
38-112 *062013093-0112*	1975 Addition-Vestibule - Blue VBBM/Mastic	Blue Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
38-113 *062013093-0113*	1975 Addition-Library - Blue VBBM/Mastic	Blue Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
38-114 *062013093-0114*	1975 Addition-Library - Blue VBBM/Mastic	Blue Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
39-115 *062013093-0115*	1975 Addition-Resource Rm - Brown VBBM	Brown Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
39-116 *062013093-0116*	1975 Addition-Resource Rm - Brown VBBM	Brown Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
39-117 *062013093-0117*	1975 Addition-Resource Rm - Brown VBBM	Brown Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
40-118 *062013093-0118*	1975 Addition-Resource Rm - Mastic of Brown VBBM	Tan/White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
40-119 *062013093-0119*	1975 Addition-Resource Rm - Mastic of Brown VBBM	Tan/White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
40-120 *062013093-0120*	1975 Addition-Resource Rm - Mastic of Brown VBBM	Tan/White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Soaiful Islam (54)

Daniel Clarke, Asbestos Laboratory Manager
or other approved signatory

Samples analyzed by EMSL Analytical, Inc. Carle Place, NY

Initial report from: 07/27/2020 14:30:17

LiRo Engineers, Inc.
A LiRo Group Company

APPENDIX B:

Personnel Licenses

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

William D. McKinney,
Director

Asbestos Designer

BRET LANGLOIS

Eff. Date 11/16/19
Exp. Date 11/16/20
AD900390
Member of C.O.N.E.S.
BOSR **BOS-RENEW**

20

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

William D. McKinney,
Director

Asbestos Inspector

BRET LANGLOIS

Eff. Date 11/16/19
Exp. Date 11/16/20
AI900883
Member of C.O.N.E.S.
BOSR **BOS-RENEW**

20

LiRo Engineers, Inc.
A LiRo Group Company

APPENDIX C:

Laboratory Accreditation

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 101048-10

EMSL Analytical, Inc.

Carle Place, NY

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2019-07-01 through 2020-06-30

Effective Dates

For the National Voluntary Laboratory Accreditation Program

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

EMSL Analytical, Inc.
528 Mineola Ave.
Carle Place, NY 11514
Daniel Clarke
Phone: 516-997-7251
Email: dclarke@emsl.com
http://www.emsl.com

ASBESTOS FIBER ANALYSIS — NVLAP LAB CODE 101048-10

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Airborne Asbestos Analysis

Code	*Description*
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

For the National Voluntary Laboratory Accreditation Program

Effective 2019-07-01 through 2020-06-30

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2021
Issued April 01, 2020

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. DANIEL CLARKE
EMSL ANALYTICAL, INC.
528 MINEOLA AVE.
CARLE PLACE, NY 11514

NY Lab Id No: 11469

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

Asbestos in Friable Material	Item 198.1 of Manual
	EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual
Asbestos-Vermiculite-Containing Material	Item 198.8 of Manual
Lead in Dust Wipes	EPA 7000B
Lead in Paint	EPA 7000B

Sample Preparation Methods

EPA 3051A

NEW YORK STATE Department of Health

Serial No.: 61402

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.

LiRo Engineers, Inc.
A LiRo Group Company

APPENDIX D:

File Search (Prior Reports)

ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

Asbestos 3-Year Re-inspection Report and Updated Management Plan

Passios Elementary School
1025 Massachusetts Avenue
Lunenburg, Massachusetts, 01462

Prepared by:
ATC Group Services LLC
10 State Street, Suite 100
Woburn, Massachusetts 01801

May 15, 2019

ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

10 State Street, Suite 100
Woburn, MA 01867
Telephone 781-932-9400
Fax 781-932-6211
www.atcgroupservices.com

May 15, 2019

To Whom it May Concern,

ATC Group Services LLC (ATC) was contracted by the Lunenburg Public Schools located in Lunenburg, Massachusetts to perform the three-year AHERA re-inspection and provide this updated Management Plan for Passios Elementary School. The re-inspection and management plan update was performed in compliance with the AHERA Final Rule and Notice.

The enclosed re-inspection and updated management plan was completed in May of 2019 by Mr. Logan Fitzgerald, Commonwealth of Massachusetts Department of Labor Standards (DLS) certified Asbestos Inspector, and Mr. Ricardo Nunes, a DLS certified Management Planner. A copy of the appropriate license and certification follows.

Logan Fitzgerald
Senior Accredited Asbestos Inspector (AI-900711)

Ricardo Nunes
Accredited Asbestos Management Planner (AP-900470)

TABLE OF CONTENTS

1.0 REVIEW OF EXISTING PAPERWORK/RECORD KEEPING

Response Actions:

Each LEA must keep an updated copy of the management plan in its administrative office for each school under its administrative control or direction. The plan must be available without restriction to the public school personnel and their representatives, parents and representatives of EPA and the State, for inspection during normal business hours.

Section 763.94 (Record-keeping) of the AHERA Final Rule (40 CFR Part 763, Subpart E) requires that the following paperwork be obtained for all abatement activities: copies of all personnel accreditation's and licenses, copy of the company's (Abatement Contractor) license, copies of any required notifications, copies of disposal receipts, and records of the particulars of the job as to activity, location, and personnel used with their signatures, where applicable.

A summary of ATC's record review indicated the following:

Response Actions Completed by In-House Staff:

Available upon request.

Response Actions Completed by Independent Abatement Contractors:

Available upon request.

Six-Month Periodic Surveillance:

Provided during re-inspection, available upon request.

Annual Notifications:

No information available for review.

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

2019 Response Actions Priority List

Damaged floor tile and vinyl cove base and associated black cove base mastic is present in numerous locations (please refer to Summary Table of ACBM beginning on page 24 for specific recommendations) based upon the findings of this re-inspection. Damaged floor tile and damaged cove base/mastic should be removed or repaired as soon as economically feasible. Bulk sample analysis performed in January of 2013 determined ceiling plaster in the restrooms, pipe insulation, green vinyl cove base and associated black mastic, 9" red floor tile, 9" grey floor tile, 9" green floor tile, 9" green/white floor tile and associated black mastic and 12" white/black floor tile to be asbestos containing.

All identified ACBM and suspect materials assumed to be ACBM should be maintained in accordance with the school's AHERA Management Plan.

The following is an estimated cost and schedule for the abatement of high priority items.

Summer 2019

Removal & Repair of damaged Floor Tile with Associated Mastic and Cove Base Mastic (approx. 350 SF, & 400 LF) $10,500.00

Summer 2020

Repair of damaged Floor Tile (as needed) $5,000.00

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

2.0 AHERA INSPECTION REPORT

AHERA Terms, Abbreviations, and Acronyms

AHERA	Asbestos Hazard Emergency Response Act
Rule	40 CFR Part 763 Subpart E – Asbestos-Containing Materials in Schools Rule, including Appendices A, B, C, and D
Section	Sections 763.80 - 763.99 in the Rule
LEA	The Schools' Local Education Agency (as defined in the Rule)
Plan	The AHERA Management Plan for the School
Part	Subsections of the Plan
EPA	Environmental Protection Agency
OSHA	Occupational Safety and Health Administration
NESHAPS	National Emission Standards for Hazardous Air Pollutants
ACBM	Asbestos-containing Building Material (as defined in the Rule)
ACM	Asbestos-containing Material
ACWM	Asbestos-containing Waste Material
Non-ACM	Non-Asbestos-containing Material
S No.	Bulk Sample Number
F	Friable
NF	Non-friable
HA	Homogeneous Area
FS	Functional Space
O&M	Operation and Maintenance Program
MIS	Miscellaneous Building Material (as defined in the Rule)
CT	Ceiling Tile

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

FT	Floor Tile
FBGL	Fiberglass
TSI	Thermal Systems Insulation (as defined in the Rule)
SURF	Surfacing Materials
HVAC	Heating, Ventilation, Air Conditioning System
N/A	Not Applicable
MA DLS	Massachusetts Department of Labor Standards
	(Formerly DOS – Division of Occupational Safety)

Other relevant terms, abbreviations, and acronyms may be found within regulations included in the Appendices.

Statement of Compliance

AHERA RE-INSPECTION REPORT FOR MANAGEMENT PLAN
PASSIOS ELEMENTARY SCHOOL
1025 MASSACHUSETTS AVENUE
LUNENBURG, MASSACHUSETTS

This school was inspected in order to comply with the Asbestos Hazard Emergency Response Act (AHERA), signed into law by President Reagan in 1986. This AHERA Inspection Report is derived from the inspection and classification of asbestos-containing material conducted by an ATC accredited Asbestos Inspector. Suspected asbestos-containing materials have been sampled, analyzed, and assessed in accordance with AHERA regulations.

Asbestos-containing materials were classified according to guidelines in the AHERA regulations. Based on a bulk sample's asbestos content, and the condition, location, and hazard potential of the material that was sampled, ATC's accredited Asbestos Management Planner recommended a response action if deemed necessary or the material should be maintained in good condition in accordance with the AHERA Management Plan.

Requirements of the Asbestos Hazard Emergency Response Act, Subpart E (Asbestos-containing Materials in Schools) were complied with for the purpose of this Inspection Report.

The following Consultant Accreditation Page identifies the inspectors and management planners who contributed to the Plan. Also provided are the certificate numbers, signatures, and date of signature of each.

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Consultant Accreditation

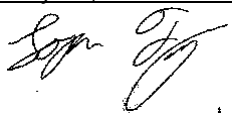
ATC GROUP SERVICES LLC
Woburn, Massachusetts

1. ACCREDITED ASBESTOS INSPECTOR

Name: Logan Fitzgerald

MA DLS Accreditation Number: AI-900711 (Exp. Date 09/05/19)

Date: May 15, 2019

Signature: 

2. ACCREDITED ASBESTOS MANAGEMENT PLANNER

Name: Ricardo Nunes

MA DLS Accreditation Number: AP-900470 (Exp. Date 03/05/20)

Date: May 15, 2019

Signature: 

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Asbestos Information

1 GENERAL

"Asbestos" is the term used to describe certain fibrous silicate minerals that were formerly widely used for insulating, construction, and other purposes. Asbestos fibers were used throughout the construction industry due to their properties of non-flammability, high tensile strength, and low heat conductance. In the northeast United States, the most commonly encountered types of asbestos are "chrysotile" and "amosite". Other types of asbestos are found in a wide variety of construction materials.

Asbestos poses a health hazard when very small asbestos fibers, approximately five micrometers in length, are released into the air and inhaled into the lungs. Once in the lungs these fibers can either be expelled or become trapped. If they become trapped the body cannot break the fibers down, and the lungs try to encase the foreign material with tissue. This process can cause scarring of the lung tissue that may ultimately result in impaired lung elasticity and subsequent chronic dysfunction. This disease is called asbestosis.

Asbestos diseases may manifest in other forms that are equally dangerous, such as mesothelioma, a form of lung cancer. The latency period of these diseases has been determined by medical professionals to be anywhere between ten and thirty years following exposure. For additional information regarding the health hazards of asbestos, consult Health Hazards of Asbestos, U.S. Department of Labor, Occupational Safety and Health Administration (OSHA 3040), and Guidance for Controlling Friable Asbestos-Containing Materials in Buildings, U.S. Environmental Protection Agency (EPA 560/5-83-002, March 1983). These documents are available from the regional office of the U.S. Environmental Protection Agency, Federal Office Building, 26 Federal Plaza, New York, New York 10007, 212-264-2525.

Asbestos-containing building materials (ACBM) can be categorized into two groups: (1) friable; and (2) non-friable. Friable asbestos-containing material is that which can be crumbled, pulverized, or reduced to dust or powder using hand pressure. The presence of friable ACBM creates the need for the most urgent attention, while the presence of non-friable ACBM should be documented and proper handling procedures established, in order to avoid allowing the material to deteriorate to a friable and hence potentially hazardous condition. Non-friable ACBM, as well as friable ACBM, must be assessed periodically to determine their potential for fiber release. An operation and maintenance program including preventive measures must be established to prevent disturbance of all asbestos-containing materials.

Note: The AHERA Rule differentiates between ACBM and ACM. In the remainder of this report, all asbestos-containing material, including ACBM, will be referred to by the acronym "ACM".

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

2 AHERA CLASSIFICATIONS

AHERA classifies asbestos-containing materials as thermal system insulation, miscellaneous materials, or surfacing materials.

a. Thermal System Insulation (TSI)

The most common asbestos-containing thermal system insulation (TSI) are the following: aircell, which is an asbestos-containing paper; calcite and magnesia, which are powdery fibrous silicas; and preformed asbestos lagging or blocks. These types of TSI were used for many years as insulation wrapped around pipes, boilers, ducts, and hot water tanks in order to reduce thermal heat loss and prevent condensation.

When asbestos-containing insulation and its outer wrapping are in good condition there is minimal chance that asbestos fibers will become airborne, provided the insulation is not disturbed. Insulation that is intact may remain in place as long as its location and condition are documented, and proper education is provided to individuals who may potentially disturb the insulation, thereby causing a fiber release episode.

If TSI is intact and in good condition, it must be maintained according to an Operations and Maintenance Program in order to monitor its condition, since the physical condition of the insulation may change, thereby increasing the potential for fiber release. If asbestos insulation is frayed, punctured, ripped, water damaged, or vandalized, a fiber release episode may occur. Whenever a fiber release occurs, the insulation should be repaired, encapsulated, enclosed, or removed in order to decrease the potential hazard to both human health and the environment.

b. Miscellaneous Materials

Floor and ceiling tiles are categorized as miscellaneous interior building materials. Of the two, ceiling tiles are the most common friable materials. Ceiling tiles may release asbestos fibers upon the slightest disturbance. Air currents from HVAC systems may also cause erosion of ceiling tiles and subsequent asbestos fiber release. Routine maintenance of pipes located above asbestos-containing ceiling tiles can possibly cause some quantity of fibers to be released due to disturbance of the tiles. Under normal conditions, non-friable miscellaneous ACM has virtually no potential for fiber release. However, if these materials are sanded drilled, broken, or otherwise structurally disturbed they can release fibers to the air and the environment.

c. Surfacing Materials

Acoustical troweled-on-plaster and sprayed-on fireproofing are categorized as surfacing ACM. Fireproofing insulation was applied as a fluffy coating in order to provide two to four-hour fire protection, so that structural beams would not warp and collapse during a fire. Insulation of this type has a high potential to release fibers into the air

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

upon any physical contact or by the action of air currents. Asbestos-containing plaster was also used for fireproofing and for acoustical purposes. Non-friable surfacing ACM that has a low potential for disturbance also presents a low potential for fiber release.

3 METHODS OF SURVEY CLASSIFICATION AND RESPONSE ACTION DETERMINATION

This school was inspected for ACM by a trained and certified ATC inspector. The inspector assessed the building materials and categorized similar materials into a group called a homogeneous area (HA). The HA are listed by number, with a description of the material and a list of areas that contain the material, which are called functional spaces. Bulk samples of each suspect HA were taken according to Section 763.86 of the Rule. Sample locations are described or noted on the building diagrams.

The inspector recorded the following for each HA: the approximate square or linear footages, activity in the area, risk factors, condition of the ACM, type of damage, if any, and the distribution of damage. These factors were considered when developing the response actions presented in this plan.

These factors, future building uses, and planned renovations all should be taken into consideration when the LEA must choose among the alternative response actions recommended, or otherwise available, for reducing the hazard to human life and the environment posed by the presence of ACM.

4 ASBESTOS TREATMENT METHODS

Three categories of alternative treatments are available to treat or control asbestos-containing materials. Conditions that must be taken into consideration when determining the appropriate method of treatment for ACM are location, quantity, physical condition, future uses, renovation or demolition plans, and any social, political, or economic constraints that may apply. The following are brief descriptions of the three categories of alternative treatments.

a. Repair and Encapsulation

Repair and encapsulation generally offer the least expensive form of treatment. Although this brings the material back to its original and/or non-friable condition, the activity must still be documented in an O&M Program to monitor the future condition of the material and its potential for hazard. This method, however, leaves the ACM in the building where it will continue to age and deteriorate.

b. Enclosure

Enclosure offers a more expensive but more secure solution for some ACM. Building an impermeable case around asbestos-containing pipes or plaster can prevent release of asbestos fibers due to deterioration and physical

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disturbance. However (as is also true for repair and encapsulation), the NESHAPS legislation requires that if future plans call for renovation, repair, or demolition, the ACM must first be removed. Enclosed ACM must also be included in an O&M Program.

c Removal

Removal, although initially the most expensive option, is often the most permanent and cost-effective solution. Not only are future potential hazards associated with asbestos-containing materials eliminated, operation and maintenance, repair, and periodic surveillance and inspection (as required with the options described above) become unnecessary. Future problems or costs for asbestos control are thus completely eliminated.

5 RESPONSE ACTION RECOMMENDATION / IMPLEMENTATION

Regardless of the abatement method chosen, it is important to bear in mind that any disturbance of friable asbestos-containing material can cause fibers to be released, if proper procedures and precautions are not observed.

Asbestos abatement workers licensed in Massachusetts must be employed to perform any large-scale operation (one involving greater than three square or three linear feet of asbestos). It is recommended that a Massachusetts DLS certified asbestos project monitor be employed to ensure the safety of employees and building occupants and to ensure that proper work practices and procedures are followed during all phases of an abatement project. Collection of samples to determine ambient air fiber levels upon completion of a project is also required. It is also recommended that ambient air fiber levels be measured before and during a project. These added precautionary measures greatly increase a school's ability to document and record pertinent data and thereby reduce its own potential liability.

6 RISK ASSESSMENT AND ASBESTOS CONTROL

Actual risk due to asbestos exposure cannot be quantitatively defined, nor can the relationship between an exposure and its consequential effect be estimated. The only precise quantitative statement that can be made concerning asbestos is that zero exposure will give zero risk. It is generally agreed, however, that the greater the exposure, the greater the risk.

The above consideration, combined with the fact that over time, any building material will decay and eventually most systems will be replaced by newer, more advanced and efficient systems, is the basis for the recommendation that, whenever possible, all exposed friable asbestos be removed and that any remaining asbestos-containing materials be controlled with an asbestos O&M Program. Recommended control methods are outlined in the Operation and Maintenance Program in Part VII. Appendix B of the Rule should be consulted regularly as a guide for specific work practices to use for jobs that require contact with asbestos in a School. Again, bear in mind that NESHAPS regulations currently in force require the proper removal of ACM before any major renovation, repair, or demolition occurs.

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Bulk Sample Analysis

ATC collected representative bulk samples of suspect materials in 2013. The following table illustrates the materials sampled and their analytical results:

Material	Location(s) Sampled	Analytical Result
Plaster Base Coat	Hall by Gym, Men's Room by Office, Nurse, Boy's Room by Office, Kitchen, Principal's Office	NAD
Plaster Skim Coat	Hall by Gym, Men's Room by Office, Nurse, Boy's Room by Office, Kitchen, Principal's Office	NAD
Soft Ceiling Plaster	Girl's Room by Office, Girls Room 19-24, Boy's Room by Office, Boy's Room across Superintendent, 2nd Floor above Teacher's Lounge	2% chrysotile
Pipe Insulation	Above Ceiling 17-25, Above Ceiling 11-15, Above Ceiling 1-9	60% chrysotile
Joint Compound	Hall Closet across Room 19, Teacher's Lounge, Gym	NAD
Sheetrock	Gym, Teacher's Lounge	NAD
1' x 1' Dotted Spline Ceiling Tile (no glue)	Custodian Closet across Superintendent	NAD
2' x 4' Ceiling Tile	Teacher's Lounge	NAD
Paper above 1' x 1' Dotted Spline Ceiling Tile	Custodian Closet across Superintendent	NAD

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Material	Location(s) Sampled	Analytical Result
2' x 4' Ceiling Tile	Teacher's Lounge	NAD
Paper above 1' x 1' Dotted Spline Ceiling Tile	Custodian Closet across Superintendent	NAD
1' x 1' Smooth Acoustical Tile (on wall)	CR 15	NAD
1' x 1' Textured Ceiling Tile	Hall outside CR 17	NAD
Green Vinyl Cove Base	CR 1, CR 9	3% chrysotile
Black Cove Base Mastic on Green Vinyl Cove Base	CR 1, CR 9	10% chrysotile
9" Red Floor Tile	CR 9	3% chrysotile
Black Mastic on 9" Red Floor Tile	CR 9	NAD
9" Grey Floor Tile	CR 6	5% chrysotile
Black Mastic on 9" Grey Floor Tile	CR 6	NAD
9" Green Floor Tile	Cafe	3% chrysotile
Black Mastic on 9" Green Floor Tile	Cafe	NAD
9" White/Green Floor Tile	CR 14	3% chrysotile
Black Mastic on 9" White/Green Floor Tile	CR 14	10% chrysotile
12" Tan/Brown Fleck Floor Tile and associated Yellow Mastic	2nd Floor above Teacher's Lounge	NAD
12" White/Black Floor Tile	Resource Room next to Library	2% chrysotile
Black Mastic on 12" White/Black Floor Tile	Resource Room next to Library	NAD
12" Blue Floor Tile and associated Black Mastic	Custodian Closet across Superintendent	NAD
12" Tan/Pink Fleck Floor Tile and associated Yellow Mastic	Teacher's Lounge	NAD
Asbestos Cement Board	Above ceilings along catwalks – Inaccessible for sampling	Assumed

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

3.0 LOCAL EDUCATION AGENCY (LEA)

LEA Responsibilities

1. All aspects of the inspection and management plan are carried out in accordance with the Rule.

2. Custodial and maintenance staff receives proper training as required by all federal and state regulations.

3. Workers and building occupants or their legal guardians are informed at least once each school year about all asbestos-related activities that are planned or are in progress.

4. Short-term workers who may come in contact with asbestos are informed about the locations of ACM and assumed ACM.

5. Required warning labels are posted in routine maintenance areas according to Section 763.95 of the Rule.

6. Parent, teacher, and employee organizations are notified yearly of the availability of the Plan. The School maintains a copy of the Plan at the School for inspection per Section 763.93(g) of the Rule.

7. Per Section 763.84(g)(1) of the Rule, the LEA shall "Designate a person to ensure that requirements under this section are properly implemented and ensure that the designated person receives adequate training as described in Section 763.84 (g)(2)."

8. "Consider whether any conflict of interest may arise from the interrelationship among accredited personnel and whether that should influence the selection of accredited personnel to perform activities under this Subpart." (Section 763.84(h) of the Rule.)

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Confirmation of Designated Person

LEA	Lunenburg Public Schools
School	Passios Elementary School
Address	1025 Massachusetts Avenue, Lunenburg, Massachusetts 01462
Telephone	(978) 582-4105
Designated Person	John Londa
Title	Director of Facilities
Address	1033 Massachusetts Ave. Lunenburg, MA 01462
Telephone	(978) 582-4100
QUALIFICATIONS	
Training	AHERA Designated Person Training
Training Facility	Assabet High School conducted by Division of Occupational Safety
Town, State	Marlborough, Massachusetts
Certificate Number	ADP 056
Hours of Training	4 hours
Date of Course	7/29/98

ASSURANCE OF RESPONSIBILITIES ASSUMED

As the AHERA Designated Person, I shall assume responsibility to ensure that the LEA's duties are carried out as described in 40 CFR 763, Subpart E.

Date _____ **Signature of Designated Person** _____

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Recommendation to LEA

There is an increasing number of regulations regarding the handling, removal, transportation, and disposal of asbestos-containing materials. The LEA must be kept informed of and perform all response actions and other asbestos-related activities, in accordance with all federal, state, and local regulations regarding asbestos. In addition to AHERA 40 CFR Part 763 Subpart E, these regulations include, but are not limited to: 453 CMR 6.00 (Massachusetts DLS); 29 CFR 1926.1101 and 29 CFR 1910.134 (OSHA); 40 CFR Part 763, Subpart G (EPA Worker Protection); 40 CFR Part 61, Subpart M (NESHAPS); 310 CMR 7.15 (Massachusetts DEP); 49 CFR Part 100-177 (DOT); and all amendments and mandatory appendices and regulations cited within these regulations.

The regulations are meant to protect the health and safety of those working with and around asbestos, as well as building occupants. Given the LEA's responsibility to protect both human health and the environment of the school building's occupants, and the high potential liability associated with asbestos remediation projects, the LEA **MUST ENSURE** that the interests of the building's occupants are protected.

All response actions other than small-scale, short duration activities must be designed and conducted by persons accredited and licensed to conduct such activities. Design specifications should be sufficiently explicit to avoid conflicts or confusion that may arise concerning the scope of work and required procedures. It is recommended that the LEA contract a Massachusetts certified and licensed Asbestos Abatement Project Monitor to help ensure that projects are carried out safely, thoroughly, and in compliance with all applicable laws and regulations. Areas adjacent to the project should be sufficiently monitored throughout the project to provide clear documentation of project integrity. Final inspection and air clearance must be achieved as required in Section 763.90(i) of the Rule before any response action may be considered successfully completed.

The LEA must consider any conflict of interest that may potentially arise when retaining accredited designers and contractors to perform asbestos-related activities. Generally it is recommended that the LEA choose separate accredited entities: one for project design (including project oversight, clearance visual inspection, and air monitoring); and another to conduct the asbestos project according to the design. Appendix A of the Rule states that ". . . air sampling operations must be performed by qualified individuals completely independent of the abatement contractor".

4.0 PUBLIC NOTIFICATION

Occupant Notification

In accordance with Section 763.84(c) of the Rule, the LEA will notify in writing, at least once yearly, all relevant occupants of the school of all asbestos-related activities that take place at the school. Relevant occupants include, but are not limited to: building occupants or their legal guardians; staff, including teaching, administrative, custodial, maintenance, and all other personnel; all parent, teacher, employee, and administrative organizations; and/or any similar organizations at the school which serve similar functions.

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Asbestos activities include, but are not limited to: inspections; response actions, including removal, encapsulation, enclosure, repair, and operation and maintenance; and post-response action activities, including periodic surveillance and re-inspection. In addition, Section 763.93(g)(4) of the Rule requires the LEA to inform occupants at least once per year that the AHERA Management Plan exists and is available for review in the school's Administration Office.

In accordance with the aforementioned Sections and Section 763.93(b) of the Rule, the LEA must maintain a dated copy of all such notifications. The list of relevant groups to be notified will be added to and updated as necessary and should also be kept on file.

Plan for Notification

In accordance with Sections 763.84(c) and Sections 763.93(e)(10) and (g)(4) of the Rule, all school building occupants will be informed by written notification about all asbestos-related activities at least once every school year.

Building occupants to be notified include, but are not limited to, all students or their legal guardians, and all staff members and their committees, representatives, and organizations.

Building occupants at the school include the following:

- Students
- Legal guardians of students
- Staff (including teaching, custodian, maintenance, Administrative and all other personnel)

The LEA may choose various methods of notification to building occupants. The method of notification, such as written notification via posted notices at the school, or through publications such as a legal notice in the local newspaper, must be documented and details of the new notification methods used must be included in the Management Plan. Copies of the annual public notice must be included in the Management Plan.

ACBM Locations

According to Section 763.84(d) of the Rule, the LEA must ensure that all short-term workers who may come in contact with asbestos in the school (e.g., telephone, plumbing, HVAC, electrical workers, etc.) are provided information regarding the locations of identified or assumed ACM. In addition, as required by Section 763.92(a)(i)(iii), all members of the school's maintenance and custodial staff must be informed of the locations of ACM identified throughout each school building in which they work.

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Asbestos Activities

Prior to the start of asbestos abatement and/or associated or remediation projects, proper notifications must be made by the appropriate entities to all applicable federal, state, and local agencies and authorities. The local Health and Fire Departments are often good places to begin researching local regulations and notification requirements. Notifications may include but are not limited to the following.

1. NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS)

NESHAPS requires notification whenever asbestos is being removed according to the quantities involved, as follows:

a. Demolition ACM Removal >160 square feet or 260 linear feet

10 days' notice for any asbestos abatement project. Notification must include friable and potentially friable ACBM

b. Renovation ACM Removal >160 square feet or 260 linear feet

10 days' notice for any asbestos abatement project. Notification must include friable and potentially friable ACBM

NESHAPS notifications are submitted to the EPA Region I Office per 40 CFR Part 61, Subpart M.

2. MASSACHUSETTS DEPARTMENT OF LABOR STANDARDS (DLS)

The Massachusetts Department of Labor Standards (DLS) must be given proper notice when any asbestos abatement project or asbestos associated project involving more than three linear or three square feet is planned. The Commissioner of the DLS must be notified at least ten days prior to the project start date (postmark or hand delivery), or in the case of an emergency, within one working day after the project start date (DLS 453 CMR 6.00).

3. MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)

The Massachusetts DEP requires proper notification and ten days prior notice (one day prior notice in the event of emergency) before the start date of **any and all** asbestos removal projects (310 CMR 6.00, 7.00, and/or 8.00).

*Contact the agencies denoted above or refer to the appropriate regulations for further information requiring proper notification procedures and guidelines.

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5.0 ASBESTOS-CONTAINING MATERIALS RESPONSE ACTIONS

Response Action Determination Summary

Response Action Determinations were made by using the EPA recommended method to determine the risk to human health associated with exposure to asbestos within a given ACM category. Appropriate response actions that are consistent with applicable regulations and protect human health and the environment are then recommended in order to best respond to and/or control ACM.

Response Action Descriptions

The following is a brief and general description of the Response Actions recommended in the Plan. The following response actions may only be undertaken in accordance with all applicable federal, state, and local regulations governing the handling and disposal of asbestos. Procedural requirements and work practices regarding small-scale, short-duration asbestos activities may be found in the O&M Section of this Plan. Refer to the Table at the end of Part V for a complete list of ACBM and recommended response actions.

1. Removal

Removal means the complete removal and disposal of designated asbestos-containing material of any kind. If ACM debris is present, the area must be isolated and the debris cleaned up immediately.

2. Repair

Repair means to restore a damaged area to its original intact condition. This includes making the damaged area airtight to prevent the release of fibers into the air. If ACM debris is present, the area must be isolated and the debris cleaned up immediately. Place all repaired ACM in the O&M Program.

3. Encapsulation

Encapsulation means the application of a material with a bonding or sealing property to prevent the release of airborne fibers. If ACM debris is present, the area must be isolated and the debris cleaned up immediately. Place encapsulated ACM in the O&M Program.

4. Enclosure

Enclosure means creating an airtight structure around an affected area to prevent the release of airborne fibers and significantly reduce the possibility of future physical disturbance or damage to the ACM. Any damaged ACM must be

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repaired prior to enclosure. If ACM debris is present the area must be isolated and the debris cleaned up immediately. Place the enclosed area in the O&M Program.

5. Operation & Maintenance (O&M) Program

An O&M program describes a structured plan of action to maintain ACM in a condition that protects the health and safety of the occupants in a building and provides for remedial action in the event that ACM is disturbed.

Material/Condition Assessment Key for Functional Spaces as found in the School Report

1. Damaged or significantly damaged TSI.
2. Damaged friable surfacing material.
3. Significantly damaged friable surfacing material.
4. Damaged or significantly damaged friable miscellaneous material.
5. ACM with potential for damage.
6. ACM with potential for significant damage.
7. Any remaining friable known or suspect ACM.
8. Damaged or significantly damaged non-friable ACMB. Note that this category is not listed in the AHERA regulations but is provided for reference in this report.

Method of Response Action Determination for Surfacing and Miscellaneous ACM

1. Friable Surfacing or Miscellaneous ACM with Significant Damage

Response Action 1: Remove

Isolate the area and clean up debris immediately. Remove ACM as soon as possible.

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

2. Friable Surfacing or Miscellaneous ACM with Damage and High Potential for Disturbance

Response Action 1: Remove

Isolate area and clean up immediately. Remove ACM as soon as possible.

3. Friable Surfacing or Miscellaneous ACM with Damage and Moderate Potential for Disturbance

Response Action 4: Enclose

Institute preventive measures. Repair ACM to return to airtight, intact condition, and enclose with an impermeable encasement to prevent physical disturbance. Continue with O&M.

4. Friable Surfacing or Miscellaneous ACM with Damage and Low Potential for Disturbance

Response Action 3: Encapsulate

Institute preventive measures. Repair damaged material to return to intact condition and encapsulate to reduce the possibility of fiber release. Continue with O&M.

5. Friable Surfacing or Miscellaneous ACM with No Damage and High Potential for Damage

Response Action 4: Enclose

Institute preventive measures. Enclose material to reduce effects of future disturbance. Continue with O&M.

6. Friable Surfacing or Miscellaneous ACM with No Damage and Moderate Potential for Damage

Response Action 3: Encapsulate

Institute preventive measures. Encapsulate material to reduce the possibility of fiber release. Continue with O&M.

7. Friable Surfacing or Miscellaneous ACM with No Damage and Low or no Potential for Damage

Response Action 5: O&M Program

Continue with O&M until condition factors change, requiring additional response.

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

8. Non-Friable Surfacing or Miscellaneous ACM

Response Action 5: O&M Program

Continue with O&M until condition factors change, requiring additional response.

Method of Response Action Determination for Thermal System Insulation (TSI) ACM

1. Significantly Damaged Thermal System Insulation (TSI)

Response Action 1: Remove - Isolate the area and restrict access. ACM debris should be removed and the area cleaned up immediately.

2. Damaged Thermal System Insulation with High Potential for Disturbance

Response Action 1: Remove - Institute preventive measures and remove material as soon as possible.

3. Damaged Thermal System Insulation with Moderate Potential for Disturbance

Response Action 4: Enclosure - Institute preventive measures. Repair insulation to airtight condition and enclose with an impermeable encasement to protect against further physical damage. Continue with O&M.

4. Damaged Thermal System Insulation with Low Potential for Disturbance

Response Action 2: Repair - Repair to airtight condition and take preventive measures necessary to eliminate any potential disturbance. Continue with O&M.

5. Undamaged Thermal System Insulation with High Potential for Disturbance

Response Action 1: Remove - Institute preventive measures. Remove to prevent the high possibility of disturbance to the ACM.

6. Undamaged Thermal System Insulation with Moderate Potential for Disturbance

Response Action 4: Enclose - Institute preventive measures. Enclose the ACM within an airtight barrier to prevent potential disturbance of ACM. Continue with O&M.

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

7. Undamaged Thermal System Insulation with Low or No Potential for Disturbance

Response Action 5: O&M - Continue with O&M.

Summary Table of ACBM
Passios Elementary School
Lunenburg, Massachusetts
April 16, 2019

Location	Material	Quantity Reported in 2016 3-Year Re-inspection	Quantity Observed in 2019 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
CR 1	9" Red Floor Tile	960 SF	960 SF	Non-Friable	8	11 SF Damaged Floor Tile	Repair damaged tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	10 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 3	9" Red Floor Tile	960 SF	960 SF	Non-Friable	8	16 SF Damaged Floor Tile	Repair or replace damaged tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
CR 5	9" Red Floor Tile	960 SF	960 SF	Non-Friable	8	25 SF Damaged Floor Tile	Repair or replace damaged tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
CR 7	9" Red Floor Tile	960 SF	960 SF	Non-Friable	8	25 SF Damaged Floor Tile	Repair or replace damaged tiles and maintain the material in good condition in accordance with the O&M Plan

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Location	Material	Quantity Reported in 2016 3-Year Re-inspection	Quantity Observed in 2019 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	5	10 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 9	9" Red Floor Tile	960 SF	960 SF	Non-Friable	8	25 SF Damaged Floor Tile	Repair damaged tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	10 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 10	9" Grey Floor Tile	960 SF	960 SF	Non-Friable	8	4 SF Damaged Floor Tile	Repair damaged tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	12 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 8	9" Grey Floor Tile	960 SF	960 SF	Non-Friable	5	2 SF Damaged Floor Tile	Repair damaged tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	12 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 6	9" Grey Floor Tile	960 SF	960 SF	Non-Friable	8	10 SF Damaged Floor Tile	Repair damaged tile and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	5 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 4	9" Grey Floor Tile	960 SF	960 SF	Non-Friable	8	10 SF Damaged Floor Tile	Repair damaged tile and maintain the material in good condition in accordance with the O&M Plan

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Location	Material	Quantity Reported in 2016 3-Year Re-inspection	Quantity Observed in 2019 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
CR 2	9" Grey Floor Tile	960 SF	960 SF	Non-Friable	8	20 SF Damaged Floor Tile	Repair damaged tile and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Hallway 1-10 (above ceiling)	Pipe Insulation	997 LF	997 LF	Friable	7	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Principal's Office	9" Grey Floor Tile	290 SF	290 SF	Non-Friable	5	Good Condition – Below Carpet	Maintain the material in good condition in accordance with the O&M Plan
Girl's Room by Office	Ceiling Plaster	230 SF	230 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
	Pipe Insulation	Not Identified	45 LF	Friable	5	Good Condition – Above Ceiling	Maintain the material in good condition in accordance with the O&M Plan
Boy's Room by Office	Ceiling Plaster	230 SF	230 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
	Pipe Insulation	Not Identified	45 LF	Friable	5	Good Condition – Above Ceiling	Maintain the material in good condition in accordance with the O&M Plan
Nurse's Office	9" Grey Floor Tile	290 SF	290 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	1 LF damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
Nurse's Closet	Pipe Insulation	4 LF	4 LF	Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Special Services Office	9" Grey Floor Tile	180 SF	180 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Secretary Office	9" Grey Floor Tile	250 SF	250 SF	Non-Friable	5	Good Condition – Below Carpet	Maintain the material in good condition in accordance with the O&M Plan

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Location	Material	Quantity Reported in 2016 3-Year Re-inspection	Quantity Observed in 2019 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
Main Office (Personnel Office)	9" Grey Floor Tiles	300 SF	300 SF	Non-Friable	5	Good Condition – Below Carpet	Maintain the material in good condition in accordance with the O&M Plan
	Pipe Insulation	Not Identified	45 LF	Friable	5	Good Condition – Above Ceiling	Maintain the material in good condition in accordance with the O&M Plan
Technology Room	9" Grey Floor Tile	Not Identified	230 SF	Non-Friable	5	Good Condition – Below Carpet	Maintain the material in good condition in accordance with the O&M Plan
	Pipe Insulation	Not Identified	30 LF	Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
	Plaster Ceiling	Not Identified	230 LF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Cafeteria	9" Green Floor Tile	1300 SF	1300 SF	Non-Friable	8	5 SF Damaged Floor Tile by Exit door and Serving Area	Repair damaged tile and maintain the material in good condition in accordance with the O&M Plan
	9" White Floor Tile	1300 SF	1300 SF	Non-Friable	8	1 SF Damaged Floor Tile water bubbler	Repair damaged tile and maintain the material in good condition in accordance with the O&M Plan
Kitchen Managers Office	Pipe Insulation	10 LF	10 LF	Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Hallway Rooms 12-18	9" Green Floor Tiles	1350 SF	1350 SF	Non-Friable	8	15 SF Damaged Floor Tile	Repair damaged tile and maintain the material in good condition in accordance with the O&M Plan
Hallway Rooms 12-18 (above ceiling)	Pipe Insulation	725 LF	725 LF	Friable	5	Good Condition – Below Carpet	Maintain the material in good condition in accordance with the O&M Plan
CR 11	9" Grey/Red Floor Tile	960 SF	960 SF	Non-Friable	8	12 SF Damaged Floor Tile	Repair broken tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	12 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Location	Material	Quantity Reported in 2016 3-Year Re-inspection	Quantity Observed in 2019 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
CR 13	9" Grey w/ Red Floor Tile	960 SF	960 SF	Non-Friable	8	4 SF Damaged Floor Tile	Repair broken tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	8 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 15	9" Grey w/ Red Floor Tile	960 SF	960 SF	Non-Friable	8	18 SF Damaged Floor Tile	Repair broken tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	5	Good condition	Maintain the material in good condition in accordance with the O&M Plan
Superintendent Office	9" White w/ Green Floor Tile and Black Mastic	340 SF	340 SF	Non-Friable	5	Good Condition – Below Carpet	Maintain the material in good condition in accordance with the O&M Plan
Boy's Room by Superintendent	Ceiling Plaster	230 SF	230 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
	Pipe Insulation	Not Identified	40 LF	Friable	5	Good Condition – Above Ceiling	Maintain the material in good condition in accordance with the O&M Plan
Girl's Room by Superintendent	Ceiling Plaster	230 SF	230 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
	Pipe Insulation	Not Identified	40 LF	Friable	5	Good Condition – Above Ceiling	Maintain the material in good condition in accordance with the O&M Plan
CR 12	9" White w/ Green Floor Tile and Black Mastic	450 SF	450 SF	Non-Friable	5	Good Condition – Below Carpet	Maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Location	Material	Quantity Reported in 2016 3-Year Re-inspection	Quantity Observed in 2019 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
CR 14	9" White w/ Green Floor Tile and Black Mastic	960 SF	960 SF	Non-Friable	8	14 SF Damaged Floor Tile	Repair broken tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	2 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 16	9" White w/ Green Floor Tile and Black Mastic	960 SF	960 SF	Non-Friable	8	25 SF Damaged Floor Tile	Repair damaged tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	5 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 18	9" White w/ Green Floor Tile and Black Mastic	960 SF	960 SF	Non-Friable	8	35 SF Damaged Floor Tile	Repair damaged tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	5 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
Hydroponics Lab (above ceiling)	Pipe Insulation	100 LF	100 LF	Friable	5	Good Condition – Above Ceiling	Maintain the material in good condition in accordance with the O&M Plan
Hallway 19-24 AC	Pipe Insulation	725 LF	725 LF	Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Girls Rest Room 19-24	Ceiling Plaster	230 SF	230 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
	Pipe Insulation	Not Identified	45 LF	Friable	5	Good Condition – Above Ceiling	Maintain the material in good condition in accordance with the O&M Plan
Boys Rest Room 19-24	Ceiling Plaster	230 SF	230 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Location	Material	Quantity Reported in 2016 3-Year Re-inspection	Quantity Observed in 2019 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
	Pipe Insulation	Not Identified	45 LF	Friable	5	Good Condition – Above Ceiling	Maintain the material in good condition in accordance with the O&M Plan
Resource Room Next to Library	12" White and Black Floor Tile	Not Identified	235 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
CR 17	9" Grey w/ White Floor Tile	960 SF	960 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	12 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 19	9" Grey w/ White Floor Tile	960 SF	960 SF	Non-Friable	8	2 SF Damaged Floor Tile and 12 Missing Floor Tiles	Replace missing floor tile and repair damaged tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	2 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 21	9" Grey w/ White Floor Tile	960 SF	960 SF	Non-Friable	8	8 SF Damaged Floor Tile	Repair damaged tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	5	20 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 23	9" Grey w/ White Floor Tile	960 SF	960 SF	Non-Friable	8	3 SF Damaged Floor Tile and 2 Missing Floor Tiles	Replace missing floor tile and repair damaged tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	15 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Location	Material	Quantity Reported in 2016 3-Year Re-inspection	Quantity Observed in 2019 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
CR 25	9" Grey w/ White Floor Tile	960 SF	960 SF	Non-Friable	8	6 SF Damaged Floor Tile	Repair damaged tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	5	15 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 24	9" Brown Floor Tile	960 SF	960 SF	Non-Friable	8	10 SF Damaged Floor Tile	Repair damaged tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	15 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 22	9" Brown Floor Tile	960 SF	960 SF	Non-Friable	8	5 SF Damaged Floor Tile	Repair damaged tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	8	5 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
CR 20	9" Brown Floor Tile	960 SF	960 SF	Non-Friable	8	20 Floor Tiles Missing	Replace missing floor tiles and maintain the material in good condition in accordance with the O&M Plan
	Green Cove Base and Black Cove Base Mastic	110 LF	110 LF	Non-Friable	5	10 LF Damaged Cove Base & Mastic	Repair damaged cove base & mastic and maintain the material in good condition in accordance with the O&M Plan
Teacher's Lounge Closet	Pipe Insulation	8 LF	8 LF	Friable	1	1 Exposed End	Repair/wet wrap exposed end and maintain the material in good condition in accordance with the O&M Plan
2nd Floor Above Teacher Lounge	12" Floor Tile	900 SF	900 SF	Non-Friable	5	The previous AHERA report identifies this floor tile as ACM. ATC resampled this	Maintain the material in good condition in accordance with the O&M Plan

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

Location	Material	Quantity Reported in 2016 3-Year Re-inspection	Quantity Observed in 2019 3-Year Re-inspection	Friable / Non-Friable	Material/ Condition Assessment Code	Comments	Response Action Recommendation
						floor tile and it was determined to be non-asbestos. ATC assumes this material to be ACM based on the previous report.	
Hallway 1-10 (above ceiling)	Cementitious Cement Board	160 SF	160 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Hallway 11-18 (above ceiling)	Cementitious Cement Board	320 SF	320 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Hallway 17-25 (above ceiling)	Transite Cement Board	320 SF	320 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan
Women's Restroom Next to Personnel Service	Pipe Insulation	Not Identified	230 SF	Friable	5	Good Condition – Above Ceiling	Maintain the material in good condition in accordance with the O&M Plan
	Plaster Ceiling	Not Identified	45 SF	Non-Friable	5	Good Condition	Maintain the material in good condition in accordance with the O&M Plan

Material Condition/Assessment Code Definitions: According to the AHERA Regulation, 763.88 Assessment, the following categories are provided to assess the ACBM, suspected ACBM or assumed ACBM in the school building: (1) damaged or significantly damaged TSI, (2) damaged friable surfacing material, (3) significantly damaged friable surfacing material, (4) damaged or significantly damaged friable miscellaneous material, (5) ACBM with potential for damage, (6) ACBM with potential for significant damage, (7) any remaining friable known or suspect ACBM, or (8) damaged or significantly damaged non-friable ACBM (note that this category is not listed in the AHERA regulations but is provided for reference in this report.)

SURVEY REPORT
FOR PCB-CONTAINING MATERIALS

Performed at:
Thomas C Passios Elementary School
1025 Massachusetts Avenue
Lunenberg, MA 01462

Performed for:
DAI - DiGiorgio Associates Inc.
529 Main Street - Suite 3303
Charlestown, MA 02129

Prepared by:

LiRo Engineers, Inc.
A LiRo Group Company

LIRO Engineers, Inc.
Three Aerial Way
Syosset, New York 11791
Phone: 516-938-5476

LIRO Job #: 20-138-2329

October 6, 2020

LiRo Engineers, Inc.
A LiRo Group Company

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APPENDICES

1.0 BACKGROUND

LIRO Engineers, Inc. (LIRO) has completed a project specific environmental survey for the presence of polychlorinated biphenyls-containing materials (PCB) at the following building:

Site: Thomas C Passios Elementary School
Address: 1025 Massachusetts Avenue, Lunenberg MA 01462

The inspector(s) responsible for this project are:

Bret Langlois	MA Asbestos Designer # AD900390	Exp.: 11/16/2020
Logan Fitzgerald	MA Asbestos Inspector # AI900711	Exp.: 9/10/2021
(LIRO Engineers)	MA Asbestos Inspector # AI900883	Exp.: 11/16/2020

Site Visit(s): September 17, 2020

Report Date: October 6, 2020

Field Procedures and Analysis Methodology:

PCB:

The sampling process includes removing a small portion of the suspect PCB caulk material for analytical testing. Typically, three subsamples of each homogeneous caulk are collected in order to form a composite sample of approximately 10 grams. This quantity of caulk is needed by the laboratory for analytical testing. All samples were analyzed in accordance with the ELAP Certification Manual and USEPA Method 8082.

The laboratory performing these analytical procedures for the survey EMSL Analytical, Inc. located at 200 Route 130 North, Cinnaminson, New Jersey 08077. The laboratory has received accreditation from the following agencies for the analysis of PCB:

- NVLAP Lab Code: 101147-0
- Massachusetts: AA000056

The PCB inspection involved a thorough visual examination of all areas that may be impacted by the planned renovation at the facility. Suspect PCB caulking materials identified during the field survey are listed in Section 5.0

Analytical results of samples collected during the survey do not indicate the presence of PCB in the caulking materials sampled at the site. As a result, special work practices or disposal requirements are not required to be performed during the renovation project. A summary of the analytical results is listed in Table 2 and the sample chain of custody forms and analytical results are included in Appendix D.

2.0 SCOPE OF WORK

The areas inspected for PCB-containing materials may be impacted by the proposed renovation work as per discussions with client representatives. The specific areas targeted by the survey are as follows:

- Main Building - Exterior - Throughout

LIRO's inspection was characterized by a close visual inspection of all accessible areas. Suspect materials found were inspected, sampled and inventoried for quantity, condition and friability.

3.0 SUMMARY OF FILE SEARCH

See Appendix E for File Search.

4.0 SUMMARY OF INSPECTION RESULTS

The environmental inspection for PCB's involved a thorough visual examination of all areas to be affected by the proposed project and sampling of suspect materials.

The following suspect materials were identified:

- Exterior Door Frame Caulk (White)
- Exterior Door Lintel Coating (White)
- Exterior Window Frame Caulk (Grey)
- Grey Caulk @ Copper Flashing
- Interior Door Frame Caulk (Silver)
- Interior Window Frame Caulk (Off-White)
- Interior Window Frame Caulk – Type II (Off-White)
- Transom Window Caulk (Grey)
- Transom Window Putty (Associated with Exterior Doors)
- Window Frame Caulk (White)

TABLE 1 - PCB - SUMMARY OF INSPECTION RESULTS (SIRT)

Line #	HA #	Location	Material	# of Samples	PCB Quantity		Results	Notes
					LF	SF		
2	27	Main Building - Interior - Throughout	Interior Window Frame Caulk (Off-White)	1	-	-	None Detected	1 sample analyzed, composite of 3 samples
4	28		Interior Window Frame Caulk -Type II (Off-White)	1	-	-	None Detected	
1	29	Main Building - Interior @ Gym / Main Entrance Lobby	Interior Door Frame Caulk (Silver)	1	-	-	None Detected	
5	13	Main Building - Roof Level - @ Wall of Windows near 1975 Addition	Transom Window Caulk (Grey)	1	-	-	None Detected	
7	14	Main Building - Roof Level - Throughout	Grey Caulk @ Copper Flashing	1	-	-	None Detected	
3	17	Main Building - Exterior Façade - Throughout	Exterior Door Frame Caulk (White)	1	-	-	None Detected	
8	18		Exterior Window Frame Caulk (Grey)	1	-	-	None Detected	
11	19		Transom Window Putty (Associated with Exterior Doors)	1	-	-	None Detected	
10	23	1975 Building Addition - Exterior - Throughout	Exterior Door Lintel Coating (White)	1	-	-	None Detected	
9	25		Window Frame Caulk (White)	1	-	-	None Detected	
			Total Quantity (LF / SF):		**0**	**0**		

Notes:

mg/ kg equals parts per million
None Detected – (Non-PCB)

Any caulk/ silicone/ sealant materials to be impacted by the scope of work which have not been assessed for PCB, regardless of their PCB content or lack of, must be assumed to be PCB containing above hazard levels and must be treated as such unless otherwise noted in the report .

5.0 CONCLUSIONS AND RECOMMENDATIONS

PCB-containing materials which may be affected by the scope of work have been identified by this visual inspection & suspect material testing (see Table 1 above). A follow up inspection may be necessary upon review of the final construction drawing prepared by the engineer to confirm that all scope items have been accessible.

In the event that any PCB's or Presumed PCB's needs to be impacted by the project. A licensed abatement contractor must perform the removal of all materials. LIRO Engineers, Inc. believes that the implementation of these recommendations will serve to best protect human health and the environment.

To assure that the removal of the aforementioned PCB's is properly and effectively carried out, the following recommendations are proposed by LIRO Engineers, Inc.

A. Develop and implement a schedule that outlines the time frame for removal of PCB-containing materials.

B. Develop complete and concise specifications to effectively deal with removal of the PCB-containing material. These specifications should be developed to comply with all applicable federal, state and local regulations.

C. Retain the service of an independent testing laboratory to monitor the quality of the air before, during and after the removal work. Retain all documentation and correspondence from the removal contractor, the testing laboratory and related items in a permanent record.

6.0 AREAS NOT ACCESSIBLE

LIRO Engineers, Inc. inspected and sampled materials, which were observable and accessible to the survey team. It is possible; however, that additional suspect PCB's may exist inside other concealed spaces, which were not accessible without using destructive means. Any materials that have not been tested and/or found to contain PCB's must be assumed to contain PCB's. If any materials that are not listed are encountered, all work must cease and representatives from Lunenberg - T.C. Passios must be contacted immediately.

7.0 REPORT CERTIFICATIONS

LIRO Engineers, Inc. certifies that the information contained herein is based on the physical and visual inspections conducted by LIRO Engineers, Inc. and data collected during the inspection survey.

Bret Langlois
Project Manager / Inspector

LiRo Engineers, Inc.
A LiRo Group Company

APPENDIX A:

Analytical Results and Chain of Custody

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone: (856) 303-2500 Fax: (856) 858-4571 Email: EnvChemistry2@emsl.com

Attn: **Chris Carnanan**
The LiRo Group
690 Delaware Avenue
Buffalo, NY 14209
Phone: (716) 882-5476
Fax: (716) 882-9640

10/1/2020

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 9/24/2020. The results are tabulated on the attached data pages for the following client designated project:

Lunonburg TC Passios School

The reference number for these samples is EMSL Order #012010485. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Approved By:

Phillip Worby, Environmental Chemistry
Laboratory Director

The test results contained within this report meet the requirements of NELAP and/or the specific certification program that is applicable, unless otherwise noted
NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, CA ELAP 1877

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 858-4571
http://www.EMSL.com EnvChemistry2@emsl.com

EMSL Order: 012010485
CustomerID: LIRO50
CustomerPO:
ProjectID:

Attn: **Chris Carnanan**
The LiRo Group
690 Delaware Avenue
Buffalo, NY 14209

Phone: (716) 882-5476
Fax: (716) 882-9640
Received: 09/24/20 9:45 AM

Project: **Lunonburg TC Passios School**

Analytical Results

Client Sample Description 1
Main Entrance
Collected: 9/17/2020 ***Lab ID:*** 012010485-0001

Method	Parameter	Result	RL Units	Prep Date & Analyst		Analysis Date & Analyst	
GC-SVOA							
3540C/8082A	Aroclor-1016	ND D	0.88 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1221	ND D	0.88 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1232	ND D	0.88 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1242	ND D	0.88 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1248	ND D	0.88 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1254	ND D	0.88 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1260	ND D	0.88 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1262	ND D	0.88 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1268	ND D	0.88 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH

Client Sample Description 2
Exit 6,Interior
Collected: 9/17/2020 ***Lab ID:*** 012010485-0002

Method	Parameter	Result	RL Units	Prep Date & Analyst		Analysis Date & Analyst	
GC-SVOA							
3540C/8082A	Aroclor-1016	ND D	0.82 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1221	ND D	0.82 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1232	ND D	0.82 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1242	ND D	0.82 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1248	ND D	0.82 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1254	ND D	0.82 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1260	ND D	0.82 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1262	ND D	0.82 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1268	ND D	0.82 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH

Client Sample Description 3
Main Entrance
Collected: 9/17/2020 ***Lab ID:*** 012010485-0003

Method	Parameter	Result	RL Units	Prep Date & Analyst		Analysis Date & Analyst	
GC-SVOA							
3540C/8082A	Aroclor-1016	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1221	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1232	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1242	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1248	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH

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EMSL Order:	012010485
CustomerID:	LIRO50
CustomerPO:	
ProjectID:	

Attn: **Chris Carnanan**
The LiRo Group
690 Delaware Avenue
Buffalo, NY 14209

Phone: (716) 882-5476
Fax: (716) 882-9640
Received 09/24/20 9:45 AM

Project: **Lunonburg TC Passios School**

Analytical Results

Client Sample Description 3
Main Entrance
Collected: 9/17/2020 ***Lab ID:*** *012010485-0003*

Method	Parameter	Result	RL Units	Prep Date & Analyst		Analysis Date & Analyst	
GC-SVOA							
3540C/8082A	Aroclor-1254	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1260	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1262	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1268	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH

Client Sample Description 4
Gymnasium
Collected: 9/17/2020 ***Lab ID:*** *012010485-0004*

Method	Parameter	Result	RL Units	Prep Date & Analyst		Analysis Date & Analyst	
GC-SVOA							
3540C/8082A	Aroclor-1016	ND D	0.89 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1221	ND D	0.89 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1232	ND D	0.89 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1242	ND D	0.89 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1248	ND D	0.89 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1254	ND D	0.89 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1260	ND D	0.89 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1262	ND D	0.89 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1268	ND D	0.89 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH

Client Sample Description 5
Main Building Courtyard
Collected: 9/17/2020 ***Lab ID:*** *012010485-0005*

Method	Parameter	Result	RL Units	Prep Date & Analyst		Analysis Date & Analyst	
GC-SVOA							
3540C/8082A	Aroclor-1016	ND D	0.96 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1221	ND D	0.96 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1232	ND D	0.96 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1242	ND D	0.96 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1248	ND D	0.96 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1254	ND D	0.96 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1260	ND D	0.96 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1262	ND D	0.96 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH
3540C/8082A	Aroclor-1268	ND D	0.96 mg/Kg	9/24/2020	RS	09/29/20 0:00	EH

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EMSL Order:	012010485
CustomerID:	LIRO50
CustomerPO:	
ProjectID:	

Attn: **Chris Carnanan**
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Phone: (716) 882-5476
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Received: 09/24/20 9:45 AM

Project: **Lunonburg TC Passios School**

Analytical Results

Client Sample Description 6
Main Building Courtyard
Collected: 9/17/2020 ***Lab ID:*** *012010485-0006*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*		*Analysis Date & Analyst*	
GC-SVOA								
3540C/8082A	Aroclor-1016	ND D	0.95	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1221	ND D	0.95	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1232	ND D	0.95	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1242	ND D	0.95	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1248	ND D	0.95	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1254	ND D	0.95	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1260	ND D	0.95	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1262	ND D	0.95	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1268	ND D	0.95	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH

Client Sample Description 7
Gymnasium Roof
Collected: 9/17/2020 ***Lab ID:*** *012010485-0007*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*		*Analysis Date & Analyst*	
GC-SVOA								
3540C/8082A	Aroclor-1016	ND D	0.89	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1221	ND D	0.89	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1232	ND D	0.89	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1242	ND D	0.89	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1248	ND D	0.89	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1254	ND D	0.89	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1260	ND D	0.89	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1262	ND D	0.89	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1268	ND D	0.89	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH

Client Sample Description 8
Main Building Exit #4
Collected: 9/17/2020 ***Lab ID:*** *012010485-0008*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*		*Analysis Date & Analyst*	
GC-SVOA								
3540C/8082A	Aroclor-1016	ND D	0.98	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1221	ND D	0.98	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1232	ND D	0.98	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1242	ND D	0.98	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1248	ND D	0.98	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH

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EMSL Order:	012010485
CustomerID:	LIRO50
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ProjectID:	

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Buffalo, NY 14209

Phone: (716) 882-5476
Fax: (716) 882-9640
Received: 09/24/20 9:45 AM

Project: **Lunonburg TC Passios School**

Analytical Results

Client Sample Description 8 Main Building Exit #4 ***Collected:*** 9/17/2020 ***Lab ID:*** *012010485-0008*

Method	Parameter	Result	RL	Units	Prep Date & Analyst		Analysis Date & Analyst	
GC-SVOA								
3540C/8082A	Aroclor-1254	ND D	0.98	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1260	ND D	0.98	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1262	ND D	0.98	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH
3540C/8082A	Aroclor-1268	ND D	0.98	mg/Kg	9/25/2020	AC	09/28/20 0:00	EH

Client Sample Description 9 1975 Addition ***Collected:*** 9/17/2020 ***Lab ID:*** *012010485-0009*

Method	Parameter	Result	RL	Units	Prep Date & Analyst		Analysis Date & Analyst	
GC-SVOA								
3540C/8082A	Aroclor-1016	ND D	0.89	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1221	ND D	0.89	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1232	ND D	0.89	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1242	ND D	0.89	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1248	ND D	0.89	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1254	ND D	0.89	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1260	ND D	0.89	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1262	ND D	0.89	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1268	ND D	0.89	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH

Client Sample Description 10 Main Building Exit #4 ***Collected:*** 9/17/2020 ***Lab ID:*** *012010485-0010*

Method	Parameter	Result	RL	Units	Prep Date & Analyst		Analysis Date & Analyst	
GC-SVOA								
3540C/8082A	Aroclor-1016	ND D	0.99	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1221	ND D	0.99	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1232	ND D	0.99	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1242	ND D	0.99	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1248	ND D	0.99	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1254	ND D	0.99	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1260	ND D	0.99	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1262	ND D	0.99	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1268	ND D	0.99	mg/Kg	9/24/2020	RS	09/25/20 0:00	EH

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ProjectID:	

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Received: 09/24/20 9:45 AM

Project: **Lunonburg TC Passios School**

Analytical Results

Client Sample Description 11
Main Building Exit #3 ***Collected:*** 9/17/2020 ***Lab ID:*** *012010485-0011*

Method	*Parameter*	*Result*	*RL Units*	*Prep Date & Analyst*		*Analysis Date & Analyst*	
GC-SVOA							
3540C/8082A	Aroclor-1016	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1221	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1232	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1242	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1248	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1254	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1260	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1262	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH
3540C/8082A	Aroclor-1268	ND D	1.0 mg/Kg	9/24/2020	RS	09/25/20 0:00	EH

Definitions:
MDL - method detection limit
J - Result was below the reporting limit but at or above the MDL
ND - indicates that the analyte was not detected at the reporting limit
RL - Reporting Limit (Analytical)
D - Dilution Sample required a dilution which was used to calculate final results

OrderID: 012010485

EMSL ANALYTICAL, INC.

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(lab use only)*: 012010485

Lunda Burg
TC Passios School

Company Name: LiRo Engineers		**EMSL Customer ID:**	
Street: 100 Duffy Avenue		**City:**	**State or Province:**
Zip/Postal Code: 11801	**Country:**	**Telephone #:**	**Fax #:**
Report To (Name): Chris Carnahan		**Please Provide Results via:** ☐ Fax ☐ Email	
email Address: carnahanc@liro.com		**Purchase Order Number:**	
Client Project ID:		**EMSL Project ID** *(internal use only)*:	
State or Province Collected: Massachusetts		**CT only** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

EMSL-Bill to: ☐ Same ☐ Different - *If bill to is different note instructions in comment. Third party billing requires written authorization from third party*

Turnaround Time (TAT) Options Please Check

☐ 3 Hour | ☐ 6 Hour | ☐ 24 Hour | ☐ 32 Hour* | ☐ 48 Hour | ☐ 72 Hour | ☐ 96 Hour | ■ 1 Week | ☐ 2 Week

32 Hour TAT available for select tests only; samples must be submitted by 11:30am. Please call ahead for large projects and/or turnaround times 6 hours or less.

PLM - Bulk (reporting limit)

- ☐ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)
- Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NIOSH 9002 (<1%)
- ☐ NY ELAP Method 198.1- friable - NY
- ☐ NY ELAP Method 198.6 NOB- non-friable - NY
- ☐ NY ELAP Method 198.8- Vermiculite Surfacing Material
- ☐ OSHA ID-191 Modified
- ☐ EMSL Standard Addition Method

TEM – Bulk

- ☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
- ☐ NY ELAP Method 198.4 non-friable - NY
- ☐ Chatfield Protocol (semi-quantitative)
- ☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
- ☐ TEM Qualitative via Filtration Prep Technique
- ☐ TEM Qualitative via Drop Mount Prep Technique

Other tests (please specify)

- ☐ PCB Analysis

2020 SEP 23 PM 1:02 EMSL ANALYTICAL, INC. CARLE PLACE, NY

☐ **Positive Stop – Clearly Identify Homogenous Areas (HA)** | **Date Sampled:**

Sampler's Name: | **Sampler's Signature:**

Sample #	HA #	Sample Location	Material Description
1	1	Main Entrance	Door Caulk (silver)
2	2	Exit 6, Interior	Window Caulk (off white)
3	3	Main Entrance	Door Caulk (white)
4	4	Gymnasium	Window Caulk (gray)
5	5	Main Building Courtyard	Transom Putty (gray)
6	6	Main Building Courtyard	Window Caulk (white)

1 2 3 4 5 6

Client Sample # (s): | **Total # of Samples:** 6

Relinquished by (Client): Chris Carnahan | **Date:** 9/23/20 | **Time:** 1503

Received by (Lab): Colleen Palladino | **Date:** 9/24/20 | **Time:** 9:45 AM

Comments/Special Instructions:

email for collection date 9/24
Collection date 9/17 per email 9/24/20

17.8°C ice pac rec'd in plastic 9/24

OrderID: 012010485

EMSL ANALYTICAL, INC.

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(lab use only)*

012010485

Additional pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
7	7	Gymnasium Roof	Copper Flashing Caulk
8	8	Main Building Exit #4	Door Caulk (gray)
9	9	1975 Addition	Window Caulking (white)
10	10	Main Building Exit #4	Door Lintel Caulk (white)
11	11	Main Building Exit #3	Window Glazing (white)

*Comments/Special Instructions:

Page _____ of _____ pages

Controlled Document – COC-01 Asbestos Bulk – R4 – 09/10/2019

EMSL Analytical, Inc.'s (DBA. LA Testing) Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical Inc. constitutes acceptance and acknowledgment of all terms and conditions.

LiRo Engineers, Inc.
A LiRo Group Company

APPENDIX B:

Personnel Licenses


Michael Flanagan
Director
Asbestos Inspector
LOGAN J FITZGERALD
Eff. Date 09/10/20
Exp. Date 09/10/21
AI906711
21
BOS 6/5/21

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

William D. McKinney
Director

Asbestos Designer

BRET LANGLOIS

Eff. Date 11/16/19
Exp. Date 11/16/20
AD900390
Member of C.O.N.E.S.
BOSR **BOS-RENEW**

20

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

William D. McKinney
Director

Asbestos Inspector

BRET LANGLOIS

Eff. Date 11/16/19
Exp. Date 11/16/20
AI900883
Member of C.O.N.E.S.
BOSR **BOS-RENEW**

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LiRo Engineers, Inc.
A LiRo Group Company

APPENDIX C:

Laboratory Accreditation

THE COMMONWEALTH OF MASSACHUSETTS

EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT

DEPARTMENT OF LABOR STANDARDS

19 STANIFORD STREET, BOSTON, MASSACHUSETTS 02114

CERTIFICATION FOR ASBESTOS ANALYTICAL SERVICES

EMSL ANALYTICAL, INC
5 CONSTITUTION WAY
UNIT A
WOBURN MA 01801

LICENSE: **AA000188** EXPIRES: **Thursday, May 27, 2021**

IN ACCORDANCE WITH MGL CH. 149 § 6B AND 453 CMR 6.08 THIS CERTIFICATE IS ISSUED BY THE DEPARTMENT OF LABOR STANDARDS TO THE ABOVE NAMED ENTITIY TO PROVIDE THE ASBESTOS ANALYTICAL SERVICES SPECIFICALLY LISTED BELOW.

CLASS A CERTIFICATE
CLASS C CERTIFICATE
CLASS D CERTIFICATE

MICHAEL FLANAGAN, INTERIM DIRECTOR

Mailing Address:

EMSL ANALYTICAL, INC
5 CONSTITUTION WAY
UNIT A
WOBURN, MA 01801

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2020
Issued April 01, 2019

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. PHILLIP M. WORBY
EMSL ANALYTICAL INC
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077

NY Lab Id No: 10872

Is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2003) for the category ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:

Polychlorinated Biphenyls	
Aroclor 1016 (PCB-1016)	EPA 8082A
Aroclor 1221 (PCB-1221)	EPA 8082A
Aroclor 1232 (PCB-1232)	EPA 8082A
Aroclor 1242 (PCB-1242)	EPA 8082A
Aroclor 1248 (PCB-1248)	EPA 8082A
Aroclor 1254 (PCB-1254)	EPA 8082A
Aroclor 1260 (PCB-1260)	EPA 8082A
Aroclor 1262 (PCB-1262)	EPA 8082A
Aroclor 1268 (PCB-1268)	EPA 8082A
PCB 1	EPA 8082A
PCB 101	EPA 8082A
PCB 110	EPA 8082A
PCB 138	EPA 8082A
PCB 141	EPA 8082A
PCB 151	EPA 8082A
PCB 153	EPA 8082A
PCB 170	EPA 8082A
PCB 18	EPA 8082A
PCB 180	EPA 8082A
PCB 183	EPA 8082A
PCB 187	EPA 8082A
PCB 206	EPA 8082A
PCB 31	EPA 8082A
PCB 44	EPA 8082A
PCB 5	EPA 8082A
PCB 52	EPA 8082A

Polychlorinated Biphenyls	
PCB 66	EPA 8082A
PCB 87	EPA 8082A
Polynuclear Aromatic Hydrocarbons	
2-Acetylaminofluorene	EPA 8270D
Acenaphthene	EPA 8270D
Acenaphthylene	EPA 8270D
Anthracene	EPA 8270D
Benzo(a)anthracene	EPA 8270D
Benzo(a)pyrene	EPA 8270D
Benzo(b)fluoranthene	EPA 8270D
Benzo(g,h,i)perylene	EPA 8270D
Benzo(k)fluoranthene	EPA 8270D
Chrysene	EPA 8270D
Dibenzo(a,h)anthracene	EPA 8270D
Fluoranthene	EPA 8270D
Fluorene	EPA 8270D
Indeno(1,2,3-cd)pyrene	EPA 8270D
Naphthalene	EPA 8270D
Phenanthrene	EPA 8270D
Pyrene	EPA 8270D
Priority Pollutant Phenols	
2,3,4,6 Tetrachlorophenol	EPA 8270D
2,4,5-Trichlorophenol	EPA 8270D
2,4,6-Trichlorophenol	EPA 8270D
2,4-Dichlorophenol	EPA 8270D

Serial No.: 59460

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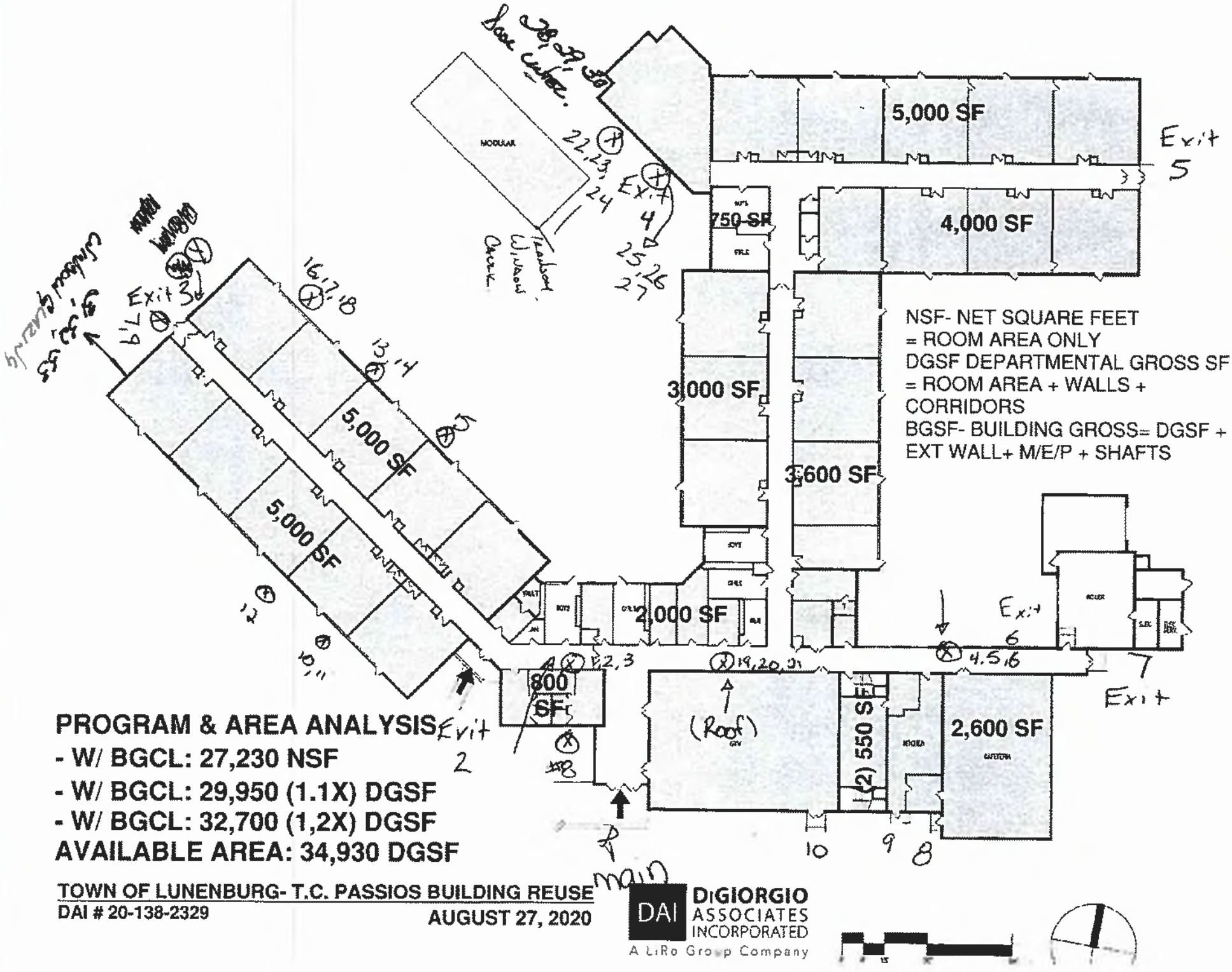
Appendix D
Site Sampling Locations



PROGRAM & AREA ANALYSIS

- **W/ BGCL: 27,230 NSF**
- **W/ BGCL: 29,950 (1.1X) DGSF**
- **W/ BGCL: 32,700 (1,2X) DGSF**

AVAILABLE AREA: 34,930 DGSF

TOWN OF LUNENBURG- T.C. PASSIOS BUILDING REUSE
DAI # 20-138-2329

AUGUST 27, 2020

DAI DiGIORGIO ASSOCIATES INCORPORATED
A LiRo Group Company