3.3.2 Evaluation of Existing Conditions

3.3.2 Evaluation of Existing Conditions

A. Updates to the Existing Conditions Evaluation

Fire Protection – Hydrant Flow Test

A hydrant flow test was conducted on April 24, 2026.

The results are as follows:

- Static Pressure: 66 PSI
- Residual Pressure: 54 PSI

Flow: 1,065 GPM

The existing water pressure is not adequate to support the proposed addition/renovation to the existing building. A fire pump will be needed in a dedicated fire pump room as described in the fire protection scope for the preferred alternative.

Geotechnical Evaluation

Geotechnical consultant, Haley & Aldrich, has completed geotechnical investigations, including borings and test pits on the Medford High School site beginning in December, 2026. A geophysical survey of the top of bedrock took place in April, 2026. The updated report with conclusions and recommendations will be attached at the end of this section.

ESA - Limited Phase II

A Phase I Environmental Site Assessment was performed by ADS Environmental Engineering, LLC and dated December 2025. Initial findings indicated a need for a Phase II assessment. ADS did a limited subsurface Exploration program that tested soil samples from the geotechnical test pits in areas of interest based off of their historical research. ADS did not note obvious signs of significant contamination in the soil samples collected. The limited Phase II report is attached at the end of this section.

Environmental Noise

Acoustical consultant, Acentech, installed noise meters on the Medford High School property on February 11, 2026. The results of this testing led to Acentech's report dated February 26, 2026, which provides needed design critera and is attached at the end of this section.

Geothermal Test Bore

The project team is working on scheduling the install a geothermal test well at the site this summer. The test well will be performed with the assistance of a grant program through MassCEC.

Hydrant Flow Test Report

Test Date 4/24/2026 **Test Time** 11:15 AM

Location

489 Wintrop St
Medford, MA

Tested by

John Hoadly & Sons

Witnessed By:
Medford Water Dept.
AKAL Engineering

Notes

Rear of High School

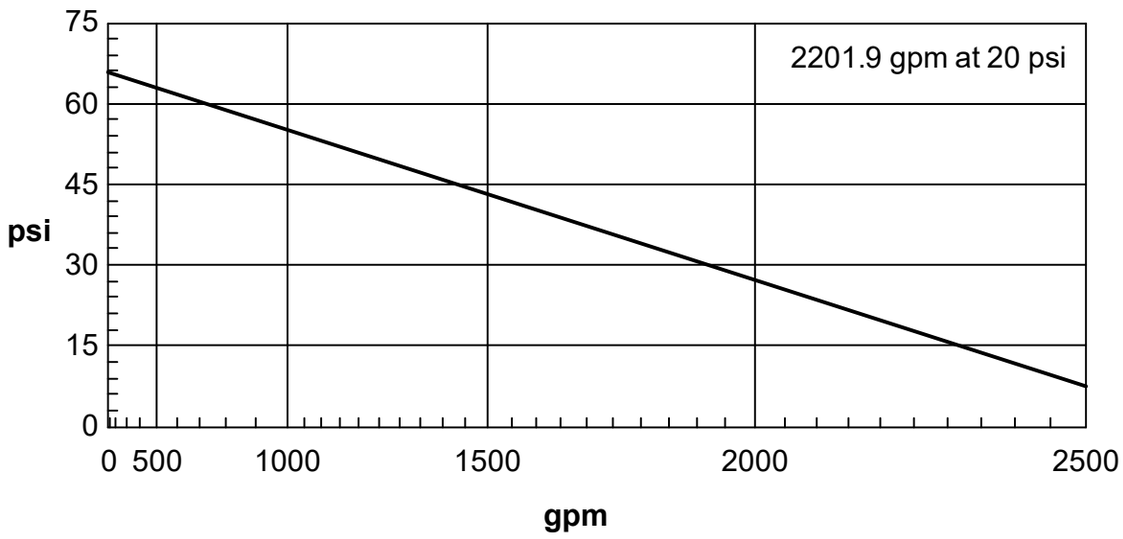
Read Hydrant

66 psi **static pressure**
54 psi **residual pressure**
25 ft **hydrant elevation**

Flow Hydrant(s)

Outlet	Elev	Size	C	Pitot Pressure	Flow
#1		2.5	1		1065 gpm

Flow Graph



Created with the free hydrant flow test program from www.igneusinc.com

HALEY ALDRICH

www.haleyaldrich.com

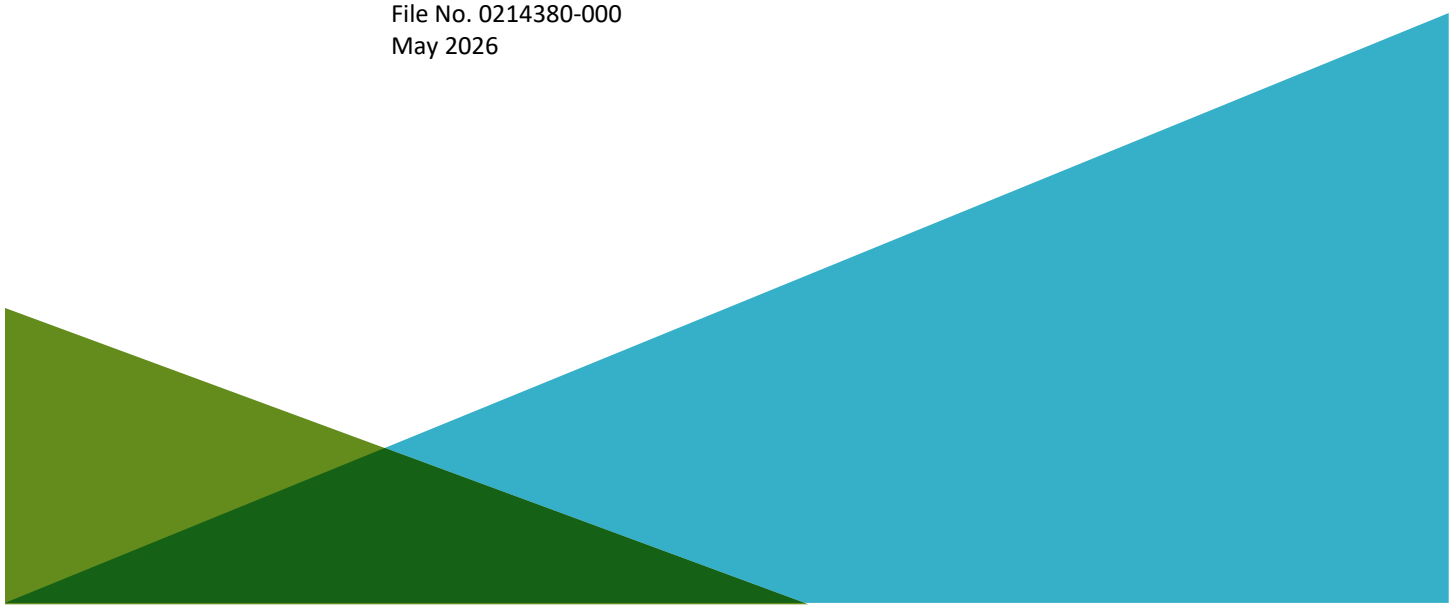
REPORT ON

PROPOSED MEDFORD HIGH SCHOOL
489 WINTHROP STREET
MEDFORD, MASSACHUSETTS

by
Haley & Aldrich, Inc.
Boston, Massachusetts

for
SMMA
Cambridge, Massachusetts

File No. 0214380-000
May 2026



HALEY & ALDRICH, INC.
465 Medford St
Ste 2200
Boston, MA 02129
617.886.7400

4 May 2026
Revised 21 May 2026
File No. 0214380-000

SMMA
1000 Massachusetts Ave
Cambridge, MA 02138

Attention: Helen Fantini
Senior Associate

Subject: Preliminary Geotechnical Report
Proposed Medford High School
489 Winthrop Street
Medford, Massachusetts

Ladies and Gentlemen:

This letter report presents the results of the recent subsurface explorations completed at the project site (Site) by Haley & Aldrich, Inc. (Haley & Aldrich) and provides preliminary geotechnical engineering recommendations associated with the proposed Medford High School redevelopment and site improvements as understood at this time. This letter report is intended to support project design during the Preferred Feasibility Report (PSR) phase and feasibility of alternates being considered by the SMMA team.

This report has been updated to include the results of the geophysical survey and interpretation of the geologic bedrock contours. This report supersedes the previously issued report dated 4 May 2026.

Our work was conducted in accordance with our signed Agreement dated December 31, 2025, and included the following:

- Desktop Study & Geologic Reconnaissance; and
- Preliminary Subsurface Exploration Program (test pit explorations, test boring explorations, and a forthcoming geophysical program)

We have coordinated our work with the following Project Design Team members:

- Owner: City of Medford;
- Architect/Structural/Civil: SMMA; and
- Environmental Engineer: ADS Environmental Engineering, LLC.

Ongoing geotechnical consultation has been provided to the Design Team over the past several months. We have also included in this report our preliminary geotechnical considerations for new building foundations, recommendations for addition/renovation foundations, and recommendations for additional studies.

Proposed Development

As of this report, the final location, geometry of the proposed High School building(s), and exterior site development have not yet been determined. We understand there are six design alternatives being considered during PSR, including both new construction and/or renovation and addition within the limits of the Site. Extents of below grade space, building heights, and details related to other site improvements vary significantly between the six PSR Alternatives; A.1, B.1.2, C2.2, C.3.4, D.1.1, and D.2.1. Parking options being considered include surface parking, construction of a 4-story parking garage, or field/stadium over below-grade parking.

Around the exterior of the proposed High School, the Site will be finished with landscape and hardscape improvements. An access road to the Site will allow vehicular parking, access to the High School (entrance, loading dock, etc.), and access to the athletic complex(es). New utilities and other infrastructure (e.g., stormwater, electric, drainage, possibly geothermal system) will also be included in the redevelopment of the Site but have not been defined and are not addressed in this report.

To prepare the Site for redevelopment, the existing buildings will be either completely demolished or partially demolished dependent upon the final design alternative determined at the completion of PSR.

Site Investigation Program

Haley & Aldrich coordinated and executed a preliminary exploration program at the Site that consisted of test pit explorations, test boring explorations, and surface deployed geophysical investigation methods. Approximate locations of the recent explorations are shown on **Figure 2**. Details of the recent subsurface exploration program are described below.

DESKTOP STUDY

Haley & Aldrich conducted a desktop study in an effort to understand surficial soil and bedrock conditions at the Site. The desktop study generally consisted of reviewing geologic maps, historic subsurface information, and information in Haley & Aldrich archives. The reviewed information

collected during the desktop study is summarized in the following sections and was used to develop the preliminary site investigation program for the planned redevelopment.

Surficial Geology

Overburden soils at the Site were primarily a result of the most recent Pleistocene ice advance and retreat, depositing glacial soils that consist of varying portions of silt to gravel sized fractions. The Site is mapped as having areas of abundant bedrock outcrop or shallow depth to bedrock. Overburden soils in the vicinity of the Site consist of glacially stratified sand and gravel deposits with varying silt contents (shown in "orange" in Image 1), as well as Glacial Till Deposits (shown in "white" in Image 1).

Surficial maps indicate more recent stream deposits, wetlands, and deposits resulting from weathering of bedrock (shown in "brown" in Image 1). Numerous large boulders at ground surface occur in both upland and lowland areas.

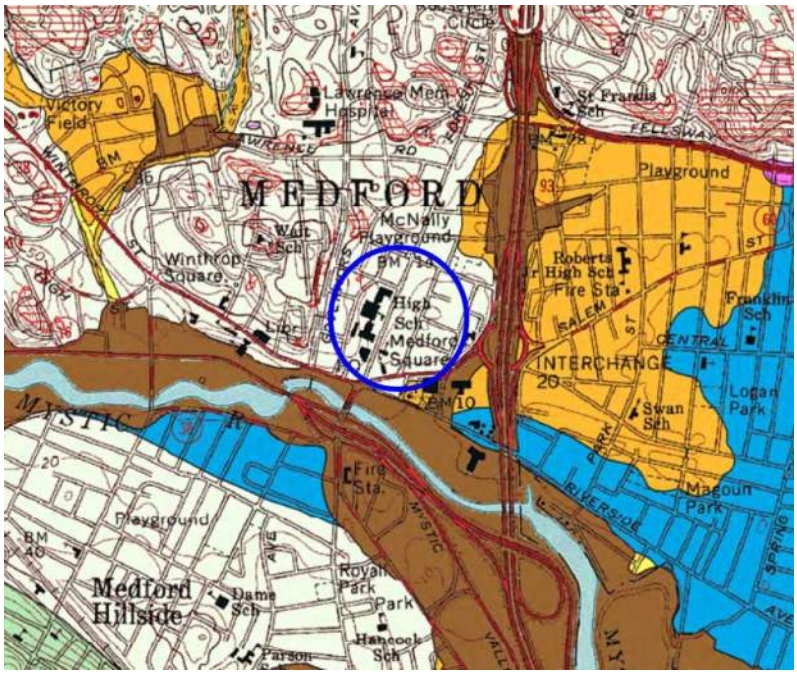


Image 1: Existing Medford High School Site shown in "blue" circle. Taken from "Surficial Materials Map of the Boston North Quadrangle, Massachusetts, Quadrangle 125 – Boston North"

Bedrock Geology

The existing Medford High School is located within the north border of the geologic unit known as the Boston Basin; as indicated in "red" in Image 1. The Site borders the northern fault zone of the Boston Basin and the Lynn Volcanic Complex (generally mapped north of the Site). Although bedrock description from field mapping by others generally describes the lithology of the bedrock as a granitic intrusive rock type (Dedham Formation), available literature documenting more recent field mapping indicates subdivision of the Dedham Formation by evidence of younger igneous intrusions as evidenced by sharp contacts (faults, dikes, etc.) within the Dedham Formation. Additionally, and given the proximity to the Lynn Volcanic Complex, field mapping and bedrock testing indicates the presence of volcanic intrusions at select areas in close proximity to the Site.

While the overall strength and character of the crystalline rocks in this area of Medford can be typically quite hard and durable, the structural relationships between rock blocks may be expressed as localized variations in rock elevation or zones of weaker, broken rock that can affect the overall competency of the bedrock.

Available File Review

As part of the desktop study, Haley & Aldrich reviewed available information provided by SMMA and from the archive of our project files. Limited information (drawings and/or reports) relative to the existing High School were available for review.

Within our project files, we found a copy of a 1967 drawing titled "Site Preparation Plan, Medford High School, Medford, MA" that provides surficial conditions at the Site. Noted on the Drawing are existing ground surface elevations, bedrock outcrops, and the limits of the proposed Medford High School buildings and site amenities. Logs from test borings and test pits indicated on the Drawing were not able to be obtained from our project files.

Noted on the drawing are the limits of a 1948 "Pit" located on the south portion of the Site. Based on historic review, the "Pit" is a remnant from mining bedrock and following bedrock excavation was utilized as a municipal refuse dump. The Pit was reportedly covered with soil at some time following filling operations. Two other smaller pits are also identified on the 1967 drawing, called out as "Pit"-2 and "Pit"-3 on Figure 2. Foundation construction for the existing High School considered provisions for foundations located within Pit that included excavation to remove the upper 10 feet of material in the Pit and placement and compaction of suitable material prior to foundation construction, but as-built documents were not available for review to confirm as-constructed foundation system in this general area of the Medford High School footprint. Refer to Appendix D for the 1967 Drawing.

GEOLOGIC SITE RECONNAISSANCE

On December 30, 2025, two Haley & Aldrich representatives visited the Site to complete a geologic site reconnaissance to review overall geology and potential geologic hazards of the Site. Observation included qualitative observation of exposed bedrock at and along the perimeter of the Site, including lithologic determination, weathering, and visual observation of discontinuities. In general, observation of rock size and type were made of loose rock blocks and bedrock outcrops. Surficial geology was observed across the Site but was generally observed to be either covered in asphalt pavement or landscape. Results of the Geologic Site Reconnaissance were generally consistent with soil and bedrock descriptions reviewed in available geologic literature.

As part of the geologic reconnaissance, locations for subsurface explorations (test borings and test pits) were reviewed and confirmed.

SUBSURFACE EXPLORATION PROGRAM

Haley & Aldrich planned and executed a preliminary subsurface exploration program that was performed in January 2026. The completed portion of the program consisted of advancing test borings at locations around the Site as well as test pit explorations. The field portion of a geophysical survey consisting of surface-deployed methods was completed in April 2026 following melting of the snowpack and thawing of frost that penetrated the ground during Winter.

Test Boring Explorations

Haley & Aldrich planned, implemented, and monitored four test borings, designated TB26-1 through TB26-4, to obtain general subsurface information across the Site to support geotechnical aspects of project design. Boring logs are included in **Appendix A**.

The borings were drilled by Carr-Dee Corp. of Medford, Massachusetts (Carr-Dee), between January 12 and 16, 2026. Borings were advanced with a Mobile B-46 drill rig. Standard Penetration Tests ("SPTs") were performed continuously in the top 10 ft, and at 5 ft intervals thereafter or until refusal on top of bedrock. Bedrock was cored using an NX size core barrel in borings TB26-1, TB26-2, and TB26-3. Bedrock core was not completed at TB26-4. The boreholes were backfilled with soil cuttings upon completion.

Test Pit Explorations

Haley & Aldrich planned, implemented, and monitored a test pit exploration consisting of 11 test pits, designated TP26-1 through TP26-11. Test pits TP26-1 through TP26-6 were located in areas surrounding the existing building to observe surface soil and groundwater conditions and to supplement top of rock information from the geophysical test program. Test pits TP26-7 through TP26-11 were located on the exterior of the existing building to evaluate the type and geometry of the existing foundations and subgrade bearing conditions.

Test pit logs are included in **Appendix B** and photo logs are included in **Appendix C**. General details of the test pit investigations are summarized below.

<u>Perimeter Site Test Pits</u>

- **TP26-1**: Located northwest of the existing building, test pit TP26-1 encountered fill to a depth of 2.3 ft below ground surface overlying loess and glacial till. Refusal on bedrock was encountered at a depth of 5 to 6 ft below ground surface.
- **TP26-2**: Located in the parking area west of the existing building, test pit TP26-2 encountered loamy fill overlying bedrock fill overlying general fill consisting of sandy silt with gravel. An abandoned ¾-inch copper water pipe was encountered at a depth of 6 ft below ground surface, and a piece of orangeburg pipe (bituminized fiber pipe) was encountered at a depth of 6.5 ft below ground surface. Top of bedrock was not determined at this location.

- **TP26-3**: Located in the parking area west of the existing building, test pit TP26-3 encountered loamy fill and fill to a depth of 2.3 ft below ground surface. Glacial till was encountered below the fill. Refusal on bedrock was encountered between 2.3 ft at the south end of the pit to 6 ft below ground surface at the north end.
- **TP26-4**: Located in the parking lot near the southeast corner of the existing building, test pit TP26-4 encountered loamy fill and a silty sand fill with gravel overlying blast bedrock fill. Top of bedrock was not determined at this location.
- **TP26-5**: Located in the parking spaces east of the existing building, test pit TP26-5 encountered fill directly below the asphalt to top of bedrock between 6.5 ft and 7 ft below ground surface.
- **TP26-6**: Located in the parking spaces east of the existing building, test pit TP26-6 encountered 0.5 ft of dense grade material directly below the asphalt. Silty sand fill was encountered below the dense grade, which was underlain by loess and glacial till. Refusal on bedrock was encountered at a depth of 6 ft below ground surface.

Existing Building Foundations

- **TP26-7**: Located along the north exterior wall of the building on the east side (Building Part F), test pit TP26-7 was excavated to a depth of 10.5 ft below ground surface and did not find the bottom of the foundation wall observed in the south test pit wall was not able to be determined within the depth of the test pit. A 6-inch diameter perforated clay pipe was encountered at a depth of about 6 ft surrounded by ¾-inch gravel. Fill consisted of coarse gravel and cobbles and silty sand with organic debris and construction debris (metal, brick, concrete).
- **TP26-8**: Located along the west exterior wall on the north side of the building (Building Part C), test pit TP26-8 encountered the bottom of the exterior foundation wall bearing on poorly graded sand at a depth of 4 ft below ground surface. Bedrock fill and small boulders were also encountered.
- **TP26-9**: Located along the west exterior wall on the south side of the building (Building Part A), test pit TP26-9 exposed the foundation wall bearing on a footing at a depth of 4.5 ft. The footing extended 3 inches beyond the face of the wall and was approximately 2 ft thick (bearing at a depth of 6.5 ft below adjacent grade). Fill material consisted of silty gravel with sand and bedrock fill.
- **TP26-10**: Located along the south exterior wall of the building (Building Part B), test pit TP26-10 exposed the bottom of the exterior foundation wall at a depth of 4 ft below grade bearing on silty sand and fine gravel and excavated bedrock fill. No footing was encountered below the foundation wall.
- **TP26-11**: Located along the east exterior wall of the building (Building Part G), test pit TP26-11 encountered a two-tiered concrete footing at a depth of 5.3 to 6.7 ft below ground surface poured directly on bedrock. The first tier of the footing extended 7 inches wide from the face of the wall and the lower tier extended another 2 inches. Fill consisted of silty sand with gravel and bedrock fill fragments.

Geophysical Survey Program

A geophysical survey program was performed April 20-23, 2026, consisting of a surface-deployed seismic refraction survey to interpret depth to bedrock and develop an estimated top of bedrock contour map for the Site. Top of bedrock data obtained from this survey has been calibrated using the data points collected from the test pits and test borings. An interpretation of the top of geologic bedrock contour plan is included as **Figure 3**. The seismic refraction survey report is included in **Appendix E**.

Site and Subsurface Conditions

EXISTING SITE CONDITIONS

The Site is the current location of the Medford High School project located at 489 Winthrop Street in Medford, Massachusetts. The overall Site is approximately 29 acres in size and is currently comprised of both generally level developed areas and existing athletic fields as well as topographically high, wooded areas with some bedrock and boulders visible at ground surface. The current High School configuration includes: a four-story High School Building (approximately 522,205 gross square feet), at-grade parking (450 spaces across approximately 1.3 acres), and athletic field and outdoor spaces (approximately 5.9 acres). The project location is generally shown on the Project Locus, **Figure 1**.

Site grades vary from about El. 71 [1]at the southwest entrance roadway to the Site along Winthrop Street to approximately El. 126 at the existing synthetic turf athletic fields at the north side of the Site. Several grade changes and soil slopes provide surface grade transitions across the Site. The overall Site is bound by densely-settled residential neighborhoods and commercial buildings located west and south of the Site and wooded upland areas (Middlesex Fells Reservation) to the north and east.

SUBSURFACE SOIL CONDITIONS

The results of the recently completed test borings generally indicate the following sequence of subsurface units in order of occurrence from ground surface:

Generalized Strata Description	Range in Thickness (ft)	Depth Below Ground Surface to Top of Stratum (ft)
Ground Cover (Topsoil, Asphalt)	0 to 0.4	-
Fill	4.6 to 30.6	0 to 0.4
Loess	0.7 to 1.6 (where identified)	1.9 to 7.7
Glacial Till	2 to 6.4 (where identified)	2.3 to 8.4
Bedrock	N/A	5.0 to 30.9

[1] Elevations in this report are in feet and reference North American Vertical Datum of 1988 (NAVD88).

Generalized soil strata encountered in the recent test borings are described below in order of increasing depth. Detailed descriptions of each stratum and the Unified Soil Classification System ("USCS") Group Symbol for each sample are provided on the logs in **Appendix A**. The stratification lines designating the interface between strata on the logs are approximate. The logs depict subsurface conditions at the specific exploration location and at the time designated on the logs.

GROUND COVER – A relatively thin layer of loose topsoil or asphalt was encountered at ground surface at all boring locations.

FILL– Encountered below the ground cover, this layer was generally described as medium dense to very dense, silty sand and silty gravel with traces of brick, glass, ash, and metal.

LOESS/SUBSOIL – Encountered in one of the four borings (TB26-1) and two test pits (TP26-1 and TP26-6), this layer was described as medium stiff orange-brown silt with sand.

GLACIAL TILL DEPOSIT – Typically described as dense to very dense, brown and gray-brown silty sand with gravel with sand and trace rock fragments. The Glacial Till was encountered in boring TB26-1 and in test pits TP26-1, TP26-3, and TP26-6.

BEDROCK – Bedrock was generally shallow across the Site with the exception of the "pit" on the south area of the Site. Bedrock was cored in borings TB26-1, TB26-2, and TB26-3 and was classified as hard, slightly to fresh weathered, aphanitic to medium grained, gray Dedham granite. Top of rock elevations encountered in the test borings are identified in plan on **Figure 2**.

GROUNDWATER LEVELS/CONDITIONS

During drilling and test pit excavation groundwater was not encountered. Water levels can be expected to vary with seasonal changes, precipitation, snow melt, construction activities, and other factors, and should be anticipated to vary both during and following construction. The local geology and topography also likely will impact groundwater levels on the Site. Groundwater may be perched on top of low permeability soils, such as the Glacial Till, and bedrock. As a result, water levels encountered during and following construction may differ from those encountered in the explorations.

Geotechnical Design Considerations and Recommendations

The following sections of this report present geotechnical design recommendations pertaining to the permanent design of the proposed Medford High School structure(s), below-grade parking garage structure, and site development outside the limits of proposed structures. The recommendations and conclusions provided herein were developed during PDR and PSR and are based on review of available sketches received by Haley & Aldrich through April 2026. As the design for the proposed Medford High School Site progresses, we will provide subsequent geotechnical design recommendations as well as geotechnical related construction considerations.

GENERAL

Foundations and below-grade structures should be designed and constructed in accordance with the 10th Edition of the Massachusetts State Building Code.

SITE DEVELOPMENT

While the limits of excavation are not known at this time, we anticipate soil and potential bedrock excavation will be required for the new building(s), additions, and surrounding site improvements construction. We anticipate that the majority of the excavated materials will be Fill and Glacial Till with cobbles and boulders, and bedrock excavation should be anticipated to be encountered and will be dependent on the final design.

If relatively shallow excavation into bedrock is required (less than 5 ft), we anticipate the rock can be removed by mechanical means, such as hoe ramming, intermittent drilling and splitting, and ripping. If deeper excavations into sound bedrock are proposed, controlled blasting will be required and a blasting contractor should be consulted to obtain guidance and to obtain an estimate of blasting costs.

Where space permits, open cut soil slopes inclined no steeper than 1.5H:1V are considered feasible provided existing and/or new structures are not undermined. However, such slopes should be confirmed on a case-by-case basis at the time of excavation. Some sloughing and raveling should be anticipated on temporary earth slopes constructed at this inclination. As a general recommendation, excavation and sloping activities should be conducted in accordance with OSHA and other applicable regulations.

Underpinning of existing foundations may be required if excavations for new construction have the potential to undermine the existing structure to remain. To minimize the size of the excavation, temporary lateral earth support may be required to complete the proposed construction. Additional considerations are provided below.

Locations and sequencing of temporary excavation support systems and utilities, proposed and existing to remain in service, should be reviewed by the earthwork contractor based on their specific excavation plan and by the general contractor/construction manager relative to their construction staging and traffic control plan.

All final excavation work and excavations within existing spaces should be conducted in-the-dry. Control of surface and seepage water into excavations for footings and other areas will be necessary to avoid disturbance of bearing surfaces and promote completion of below-grade work within existing spaces. The Contractor should control the flow of surface water, precipitation, and seepage water into excavations at all times. Construction dewatering will be necessary as discussed below.

Some fill placement will likely be required to raise grades. Prior to placing fills, excavation to naturally deposit soils or bedrock will be required to achieve proper bearing conditions prior to placing and compacting Fill material.

Existing utilities to be abandoned will require cut-and-capping beyond the plan limits of the work and complete removal from within the new footprints of the proposed High School. Existing, active utilities to remain and new utilities to be installed will require coordination with new work to avoid potential design conflicts. Construction activities will need to be coordinated to not impact the active utilities to remain and new utilities to be constructed.

PRELIMINARY FOUNDATION DESIGN CONSIDERATIONS

Conventional reinforced concrete spread footings are typically the most cost-effective foundation type for most low to medium-height buildings if suitable foundation bearing soils or bedrock are present at shallow depths and predicted building settlements are acceptable. The Fill, Topsoil, and Loess is variable in thickness at the Site, is an unsuitable bearing layer in its current condition. Foundations must transmit building loads below Fill, Topsoil, and Loess soils or those soils must be removed and replaced to avoid undesirable settlements and foundation instabilities.

Shallow Foundation System

Recommendations for design of new reinforced concrete footing foundations are provided below.

- If present at bearing elevation, unsuitable materials (fill and organic, soft or disturbed soils, etc.) should be removed and replaced with suitable backfill.
- Footings should be designed using a maximum allowable bearing pressure of the following:
  - 6 kips per square foot (ksf) bearing in naturally deposited granular soils and Glacial Till; and
  - 20 ksf bearing on sound bedrock.
- Footing bottoms bearing in soil should be positioned a minimum of 4 ft below the adjacent ground surface exposed to freezing temperatures. Footings bearing at locations not exposed to freezing temperatures may bear as shallow as 18 in. below the floor slab.
- A 6 -in. thick layer of granular material should be provided between the tops of footings and the bottom of the overlying floor slab.
- Soil bearing footings should be designed to bear below a reference line drawn upward and outward on a 1.5 horizontal to 1 vertical (1.5H:1V) slope from the bottom of adjacent utilities, existing building foundations to remain, or other underground structures. Where possible, footing elevations should be coordinated with utility elevations to allow utilities to pass through the foundation wall (rather than through or beneath the footing). Footing bearing elevations may need to be locally lowered or stepped to achieve this criterion.

- Footings transitioning from basement to non-basement areas or between parts of the building at different grade levels should be stepped. Transitions of bearing elevations should be no steeper than 2H:1V inclination.

  Footings bearing on Bedrock (column or wall footings) should be leveled to a slope no steeper than 10 horizontal to 1 vertical (10H:1V) within the footprint of the footing
- A coefficient of friction between cast-in-place concrete and the Glacial Till bearing strata equal to 0.3 should be used to calculate ultimate sliding resistance. A factor of safety of at least 1.5 should be applied to calculate the allowable sliding resistance.

Foundation considerations specific to renovation building options include the following:

- New footings located adjacent to any portion of the existing building to remain should be set, if possible, at the same elevation as the existing. Underpinning may be required to support existing footings to remain if the excavation required to construct new foundations has the potential to undermine the existing foundation.
- If existing footings are to be reused to support the new building, loads should not be increased by more than 10%. This condition should be reviewed on a case-by-case basis.

Deep Foundation System

Foundations for new building structures located within the limits of a 1948 “Pit-1” located on the south portion of the Site, will need to be further evaluated based on the depth and consistency of the municipal waste and historic filling of Pit-1. Based on preliminary investigations, the Fill soils present within Pit-1 are not considered suitable foundation materials for support of the proposed structures without planned below-grade space.

For preliminary pricing, assume steel H-piles or pressure injected footings end-bearing in Glacial Till or Bedrock. Estimated pile lengths will be required as design progresses and if structures without below-grade space are considered within the limits of the Pit. With a pile foundation system constructed within the limits of the Pit, pile caps, grade beams and a structural slab would be required.

Some of the PSR Alternatives consider a one- to two-level below grade parking structure within a portion of the Pit. Depending on results from future explorations to determine the plan limits and depth of the Pit, a one- to two-level below grade could be considered to bear on conventional reinforced concrete footing foundations bearing on Bedrock.

Lowest Level Floor Slab

As currently envisioned and discussed with SMMA, the lowest level of the proposed High School will be at a similar elevation as adjacent exterior grades and above Site groundwater levels. We recommend the following:

- For reinforced concrete footings, design the lowest level floor slabs as a soil-supported slabs-on-grade bearing on a base course consisting of compacted Structural Fill. The base course thickness should be 12 in. minimum. Soils to remain in-place should be observed by the Geotechnical Engineer to confirm they are firm and stable during proof-compaction and prior to placement and compaction of backfill to subgrade elevation.
- As the lowest level floors are anticipated to be above groundwater levels observed at the Site, permanent underslab drainage or waterproofing is not necessary at this time. We recommend providing a moisture vapor retarder membrane (20 mil minimum thickness) directly beneath the ground floor slabs in occupied and finished spaces, in accordance with ACI 302.2R-06, especially if humidity control is desired or relatively vapor-tight coverings will be used on the floors.
- Utilities beneath slabs may be soil-supported (with suitable bedding) bearing on existing inorganic fill soil or Glacial Till that are stable under proof-compaction, or on compacted structural fill placed following the removal of exposed unsuitable bearing materials, as applicable.

  Bedrock should be removed to at least 12 in. below utility invert elevations to limit "hard" spots and potential cracking of utilities.

  Utilities should be located above foundation bearing levels or above an imaginary reference line drawn downward and away from the lower edge of the soil-supported foundation element at a 1.5H:1V slope. Utilities that could be sensitive to inundation by moisture or water should be constructed watertight.
- Based on discussions with SMMA, we understand the existing High School Buildings do not have a radon mitigation system below the lowest level slab. As such, we do not recommend design and construction of radon mitigation for renovation considerations for the re-use of existing High School structures.
- For new construction (building(s) and/or additions), we recommend further consideration of a radon mitigation system constructed below the lowest level floor slab. A radon mitigation system could consist of 3-in. diameter perforated pipe centered within a 6 in. thick layer of crushed stone for control of radon below the slab. The radon mitigation system will sit directly below the slab-on-grade. A minimum 20-mil thick vapor barrier should be provided on the underside of the lowest level slab. Design of a radon system (below the lowest level slab and venting system) should be completed by a design professional experienced in radon system design.

SEISMIC DESIGN CRITERIA

Based on observed groundwater levels and soil conditions, Seismic Site Class C should be used in design.

Per the Code and the conditions encountered in the test borings, the applicable seismic design criteria are as follows: S_S = 0.191; S_1 = 0.066; F_a=1.2; and F_V=1.7.

Based on results from the subsurface explorations, the soils at the Site are considered to be non-susceptible to liquefaction for design level earthquake shaking.

FOUNDATION DRAINAGE

A perimeter foundation drainage system should be provided along all perimeter foundation walls where the lowest level floor slab is at or below adjacent exterior grades.

- The perimeter drainage system should consist of a continuous, 4 in. diameter Schedule 40 perforated PVC (or corrugated polyethylene) pipe laid flat or with a slight pitch (about 0.2%), with slots down, at the exterior base of the lowest level walls. The pipe should be completely surrounded with a minimum of 6 in. of 3/4-in. washed Crushed Stone, which in turn should be surrounded by a nonwoven geotextile.
- Above the perimeter drain, the foundation wall should be backfilled with a 3-ft minimum width of free-draining fill (such as Granular Fill). Alternatively, the drainage detail in these areas could consist of a continuous geocomposite drainage board (such as Amerdrain or Miradrain) backfilled with compacted Common Fill (containing less than 20 percent fines unless otherwise approved by the Geotechnical Engineer).
- The drain around the building perimeter should be designed to flow by gravity to the storm drain system or to a dedicated sump pit within or adjacent to the building, where it is then pumped to the site storm drain system. The pipe network should include multiple entry points into the sump pit for redundancy. The sump should be provided with redundant pumps and emergency backup power.
- To limit water infiltration into the perimeter drainage system, it is recommended that surface water be directed away from the building. In general, the ground surface immediately adjacent to and around the building should be sloped downward away from the structure to divert surface water.
- Foundation walls less than 5 ft bgs should be insulated and damp-proofed in accordance with Building Code requirements, as applicable.

LATERAL FOUNDATION LOADS

Building foundation walls serving as retaining walls should be designed in accordance with the applicable below-listed lateral pressures. The height of the wall (H) is defined as the distance in feet between finished grade and the top of the lowest level floor slab.

For seismic loading conditions, walls should be designed to resist static earth plus seismic pressures. Surcharge pressures do not need to be considered for seismic design unless the surcharge will be applied over an extended time period.

The recommended minimum factor of safety against sliding and overturning under static loading conditions is 1.5. The recommended minimum factor of safety against sliding and overturning under

seismic loading conditions is 1.2. Passive soil pressure should not be included as a resisting force.

Restrained (At-Rest) Wall Condition

Design walls that are braced at the top and bottom for the following lateral pressures:

- Static Earth: Equivalent fluid unit weight equal to 65 pounds per square foot (psf) per foot depth.
- Seismic: Inverted triangular pressure applied over the height of the wall (H) (where H is in feet) with a magnitude of 4.7 H psf at the top of the wall.
- Surcharge: Uniform pressure applied from the elevation of the surcharge to the top of footing with a magnitude of 0.5q psf, where q is the vertical surcharge pressure psf.

Unrestrained (Active) Wall Condition

Design walls that are free to deflect at least 0.00125H at the top of the wall (i.e., are not braced) for the following lateral pressures:

- Static Earth: Equivalent fluid unit weight equal to 45 psf per foot depth.
- Seismic: Same as for restrained walls.
- Surcharge: Same as for restrained walls except with a magnitude of 0.3q.

Resistance to Lateral Loads

Lateral loads acting on the structure can be resisted by passive earth pressures acting against below grade portions of the structure such as footings or grade beams and frictional resistance between the bottom of concrete foundations and the underlying soil. Passive forces to resist lateral loads may be calculated based on an equivalent fluid unit weight of soil equal to 250 pounds per cubic foot (pcf). This value assumes that granular backfill is placed and systematically compacted in lifts. If the backfill is not systematically compacted, an equivalent fluid weight of 100 pcf should be used.

STORMWATER INFILTRATION

At the time of this report, the locations for proposed stormwater management systems were not known and subsurface explorations and soil infiltration testing were not performed. Once the location(s) is better known, in-situ permeability testing should be completed. Soil grain size testing performed on the soils intended for infiltration will also support infiltration design by others.

PAVEMENT SECTIONS

Preparation of pavement subgrade should consist of excavation and removal of all existing pavement, excavation of unsuitable subgrade soils where encountered or excavation of bedrock as required, proof-rolling the subgrade surface, and placement and compaction of soils to pavement subgrade. Base

and/or subbase for parking lots and roadway areas should bear on a proof-rolled subgrade consisting of existing stable fills, natural glacial soils, or bedrock.

BEDROCK REMOVAL AND VIBRATIONS

Localized areas of bedrock excavation and removal will be required in some of the PSR Alternatives and in areas identified with shallow depths to bedrock to meet design subgrade elevations for foundations, utilities, and site grading. In order to minimize the premium cost of bedrock removal or transporting and disposing of material off-site, every effort should be made by the designers and contractor to process and re-use excavated material onsite, whether in landscape areas around the Site or for material meeting specific geotechnical criteria as backfill.

The Contractor should be responsible for preventing damage to any nearby existing or new structures, newly concreted foundation elements, utilities and other facilities resulting from blasting operations, and for conforming to applicable codes and regulations. Controlled blasting techniques are recommended to minimize ground vibrations and airblast overpressures.

Contract documents should require blasting be conducted in such a manner that the resulting peak particle velocity of ground motion and the airblast overpressure at adjacent structures do not exceed levels recommended by the U.S. Bureau of Mines and State and local regulations to protect residential and commercial structures. The Contractor should design each blasting round for the project accordingly. Blasting mats or other suitable cover should be utilized to control flyrock during blasting operations.

PRE-CONSTRUCTION SURVEY

For the protection of the project team, including the Contractor, from damage claims due to blasting or other construction operations, a pre- and post-construction survey of existing structures within 300 ft (State requirement is 250 ft) of the proposed construction should be performed by a professional engineer registered in the Commonwealth of Massachusetts. Also, the construction should include monitoring and documenting vibration and airblast overpressure levels resulting from each blast round on the project.

Additional Investigation and Analysis

Further analysis of the site subsurface conditions (soil/bedrock/groundwater) is recommended in order to provide final foundation design recommendations and to facilitate construction of the chosen design for redevelopment. Analysis includes, but are not limited to, the following:

- Conducting a supplemental subsurface exploration program (i.e., test borings and test pits) to support geotechnical design for the final site development;
- Evaluation of locations for on-site stormwater infiltration/management and performance of in-situ infiltration tests;

- Contract Documents (specification sections and drawings); and
- Geotechnical Report including final foundation design recommendations and construction considerations.

Limitations

This report has been prepared for specific application to the Medford High School project in Medford, Massachusetts, and is intended for the exclusive use of the project team in connection with the geotechnical aspects of this project only. In the event that changes in the nature, design, or location of the project occur, the conclusions and recommendations contained in this report should not be considered valid unless they are reviewed and modified or verified in writing by Haley & Aldrich.

The conclusions and recommendations are based in part upon data obtained from the referenced explorations and sampling on the dates indicated herein. The nature and extent of potential variations between the explorations and samples may not become evident until construction. If variations are observed during additional site investigation studies or construction, it may be necessary to re-evaluate and modify or verify the conclusions and recommendations in writing.

The data, recommendations, and conclusions provided in this report are based solely on the scope of work conducted by Haley & Aldrich and the sources of information referenced herein. This work was undertaken in accordance with generally accepted geotechnical engineering practice common to the local area.

Recommendations presented in this report for foundation and floor drainage, moisture protection, waterproofing, and vapor intrusion address only the conventional geotechnical engineering related aspects of design and construction and are not intended to provide an environment that would prohibit infestation of mold or other biological pollutants. Our work scope did not include the development of criteria or procedures to minimize the risk of mold or other biological pollutant infestations in or near any structure.

We appreciate the opportunity to provide geotechnical engineering services on this project. Please do not hesitate to call if you have any questions or comments.

Sincerely yours,
HALEY & ALDRICH, INC.



Lysandra L. Reed, P.E. (NY/MA)
Senior Project Manager



R. Scott Goldkamp, P.E. (MA/NH)
Principal

Enclosures:

Figure 1	Project Locus
Figure 2	Exploration Location Plan
Figure 3	Top of Geologic Bedrock Contour Plan
Appendix A	Test Boring Logs
Appendix B	Test Pit Logs
Appendix C	Test Pit Photo Logs
Appendix D	1967 drawing titled “Site Preparation Plan, Medford High School, Medford, MA”
Appendix E	Hager-Richter Geoscience Seismic Refraction Survey Report

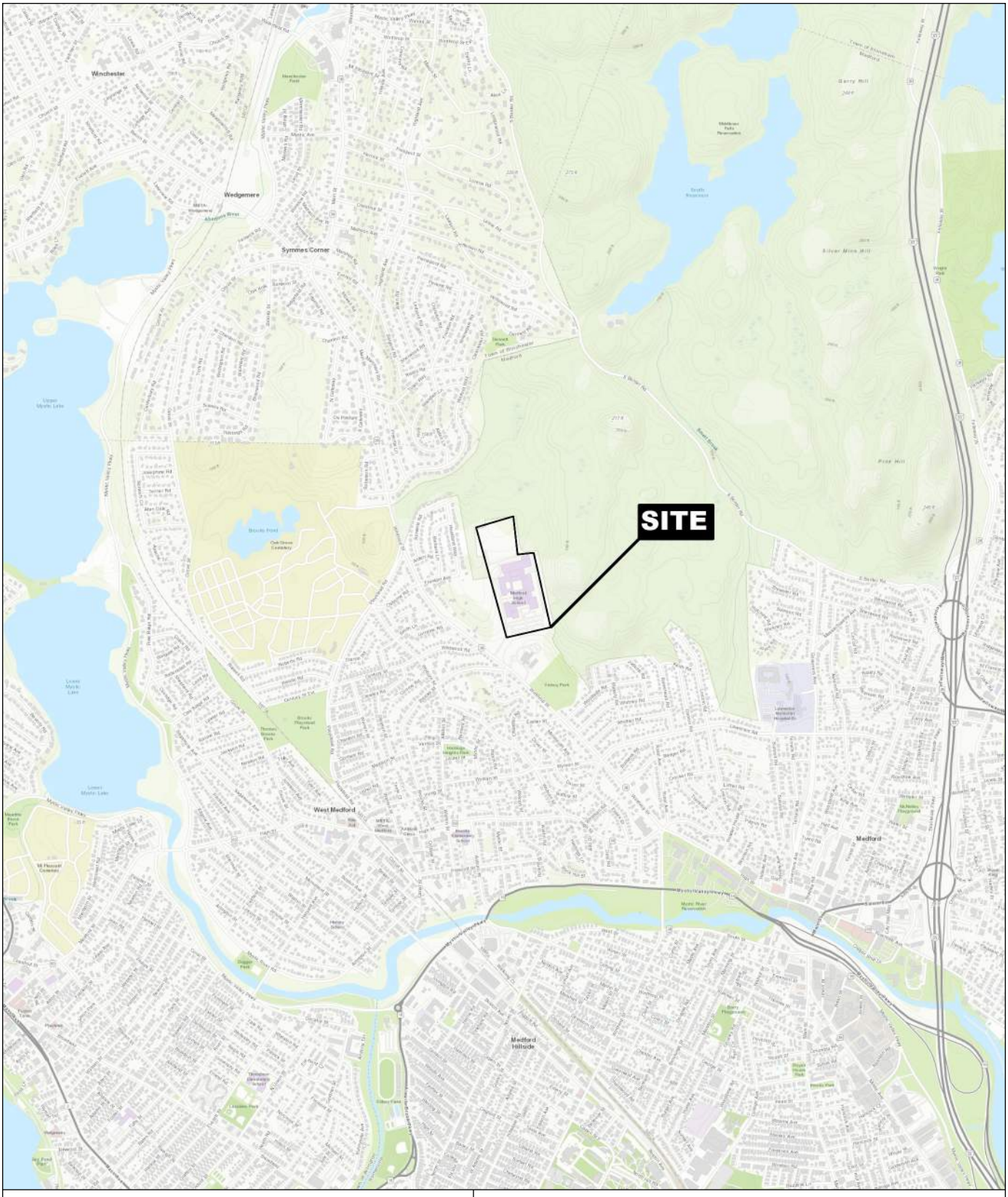
References

1. ACI 302.2R-06: Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials, 2006.

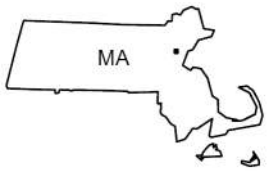
2. Commonwealth of Massachusetts. 2025. *780 CMR: Massachusetts State Building Code, 10th Edition*. Board of Building Regulations and Standards, Boston, Massachusetts.

3. "Surficial Materials Map of the Boston North Quadrangle, Massachusetts, Quadrangle 125 – Boston North" prepared by the United States Geological Survey and dated 2018.

FIGURES



SITE COORDINATES: 42°25'49"N, 71°07'28"W





MAP SOURCE: USGS

HALEY ALDRICH

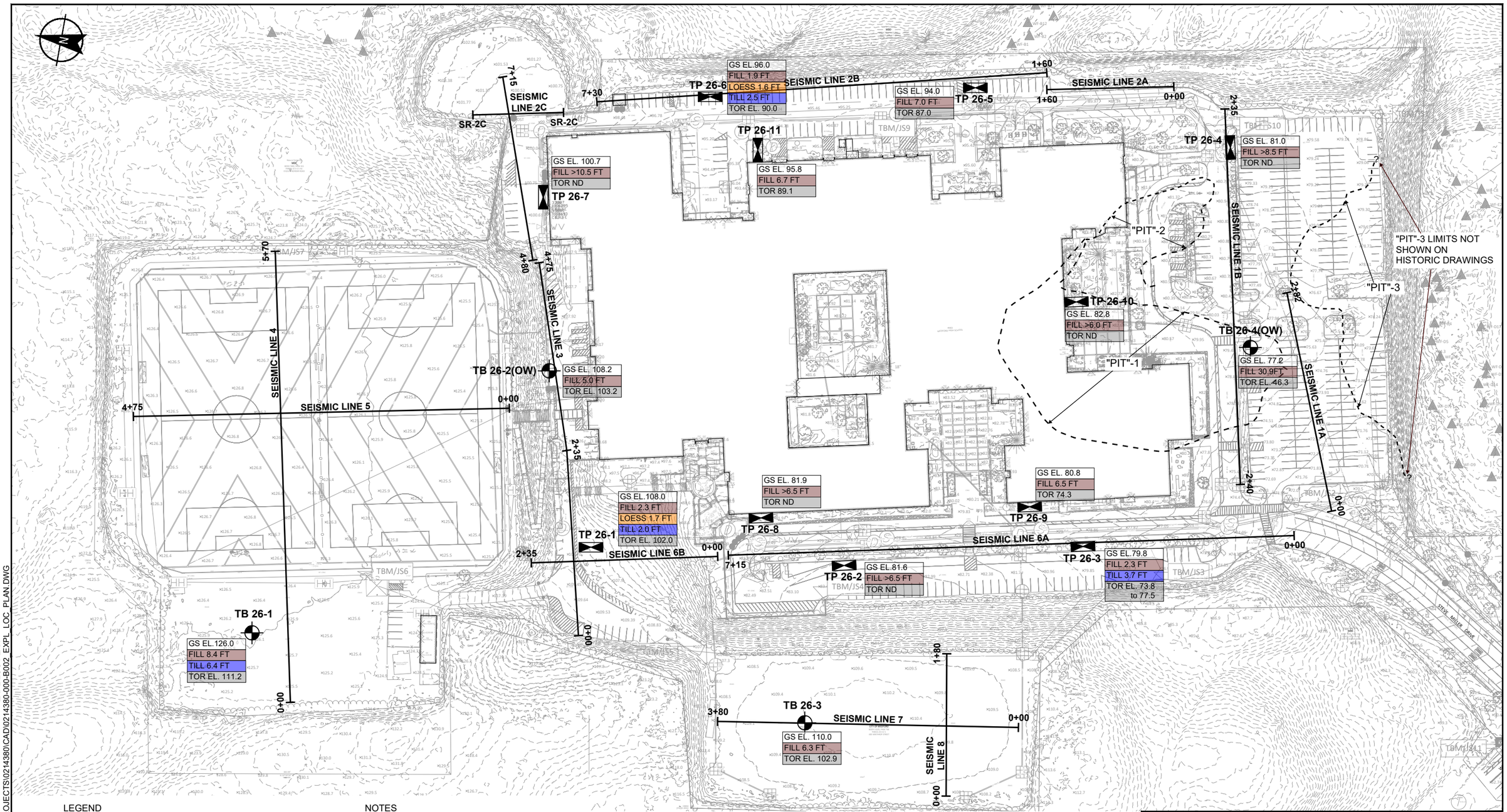
MEDFORD HIGH SCHOOL
489 WINTHROP STREETREET
MEDFORD, MASSACHUSETTS

PROJECT LOCUS

APPROXIMATE SCALE: 1 INCH = 2,000 FEET
MAY 2026

FIGURE 1

0214380_000_LOCUS HALEYALDRICH\LREED



LEGEND

TB 26-1 — DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY CARR-DEE ON JANUARY 12 TO 16, 2026

TP 26-1 — DESIGNATION AND APPROXIMATE LOCATION OF TEST PIT EXCAVATED BY EARTHWORKS ON JANUARY 6 TO 8, 2026 AND JANUARY 27 TO 30, 2026

0+00 — 2+82 APPROXIMATE LOCATION OF SEISMIC REFRACTION LINE CONDUCTED IN APRIL 2026

NOTES

1. BASE PLAN TAKEN FROM AN ELECTRONIC FILE TITLED "25558-EC(sbmt02-19-2026).dwg" PROVIDED BY SMMA ON FEBRUARY 19, 2026.
2. ELEVATIONS ARE IN FEET AND REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
3. LOCATIONS OF THE "PITS" FROM 1967 "SITE PREPARATION PLAN, MEDFORD HIGH SCHOOL, MEDFORD, MA."

STRATIGRAPHY

GS ELEVATION
FILL THICKNESS
LOESS THICKNESS
TILL THICKNESS
TOP OF ROCK ELEVATION

"ND" - INDICATES NOT DETERMINED IN DEPTH OF TEST PIT.

0 — 120 — 240
SCALE IN FEET

HALEY ALDRICH

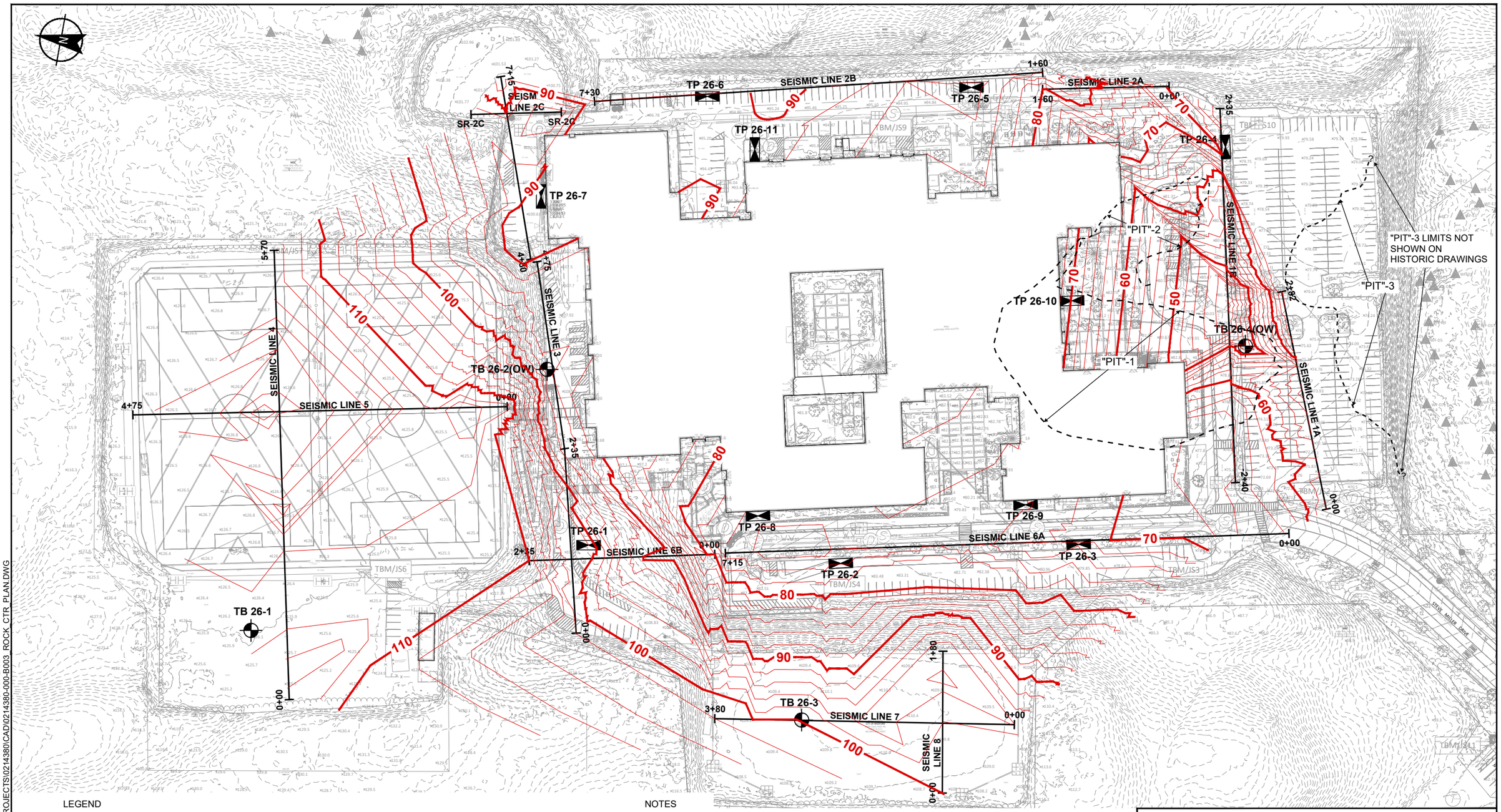
PROPOSED MEDFORD HIGH SCHOOL
MEDFORD, MASSACHUSETTS

SITE AND SUBSURFACE EXPLORATION LOCATION PLAN

SCALE: AS SHOWN
MAY 2026

FIGURE 2

Saved by: DTE Printed: 5/19/2026 7:49 AM Sheet: EXPL LOC PLAN
\\HALEYALDRICH.COM\SHARE\CP\PROJECTS\0214380\CAD\02 14380-000-B002_EXPL_LOC_PLAN.DWG



LEGEND

90 — ELEVATION OF TOP OF GEOLOGIC BEDROCK CONTOUR

TB 26-1 — DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY CARR-DEE ON JANUARY 12 TO 16, 2026

TP 26-1 — DESIGNATION AND APPROXIMATE LOCATION OF TEST PIT EXCAVATED BY EARTHWORKS ON JANUARY 6 TO 8, 2026 AND JANUARY 27 TO 30, 2026

0+00 2+82 — APPROXIMATE LOCATION OF SEISMIC REFRACTION LINE CONDUCTED IN APRIL 2026

NOTES

1. BASE PLAN TAKEN FROM AN ELECTRONIC FILE TITLED "25558-EC(sbmt02-19-2026).dwg" PROVIDED BY SMMA ON FEBRUARY 19, 2026.
2. ELEVATIONS ARE IN FEET AND REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
3. LOCATIONS OF THE "PITS" FROM 1967 "SITE PREPARATION PLAN, MEDFORD HIGH SCHOOL, MEDFORD, MA."

0 120 240
SCALE IN FEET

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PROPOSED MEDFORD HIGH SCHOOL
MEDFORD, MASSACHUSETTS

TOP OF GEOLOGIC BEDROCK CONTOUR PLAN

SCALE: AS SHOWN
MAY 2026

FIGURE 3

Printed: 5/21/2026 11:46 AM Sheet: CTR PLAN
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APPENDIX A
Test Boring Logs

IDENTIFICATION AND DESCRIPTION OF SUBSURFACE MATERIALS

SOIL

Soil description on logs of subsurface explorations are based on Standard Penetration Test results, visual-manual examination of exposed soil and soil samples, and the results of laboratory tests on selected samples. The criteria, descriptive terms and definitions are as follows:

DENSITY OR CONSISTENCY

Density of Cohesionless Soils	Penetration Resistance (Blows per ft.)	Consistency of Cohesive Soils	Penetration Resistance (Blows per ft.)
Very Loose	0-4	Very Soft	0-2
Loose	5-10	Soft	3-4
Medium	11-30	Medium	5-8
Dense	31-50	Stiff	9-15
Very Dense	over 50	Very Stiff	16-30
		Hard	over 30

PENETRATION RESISTANCE

Standard Penetration Test (ASTM D-1586) - Number of blows required to drive a standard 2 in. O.D. split spoon sampler 1 ft. with a 140 lb. weight falling freely through 30 in.

COLOR: Basic colors and combinations: black, brown, gray, yellow-brown, etc.

SUPPLEMENTAL SOIL TERMINOLOGY:

Laminae	- 0 to 1/16 in. thick (cohesive)
Parting	- 0 to 1/16 in. thick (granular)
Seam	- 1/16 to 1/2 in. thick
Layer	- 1/2 to 12 in. thick
Stratum	- > 12 in. thick
Pocket	- Small, erratic deposit less than 12 in. size
Lens	- Lenticular deposit larger than a pocket
Occasional	- One or less per 12 in. of thickness
Frequent	- More than one per 12 in. of thickness
Interbedded	- Alternating soil layers of differing composition
Varved	- Alternating thin seams of silt and clay
Mottled	- Variation of color

GEOLOGIC INTERPRETATION

Deposit type - GLACIAL TILL, ALLUVIUM, FILL.....

The natural soils are identified by criteria of Unified Soil Classification System (USCS), with appropriate group symbol in parenthesis for each soil description. Fill materials may not be classified by USCS criteria.

U.S. Standard Series Seive — Clear Square Sieve Openings

12"	3"	3/4"	4	10	40	200

Boulders	Cobbles	Gravel		Sand			Silts and Clays
		Coarse	Fine	Coarse	Medium	Fine	

305 mm	76 mm	19 mm	4.75 mm	2.00 mm	0.43 mm	0.074 mm

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			Group Symbol	Graphic Symbol	TYPICAL NAMES
Coarse grained soils: more than half is larger than number 200 sieve	Gravels: More than half of coarse fraction is larger than number 4 sieve	Gravels with little or no fines	GW		Well graded gravels, gravel-sand mixtures
			GP		Poorly graded gravels, gravel-sand mixtures
		Gravels with over 12% fines	GM		Silty gravels, poorly graded gravel-sand-silt mixtures
			GC		Clayey gravels, poorly graded gravel-sand-clay mixtures
	Sands: More than half of coarse fraction is smaller than number 4 sieve	Sands with little or no fines	SW		Well graded sands, gravelly sands
			SP		Poorly graded sands, gravelly sands
		Sands with over 12% fines	SM		Silty sands, poorly graded sand-silt mixtures
			SC		Clayey sands, poorly graded sand-clay mixtures
Fined-grained soils: more than half smaller than number 200 sieve	Silts and Clays: Liquid limit 50% or less		ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			OL		Organic clays and organic silty clays of low plasticity
	Silts and Clays: Liquid limit greater than 50%		MH		Inorganic silty, micaceous or diatomaceous fine sandy or silty soils, elastic silts
			CH		Inorganic clays of high plasticity, fat clays
			OH		Organic clays of medium to high plasticity, organic silts
Highly organic soils			PT		Peat and other highly organic soils

GENERAL NOTES

1. Logs of subsurface explorations depict soil, rock and groundwater conditions only at the locations specified on the dates indicated. Subsurface conditions may vary at other locations and at other times.
2. Water levels noted on the logs were measured at the times and under the conditions indicated. During test borings, these water levels could have been affected by the introduction of water into the borehole, extraction of tools on other procedures and thus may not reflect actual groundwater level at the test boring location. Groundwater level fluctuations may also occur as a result of variations in precipitation, temperature, season, tides, adjacent construction activities and pumping of water supply wells and construction dewatering systems.

ROCK

Rock descriptions noted on logs of subsurface explorations are based on visual-manual examination of exposed rock outcrops and core samples. The criteria, descriptive terms and definitions used are as follows:

FIELD HARDNESS: A measure of resistance to scratching.

Very Hard	Cannot be scratched with a knife point or sharp pick.
Hard	Can be scratched with a knife point or sharp pick, only with difficulty.
Moderately Hard	Can be readily scratched with a knife point or pick.
Medium Hard	Can be grooved or gouged 1/16 in. deep with firm pressure on a knife point or sharp pick.
Soft	Can be grooved or gouged easily with a knife point or pick.
Very Soft	Can be carved with a knife and excavated with a pick point.

WEATHERING: The action of organic and inorganic and chemical and physical processes resulting in alteration of color, texture and composition.

Fresh-FR	No visible sign of alteration, except perhaps slight discoloration on major discontinuity surfaces.
Slight-SL	Discoloration of rock material and discontinuity surfaces. All rock may be discolored and/or somewhat weaker than in its fresh condition.
Moderate-MOD	Less than half the rock material is decomposed and/or disintegrated to a soil. Some fresh or discolored rock is present as either a continuous framework or as corestones.
High-HIGH	More than half the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present as either a discontinuous framework or as corestones.
Complete-COMP	All rock material is decomposed and/or disintegrated to soil. The original mass structure is largely intact.
Residual Soil	All rock material is converted to soil. The mass structure and material fabric are destroyed. There has been a large change of volume, but the material has not been significantly transported.

COLOR: Basic colors and combinations: gray, light gray, brown, red-brown.

TEXTURE: Size, shape and arrangements of constituents.

Term	Size	
	Igneous	Sedimentary
Coarse-grained	> 5 mm	> 2 mm
Medium-grained	1 - 5 mm	0.625 - 2 mm
Fine-grained	< 1 mm	< 0.625 mm
Aphanitic	Individual grains invisible to the unaided eye.	

LITHOLOGY: Rock classification and modifiers; accepted formation names.

DISCONTINUITIES:

Type	Definition
Joint	A natural fracture along which no displacement has occurred. May occur in parallel groups called sets.
Shear	A natural fracture along which displacement has occurred. Surface may be slickensided or striated.
Fault	A natural fracture along which displacement has occurred. Usually lined with gouge and slickensides.
Shear or Fault Zone	Zone of fractured rock and gouge bordering the displacement plane.

ORIENTATION/ATTITUDE:

Term	Angle (degrees)
Horizontal	0-5
Low Angle	6-35
Moderately Dipping	36-55
High Angle	56-85
Vertical	86-100

SPACING:

Discontinuity Term	Bedding Term	Inches
Extremely Close	Extremely Thin	< 3/4
Very Close	Very Thin	3/4 - 2.5
Close	Thin	2.5 - 8
Moderate	Medium	8 - 24
Wide	Thick	24 - 80
Very Wide	Very Thick	80 - 240
Extremely Wide	Extremely Thick	> 240

PERSISTENCE/CONTINUITY:

Term	Feet
Very Low	0-3
Low	3-10
Medium	10-35
High	35-65
Very High	> 65

APERTURE/GAP:

Term	Distance
Very Tight	< 0.1mm
Tight	0.1mm-0.25mm
Partly Open	0.25mm-0.5mm
Open	0.5mm-2.5mm
Moderately Wide	2.5mm-1cm
Wide	> 1cm
Very Wide	1cm-10cm
Extremely Wide	10cm-1m
Cavernous	> 1m

POROSITY:

Type

Primary:
Pre-depositional and depositional inter- and intra- granular, particle, or crystalline pores.

Secondary:
Solution features including pits, vugs, caverns, molds, and channels.
Fracture features including joints, shears, faults, shrinkage and breccia fabrics.

Term	Size
Micro	< 0.0625 mm
Meso	0.0625-4.0 mm
Mega	4.0-256 mm

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SUBSURFACE EXPLORATION KEY

J:\GRAPHICS\TEMP\MCELENEY-TIFIELD SERVICES\SUBSURFACE EXPLORATION LOG KEYS\SUBSURFACE EXPLORATION KEY2008-1027.DWG

TEST BORING REPORT DRAFT

Boring No. TB26-1

Project	MEDFORD HIGH SCHOOL, MEDFORD, MASSACHUSETTS
Client	SMMA
Contractor	CARR-DEE

File No.	0214380-000
Sheet No.	1 of 2
Start	January 13, 2026
Finish	January 14, 2026
Driller	G. Smith
H&A Rep.	C. Laskowsky
Elevation	126.0
Datum	NAVD 88
Location	See plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	NX	Rig Make & Model: B-46
Inside Diameter (in.)	4	1.4	--	Bit Type: Roller Bit Drill Mud:
Hammer Weight (lb)	300	140	-	Casing:
Hammer Fall (in.)	24	30	-	Hoist/Hammer: Cat-Head / Automatic hammer PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	USCS Symbol	Stratum Change Elev/Depth (ft)	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size†, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	10 13 24 28	S1 19	0.0 2.0	SM	125.6 0.4	-TOPSOIL- Dense brown silty SAND (SM), no structure, no odor, moist -FILL-				10	50	40				
	8 50/2"	S2 2	2.0 2.7	GM	124.4 1.6	Medium dense to dense light-brown silty GRAVEL with sand (GM), no structure, no odor, moist, 5% cobbles blasted bedrock fill -FILL-	35	15	5	5	15	25				
5	21 21 14 13	S3 8	4.0 6.0													
	14 7 11 8	S4 11	6.0 8.0		118.6											
				OL/OH	7.4	Stiff dark brown ORGANIC SOIL (OL/OH), no structure, moist, buried topsoil				5	10	85				
				ML	118.3 7.7	-TOPSOIL-				5	15	80				
				SM	117.6 8.4	Medium stiff orange-brown SILT with sand (ML), no structure, no odor, moist -LOESS-	10	15	5	15	25	30				
10	36 48 54 34	S5 13	9.0 11.0			Dense to very dense brown silty SAND with gravel (SM), bonded, no odor, moist -GLACIAL TILL-										
	39 100/3"	S6 8	14.0 14.8		111.2 14.8	TOP OF BEDROCK Note: Borehole advanced with roller bit to 16.0 ft before coring. SEE CORE BORING REPORT FOR ROCK DETAILS										
15																
20																

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample ID

G - Geoprobe
HA - Hand Auger
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed Sample
S - Split Spoon Sample

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	14.8
Rock Cored (ft)	6.2
Samples	S6, C1

Boring No. TB26-1

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Plasticity**: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

†**Note: Maximum particle size is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

H&A-TEST BORING-09 REV PLOG-HA-LIB09-BOS STANDARD ONLY-MARCH 2024.GLB GREAT PYRAMID H&A.GPJ C:\USERS\KBUBELIONEDRIVE - HALEYALDRICH.COM\DATA MANAGEMENT & VISUALIZATION - GINT PROJECTS\0214380\0214380-000_GINT.GPJ May 4, 26

HALEY ALDRICH

CORE BORING REPORT DRAFT

Boring No. TB26-1
File No. 0214380-000
Sheet No. 2 of 2

Depth (ft)	Drilling Rate (min./ft)	Run No.	Run Depth (ft)	Recovery/RQD in.	Recovery/RQD %	Weath-ering	Elev./ Depth (ft)	Visual Description and Remarks
								SEE TEST BORING REPORT FOR OVERBURDEN DETAILS
15							111.2 14.8	Hard, slightly to fresh weathered, gray, aphanitic to medium grained, GRANITE -DEDHAM GRANITE-
	14.25	RC-1	16.0 21.0	60.0 34.5	100 58	Slight		Joint, high angle, close to moderate, rough and planar, discolored weathering. Joint, horizontal, very close to close, rough and undulating, discolored weathering.
	12.37							
	14.87							
	19.97							
20	16.45							
							105.0 21.0	BOTTOM OF EXPLORATION AT 21.0 FT
25								
30								
35								
40								
45								

H+A_CORE+WELL-09 PLOG-HA-LIB09-BOS STANDARD ONLY-MARCH 2024.GLB HA-TB+CORE+WELL-09 W FENCE.GDT C:\USERS\KBUBEL\ONEDRIVE - HALEYALDRICH.COM\DATA MANAGEMENT & VISUALIZATION - GINT PROJECTS\0214380\0214380-000_GINT.GPJ May 4, 26

TEST BORING REPORT DRAFT

Boring No. TB26-2

Project	MEDFORD HIGH SCHOOL, MEDFORD, MASSACHUSETTS
Client	SMMA
Contractor	CARR-DEE

File No.	0214380-000
Sheet No.	1 of 2
Start	January 14, 2026
Finish	January 15, 2026
Driller	G. Smith
H&A Rep.	C. Laskowsky
Elevation	108.2
Datum	NAVD 88
Location	See plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	NX	Rig Make & Model: B-46
Inside Diameter (in.)	4	1.4	--	Bit Type: Roller Bit Drill Mud:
Hammer Weight (lb)	300	140	-	Casing:
Hammer Fall (in.)	24	30	-	Hoist/Hammer: Cat-Head / Automatic hammer PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	USCS Symbol	Stratum Change Elev/Depth (ft)	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size†, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0					107.8	-ASPHALT-										
	8 17 34 38	S1 5	0.0 2.0	SM	0.4	Dense dark brown silty SAND with gravel (SM), no structure, no odor, moist, trace brick and asphalt -FILL-	5	15	10	15	40	15				
	28 27 100/4"	S2	3.0 4.3													
5					103.2 5.0	TOP OF BEDROCK Note: Refusal at 5.0 ft, stepped off 3.0 ft east and redrilled to 6.0 ft before bedrock core. SEE CORE BORING REPORT FOR ROCK DETAILS										
10																

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample ID

G - Geoprobe
HA - Hand Auger
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed Sample
S - Split Spoon Sample

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	5.0
Rock Cored (ft)	6.0
Samples	S2, C1

Boring No. TB26-2

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None **Toughness**: L - Low M - Medium H - High **Plasticity**: N - Nonplastic L - Low M - Medium H - High **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

†**Note: Maximum particle size is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

H&A-TEST BORING-09 REV PLOG-HA-LIB09-BOS STANDARD ONLY-MARCH 2024.GLB GREAT PYRAMID H&A.GPJ C:\USERS\KBUBELIONEDRIVE - HALEYALDRICH.COM\DATA MANAGEMENT & VISUALIZATION - GINT PROJECTS\0214380\0214380-000_GINT.GPJ May 4, 26

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CORE BORING REPORT DRAFT

Boring No. TB26-2
File No. 0214380-000
Sheet No. 2 of 2

Depth (ft)	Drilling Rate (min./ft)	Run No.	Run Depth (ft)	Recovery/RQD in.	Recovery/RQD %	Weath-ering	Elev./ Depth (ft)	Visual Description and Remarks
								SEE TEST BORING REPORT FOR OVERBURDEN DETAILS
5							103.2 5.0	Gray, aphanitic to medium grained, hard, fresh weathered to slightly weathered, GRANITE.
	13.62	C1	6.0 11.0	37.5	63	Fresh to slight		-DEDHAM GRANITE-
	7.95							
	10.55							
	12.12							
10	10.83							
							97.2 11.0	BOTTOM OF EXPLORATION AT 11.0 FT
15								
20								
25								
30								
35								
40								

H+A_CORE+WELL-09 PLOG-HA-LIB09-BOS STANDARD ONLY-MARCH 2024.GLB HA-TB+CORE+WELL-09 W FENCE.GDT C:\USERS\KBUBEL\ONEDRIVE - HALEYALDRICH.COM\DATA MANAGEMENT & VISUALIZATION - GINT PROJECTS\0214380\0214380-000_GINT.GPJ May 4, 26

TEST BORING REPORT DRAFT

Boring No. TB26-3

Project	MEDFORD HIGH SCHOOL, MEDFORD, MASSACHUSETTS
Client	SMMA
Contractor	CARR-DEE

File No.	0214380-000
Sheet No.	1 of 2
Start	January 12, 2026
Finish	January 13, 2026
Driller	G. Smith
H&A Rep.	C. Laskowsky
Elevation	110.0
Datum	NAVD 88
Location	See plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	NX	Rig Make & Model: B-46
Inside Diameter (in.)	4	1.4	--	Bit Type: Roller Bit Drill Mud:
Hammer Weight (lb)	300	140	-	Casing:
Hammer Fall (in.)	24	30	-	Hoist/Hammer: Cat-Head / Automatic hammer PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	USCS Symbol	Stratum Change Elev/Depth (ft)	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size†, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	12 13 32 55	S1 19	0.0 2.0	SM		Dense gray-brown silty SAND (SM), no structure, no odor, moist, trace plastic and brick -FILL-		10	10	15	50	15				
	52 54 29 27	S2 14	2.0 4.0	SM		Dense to very dense gray-brown silty SAND with gravel (SM), no structure, no odor, moist, 10% cobbles, blasted bedrock fill	15	20	5	10	20	30				
5	28 22 14 37	S3 11	4.0 6.0													
	38 40 50/0.5"	S4 10	6.0 7.0		102.9 7.1	TOP OF BEDROCK SEE CORE BORING REPORT FOR ROCK DETAILS										
10																
15																

Water Level Data					
Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample ID	
G	Geoprobe
HA	Hand Auger
O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample

Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal

Summary	
Overburden (ft)	7.1
Rock Cored (ft)	10.7
Samples	S4, C2
Boring No.	**TB26-3**

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None; **Toughness**: L - Low M - Medium H - High; **Plasticity**: N - Nonplastic L - Low M - Medium H - High; **Dry Strength**: N - None L - Low M - Medium H - High V - Very High

†**Note: Maximum particle size is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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CORE BORING REPORT DRAFT

Boring No. TB26-3
File No. 0214380-000
Sheet No. 2 of 2

Depth (ft)	Drilling Rate (min./ft)	Run No.	Run Depth (ft)	Recovery/RQD in.	Recovery/RQD %	Weathering	Elev./ Depth (ft)	Visual Description and Remarks
								SEE TEST BORING REPORT FOR OVERBURDEN DETAILS
	9.95	C1	7.1 12.1				102.9 7.1	Hard, slightly to fresh weathered, gray, aphanitic to medium grained, GRANITE. -DEDHAM GRANITE-
	15.53							Joint, high angle, very close to moderate, rough and planar, discolored weathering. Hard, slightly to fresh weathered, gray, aphanitic to medium grained, GRANITE. -DEDHAM GRANITE-
	10.32							
10	14.1							
	12.93			60.0		Slight		Similar to above
		C2	12.1 17.1	49.0				Joint, horizontal, moderate, rough and planar, discolored weathering.
	10.17							Similar to above
	11.85							Joint, high angle, moderate, rough and planar, discolored weathering.
	9.02							
15	7.7							
							92.9 17.1	BOTTOM OF EXPLORATION AT 17.1 FT
20								
25								
30								
35								
40								

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H+A_CORE+WELL-09 PLOG-HA-LIB09-BOS STANDARD ONLY-MARCH 2024.GLB HA-TB+CORE+WELL-09 W FENCE.GDT C:\USERS\KBUBEL\ONEDRIVE - HALEYALDRICH.COM\DATA MANAGEMENT & VISUALIZATION - GINT PROJECTS\0214380\0214380-000_GINT.GPJ

HALEY ALDRICH

TEST BORING REPORT DRAFT

Boring No. TB26-4

Project	MEDFORD HIGH SCHOOL, MEDFORD, MASSACHUSETTS
Client	SMMA
Contractor	CARR-DEE

File No.	0214380-000
Sheet No.	1 of 2
Start	January 15, 2026
Finish	January 16, 2026
Driller	G. Smith
H&A Rep.	C. Laskowsky
Elevation	77.2
Datum	NAVD 88
Location	See plan

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type	HW	S	NX	Rig Make & Model: B-46
Inside Diameter (in.)	4	1.4	--	Bit Type: Roller Bit Drill Mud:
Hammer Weight (lb)	300	140	-	Casing:
Hammer Fall (in.)	24	30	-	Hoist/Hammer: Cat-Head / Automatic hammer PID Make & Model:

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	USCS Symbol	Stratum Change Elev/Depth (ft)	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size†, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0	1 5 10 19	S1 11	0.0 2.0	SM	76.9 0.3	-TOPSOIL- Very dense brown silty SAND with gravel (SM), no structure, no odor, moist -FILL-	10	5	5	10	25	45				
	63 40 29 34	S2 21	2.0 4.0	SM		Similar to above, except dense to very dense, dark gray, trace brick, ash, and glass	15	10	10	15	30	20				
5	17 24 24 20	S3 20	4.0 6.0													
	13 14 18 34	S4 24	6.0 8.0	SM		Dense dark brown silty SAND (SM), no structure, no odor, moist, trace ash and brick	5	10	10	15	30	30				
	29 11 16 6	S5 3	8.0 10.0													
10	20 7 15 12	S6 0	10.0 12.0													
	8 5 4 2	S7 8	12.0 14.0	SM		Loose to dense dark gray silty SAND with gravel (SM), no structure, no odor, moist to wet, trace brick, metal, and glass	10	5	5	10	55	15				
15	8 7 9 28	S8 0	14.0 16.0													
	20 6 19 5	S9 0	16.0 18.0													
	37 4 19 9	S10 0	18.0 20.0			no recovery; drill wash had fill materials present (glass, plastic, brick)										
20																

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth (ft) to: Bottom of Casing	Bottom of Hole	Water

Sample ID

G - Geoprobe
HA - Hand Auger
O - Open End Rod
T - Thin Wall Tube
U - Undisturbed Sample
S - Split Spoon Sample

Well Diagram

Riser Pipe
Screen
Filter Sand
Cuttings
Grout
Concrete
Bentonite Seal

Summary

Overburden (ft)	32
Rock Cored (ft)	1.1
Samples	S14

Boring No. TB26-4

Field Tests: **Dilatancy**: R - Rapid S - Slow N - None
Toughness: L - Low M - Medium H - High
Plasticity: N - Nonplastic L - Low M - Medium H - High
Dry Strength: N - None L - Low M - Medium H - High V - Very High

†**Note: Maximum particle size is determined by direct observation within the limitations of sampler size.**

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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TEST BORING REPORT

DRAFT

Boring No. TB26-4
File No. 0214380-000
Sheet No. 2 of 2

Depth (ft)	Sampler Blows per 6 in.	Sample No. & Rec. (in.)	Sample Depth (ft)	USCS Symbol	Stratum Change Elev/Depth (ft)	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size†, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
20	100/2"	S11 0	20.0 20.2			switched to 3" casing. spoon bouncing off of suspected refuse										
25	54 53 15 4	S12 3	25.0 27.0	SM		Similar to above, except very dense										
	4 8 15 22	S13 5	27.0 29.0													
	92 91 52 100/5"	S14 23	29.0 30.9			3" casing refusal										
30					46.3 30.9	Suspected bedrock, lose of drill water and no return spoils. -DEDHAM GRANITE-										
					45.2 32.0	REFUSAL AT 32.0 FT										

NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No. TB26-4

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APPENDIX B
Test Pit Logs

HALEY ALDRICH

TEST PIT LOG

DRAFT

Test Pit No. TP26-1

Project	MEDFORD HIGH SCHOOL	**File No.**	0214380-000
Location	MEDFORD, MA	**H&A Rep**	M. Dodson
Client	SMMA	**Date**	1/6/2026
Contractor	EARTHWORK INDUSTRIES, INC.	**Weather**	
Equipment Used	Doosan DX 50 Excavator		

Ground El.: 108.0 **El. Datum:** NAVD88 | **Location:** See Plan | **Groundwater depths/entry rates (in./min.):** Not encountered.

Depth (ft)	Sample Data / PID Readings (ppm)	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests: Dilatancy	Toughness	Plasticity	Strength
0	0.0/0.0		OL/OH	Black dark brown sandy ORGANIC SOIL (OL/OH), no structure, no odor, moist, frozen top 6 inches - LOAMY FILL -	5	0	10	10	20	55				
1	Fill 0.0/0.0	107.0 1.0	SM	Gray-brown silty SAND with gravel (SM), no structure, no odor, moist - FILL -	15	10	15	10	30	20				
2	Loess southern side of pit	105.7 2.3	ML	Orange-brown SILT with sand (ML), no structure, no odor, moist - LOESS - Note: Very cobbly in northern half of pit, likely disturbed from filling activity.	5	0	0	5	15	75				
3	0.0/0.0													
4	Till	104.0 4.0	SM	Gray-brown olive-gray silty SAND with gravel (SM), no structure, no odor, moist - GLACIAL TILL -	10	10	10	15	35	20				
5	0.0/0.0			Note: Refusal on bedrock at 5 to 6 feet in bottom of pit.										
6		102.0 6.0		BOTTOM OF EXPLORATION 6.0 FT										

Obstructions: Bedrock

Remarks: Photographs Taken

Field Tests

Dilatancy R - Rapid S - Slow N - None
Toughness L - Low M - Medium H - High
Plasticity N - Nonplastic L - Low M - Medium H - High
Dry Strength N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth NE ft
measured after hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24		=
over 24		=

Test Pit Dimensions (ft)

Pit Length x Width (ft) 10x4
Pit Depth (ft) 6.0

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HA TESTPIT-09-W PID PLOG-HA-LIB09-BOS STANDARD ONLY-MARCH 2024.GLB HA-TP09+FENCE.GDT C:\USERS\ADENSON\HARRISON\ONEDRIVE - HALEYALDRICH.COM_GINT PROJECTS\CITY OF MEDFORD, MA - 0214380.MEDFORD HIGH SCHOOL GEOTECHNICAL\GINT\0214380-TP.GPJ 4 May 26

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HALEY ALDRICH

TEST PIT LOG

DRAFT

Test Pit No. TP26-2

Project MEDFORD HIGH SCHOOL
Location MEDFORD, MA
Client SMMA
Contractor EARTHWORK INDUSTRIES, INC.
Equipment Used Doosan DX 50 Excavator

File No. 0214380-000
H&A Rep M. Dodson
Date 1/7/2026
Weather

Ground El.: 81.6
El. Datum: NAVD88
Location: See Plan
Groundwater depths/entry rates (in./min.): Not encountered, bottom foot of fill moist

Depth (ft)	Sample Data / PID Readings (ppm)	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests: Dilatancy	Toughness	Plasticity	Strength
0			OL/OH	Black dark brown sandy ORGANIC SOIL (OL/OH), no structure, no odor, moist, frozen	5	0	10	10	20	55				
	Fill1	80.9		- LOAMY FILL -										
		0.7	GM	Light-brown silty GRAVEL and COBBLES with sand (GM), no structure, no odor, moist, trace metal scrap, rebar, trace-5% boulders	35	25	10	5	10	15				
1				- BLAST BEDROCK FILL -										
2	0.0/0.0													
3														
	Fill2	78.1												
		3.5	ML	Light-brown and yellow-brown sandy SILT with gravel (ML), no structure, no odor, moist. Encountered 3/4 inch copper (former water) pipe ~6 ft depth, 4 in. black orangeburg pipe ~6.5 ft depth, unable to determine if scrap or abandoned utilities, no water present in copper, orangeburg appeared empty upon removal.	5	15	10	10	25	35				
4	0.0/0.0			- FILL -										
5														
6	0.0/0.0			Note: One large 2.3 ft boulder, trace-5% small boulders, 15% cobbles										
		75.1												
		6.5		BOTTOM OF EXPLORATION 6.5 FT										

Obstructions: --

Remarks: Photographs Taken

Field Tests

Dilatancy	R - Rapid S - Slow N - None
Toughness	L - Low M - Medium H - High
Plasticity	N - Nonplastic L - Low M - Medium H - High
Dry Strength	N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth NE ft
measured after hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24		=
over 24	1	= 4.2

Test Pit Dimensions (ft)

Pit Length x Width (ft) 11x7
Pit Depth (ft) 6.5

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HALEY ALDRICH

TEST PIT LOG

DRAFT

Test Pit No. TP26-3

Project	MEDFORD HIGH SCHOOL	**File No.**	0214380-000
Location	MEDFORD, MA	**H&A Rep**	M. Dodson
Client	SMMA	**Date**	1/7/2026
Contractor	EARTHWORK INDUSTRIES, INC.	**Weather**	
Equipment Used	Doosan DX 50 Excavator		

Ground El.: 79.8 **El. Datum:** NAVD88 | **Location:** See Plan | **Groundwater depths/entry rates (in./min.):** Not encountered, bottom foot of fill moist

Depth (ft)	Sample Data / PID Readings (ppm)	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests Dilatancy	Toughness	Plasticity	Strength
0			OL/OH	Black and dark brown sandy ORGANIC SOIL (OL/OH), no structure, no odor, moist, frozen top 7 in. - LOAMY FILL -	5	0	10	10	20	55				
1	Fill 0.0/0.0	78.8 1.0	SM	Light-brown and gray-brown silty SAND with gravel (SM), no odor, wet, trace steel scrap, roots, plastic, 15% cobbles, weakly layered in color and textural changes - FILL -	25	15	10	15	20	15				
2	Till	77.5 2.3	SM	Olive-gray silty SAND with gravel (SM), no structure, no odor, moist, upper limit meets top of bedrock refusal on the south end of pit at 2.3 ft, sloping northwards to 3.0 ft at north end - GLACIAL TILL -	10	10	10	20	30	20				
3	0.0/0.0													
4														
5	0.0/0.0			Note: 10% cobbles trace-5% boulders Note: Refusal on bedrock between 2.3 and 6 ft in bottom of pit. Sloping bedrock surface beneath till.										
6		73.8 6.0		BOTTOM OF EXPLORATION 6.0 FT										

Obstructions: Bedrock

Remarks: Photographs Taken

Field Tests

Dilatancy	R - Rapid S - Slow N - None
Toughness	L - Low M - Medium H - High
Plasticity	N - Nonplastic L - Low M - Medium H - High
Dry Strength	N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth NE ft
measured after hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24		=
over 24		=

Test Pit Dimensions (ft)

Pit Length x Width (ft) 10x4
Pit Depth (ft) 6.0

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

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HA TESTPIT-09-W PID PLOG-HA-LIB09-BOS STANDARD ONLY-MARCH 2024.GLB HA-TP09+FENCE.GDT C:\USERS\ADENSON\HARRISONONEDRIVE - HALEYALDRICH.COM_GINT PROJECTS\CITY OF MEDFORD, MA - 0214380.MEDFORD HIGH SCHOOL GEOTECHNICAL\GINT\0214380-TP.GPJ 4 May 26

HALEY ALDRICH

TEST PIT LOG

DRAFT

Test Pit No. TP26-4

Project	MEDFORD HIGH SCHOOL	**File No.**	0214380-000
Location	MEDFORD, MA	**H&A Rep**	M. Dodson
Client	SMMA	**Date**	1/8/2026
Contractor	EARTHWORK INDUSTRIES, INC.	**Weather**	
Equipment Used	Doosan DX 50 Excavator		

Ground El.: 81.0 **El. Datum:** NAVD88 **Location:** See Plan **Groundwater depths/entry rates (in./min.):** Not encountered, bottom foot of fill moist

Depth (ft)	Sample Data / PID Readings (ppm)	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests: Dilatancy	Toughness	Plasticity	Strength
0			OL/OH	Black and dark brown sandy ORGANIC SOIL (OL/OH), no structure, no odor, moist, 20% grass and tree roots up to 4 in. diameter, frozen	0	5	0	5	20	70				
		80.4 / 0.6	SM	- LOAMY FILL -	25	15	10	15	20	15				
2	0.0/0.0			Light-brown and gray-brown silty SAND with gravel (SM), cemented, no odor, wet, 30% cobbles, 5% boulders under 2 ft, trace (2-3) boulders 2-3 ft - FILL -										
4		76.5 / 4.5	GM	Light-brown silty GRAVEL and COBBLES with sand (GM), no structure, no odor, moist	30	20	10	10	15	15				
	0.0/0.0			- BLAST BEDROCK FILL -										
6	0.0/0.0			Note: 10% small boulders, trace boulders over 2.0 ft (3-4)										
8		72.5 / 8.5		BOTTOM OF EXPLORATION 8.5 FT Note: Test pit terminated at 8.5 ft in Blast Bedrock Fill due to limits of machine and collapsing test pit walls.										

Obstructions: Collapsing Test Pit Walls

Remarks: Photographs Taken

Field Tests

Dilatancy R - Rapid S - Slow N - None
Toughness L - Low M - Medium H - High
Plasticity N - Nonplastic L - Low M - Medium H - High
Dry Strength N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth NE ft
measured after hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24		=
over 24		=

Test Pit Dimensions (ft)

Pit Length x Width (ft) 9x5
Pit Depth (ft) 8.5

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HA TESTPIT-09-W PID PLOG-HA-LIB09-BOS STANDARD ONLY-MARCH 2024.GLB HA-TP09+FENCE.GDT C:\USERS\ADENSON\HARRISON\ONEDRIVE - HALEYALDRICH.COM_GINT PROJECTS\CITY OF MEDFORD, MA - 0214380.MEDFORD HIGH SCHOOL GEOTECHNICAL\GINT\0214380-TP.GPJ 4 May 26

HALEY ALDRICH

TEST PIT LOG

DRAFT

Test Pit No. TP26-5

Project MEDFORD HIGH SCHOOL
Location MEDFORD, MA
Client SMMA
Contractor EARTHWORK INDUSTRIES, INC.
Equipment Used Doosan DX 50 Excavator

File No. 0214380-000
H&A Rep M. Dodson
Date 1/6/2026
Weather

Ground El.: 94.0
El. Datum: NAVD88
Location: See Plan
Groundwater depths/entry rates (in./min.): Not encountered, bottom foot of fill moist

Depth (ft)	Sample Data / PID Readings (ppm)	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests: Dilatancy	Toughness	Plasticity	Strength
0				-ASPHALT-										
	Fill	93.7 0.3	GM	Light-brown and yellow-brown silty GRAVEL with sand (GM), no structure, no odor, moist, trace brick and metal scrap, 15% cobbles	25	20	10	10	15	20				
1	0.0/0.0			- FILL -										
	Fill	92.7 1.3	SM	Brown and gray-brown silty SAND with gravel (SM), no structure, no odor, moist, 5% concrete building rubble, max size 16"x12"x10", trace roots and metal scrap including one 1/4" steel sheet 1.5—2.5 ft, 5% small boulders, 20% cobbles	25	15	10	10	15	25				
2				- FILL -										
3	0.0/0.0													
4														
	0.0/0.0													
5														
6	0.0/0.0			Note: 5% small boulders, none over 2 ft. Note: Refusal on bedrock between 6.5 and 7 ft in bottom of pit.										
7		87.0 7.0		BOTTOM OF EXPLORATION 7.0 FT										

Obstructions: Bedrock

Remarks: Photographs Taken

Field Tests

Dilatancy	R - Rapid	S - Slow	N - None	
Toughness	L - Low	M - Medium	H - High	
Plasticity	N - Nonplastic	L - Low	M - Medium	H - High
Dry Strength	N - None	L - Low	M - Medium	H - High V - Very High

Standing Water in Completed Pit

at depth NE ft
measured after hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24		=
over 24		=

Test Pit Dimensions (ft)

Pit Length x Width (ft) 10x3.5
Pit Depth (ft) 7.0

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HALEY ALDRICH

TEST PIT LOG

DRAFT

Test Pit No. TP26-6

Project	MEDFORD HIGH SCHOOL	**File No.**	0214380-000
Location	MEDFORD, MA	**H&A Rep**	M. Dodson
Client	SMMA	**Date**	1/7/2026
Contractor	EARTHWORK INDUSTRIES, INC.	**Weather**	
Equipment Used	Doosan DX 50 Excavator		

Ground El.: 96.0 ft
El. Datum: NAVD88
Location: See Plan
Groundwater depths/entry rates (in./min.): Not encountered, bottom foot of fill moist

Depth (ft)	Sample Data / PID Readings (ppm)	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests: Dilatancy	Toughness	Plasticity	Strength
0		95.7		-ASPHALT-										
		0.3	SM	Dark brown and gray-brown silty SAND with gravel (SM), no structure, no odor, moist	10	25	15	15	20	15				
	0.0/0.0													
	Fill	95.2		- DENSE GRADE -										
		0.8	SM	Brown to gray silty SAND with gravel (SM), no structure, no odor, moist, pockets of black organic soils and roots, disturbed remnant topsoil, discontinuous at bottom of unit	15	10	15	10	30	20				
1	0.0/0.0			- FILL -										
	Loess	94.1												
2		1.9	ML	Orange-brown SILT with sand (ML), no structure, no odor, moist, occasional black organic root trails top foot, becoming lighter, yellow tan with depth, stratum change sloping down to the north, following less steep trend of bedrock face beneath	5	0	0	5	15	75				
				- LOESS -										
3	0.0/0.0													
	Till	92.5												
		3.5	SM	Olive-gray silty SAND with gravel (SM), bonded, no odor, moist	10	5	10	20	35	20				
4				- GLACIAL TILL -										
5	0.0/0.0			Note: No boulders, few cobbles										
				Note: Refusal on bedrock at 6.0 ft.										
6		90.0												
		6.0		BOTTOM OF EXPLORATION 6.0 FT										

Obstructions: Bedrock

Remarks: Photographs Taken

Field Tests

Dilatancy R - Rapid S - Slow N - None
Toughness L - Low M - Medium H - High
Plasticity N - Nonplastic L - Low M - Medium H - High
Dry Strength N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth NE ft
measured after hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24		=
over 24		=

Test Pit Dimensions (ft)

Pit Length x Width (ft) 10x3.5
Pit Depth (ft) 6.0

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

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HALEY ALDRICH

TEST PIT LOG

DRAFT

Test Pit No. TP26-7

Project	MEDFORD HIGH SCHOOL
Location	MEDFORD, MA
Client	SMMA
Contractor	EARTHWORK INDUSTRIES, INC.
Equipment Used	Doosan DX 50 Excavator

File No.	0214380-000
H&A Rep	M. Dodson
Date	1/27/2026
Weather	

Ground El.: 100.7 **El. Datum:** NAVD88 **Location:** See Plan **Groundwater depths/entry rates (in./min.):** Not encountered.

Depth (ft)	Sample Data / PID Readings (ppm)	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests Dilatancy	Toughness	Plasticity	Strength
0	0-5	100.5 0.2 99.9	SM	Brown silty SAND (SM), no structure, no odor, moist, Fines moderately organic	5	5	10	15	30	35				
	0.0/0.0	0.8		- LOAMY FILL - 95.0% 5-7" THICK GRANITE PAVERS, 1-1.5 FT, 5.0% MORTAR, Former curbing laid flat as pavers - GRANITE PAVERS -										
2	0.0/0.0			55.0% COARSE GRAVEL AND COBBLES, 30.0% SILTY SAND, brown no structure, no odor, moist, 10% boulders under 2 ft, trace roots and organic debris, scrap metal, 5% hardscape scrap (like bricks, small concrete blocks) - FILL -										
4	5-10.5			Note: Below 5 ft, higher silt %, lower cobble/coarse gravel %, musty odor, may indicate fines likely somewhat organic										
6	0.0/0.1			Note: Encountered 6 in. diameter perforated clay pipe at 6.0-6.5 ft, surrounded by 3/4-1 in. gravel. Note: Clay pipe repaired with PVC pipe prior to backfill.										
8	0.0/0.0			5%<boulders under 2 ft, none over 2 ft Note: Concrete foundation wall observed in south test pit wall. Bottom of foundation wall not able to be determined for depth of test pit.										
10		90.2 10.5		BOTTOM OF EXPLORATION 10.5 FT Note: Test pit terminated at 10.5 ft due to limits of machine and collapsing test pit walls.										

Obstructions: --

Remarks: Photographs Taken

Field Tests

Dilatancy	R - Rapid S - Slow N - None
Toughness	L - Low M - Medium H - High
Plasticity	N - Nonplastic L - Low M - Medium H - High
Dry Strength	N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth NE ft
measured after hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24		=
over 24		=

Test Pit Dimensions (ft)

Pit Length x Width (ft) 13x4
Pit Depth (ft) 10.5

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

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HA-TP09+FENCE.GDT
PLOG-HA-LIB09-BOS STANDARD ONLY-MARCH 2024.GLB
HA TESTPIT-09-W PID

HALEY ALDRICH

TEST PIT LOG

DRAFT

Test Pit No. TP26-8

Project	MEDFORD HIGH SCHOOL
Location	MEDFORD, MA
Client	SMMA
Contractor	EARTHWORK INDUSTRIES, INC.
Equipment Used	Doosan DX 50 Excavator
File No.	0214380-000
H&A Rep	M. Dodson
Date	1/28/2026
Weather	

Ground El.: 81.9 ft
El. Datum: NAVD88
Location: See Plan
Groundwater depths/entry rates (in./min.): Not encountered.

Depth (ft)	Sample Data / PID Readings (ppm)	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests: Dilatancy	Toughness	Plasticity	Strength
0			OL/OH	Black to dark brown sandy ORGANIC SOIL (OL/OH), no structure, no odor, moist, frozen top few inches - LOAMY FILL - Note: Asphalt apron adjacent to foundation wall extends out approximately 12 inches, 2-3 inches thick at ground surface.	0	5	5	10	30	50				
		81.0 0.9	GM	Architectural concrete pour extendes from 20 inches above surface grade to 4 inches below.	35	25	10	5	10	15				
1				Light brown silty GRAVEL with sand (GM), no structure, no odor, moist, 25% small to large cobbles, 5% boulders up to 1.5 ft, primarily angular bedrock pieces - BLAST BEDROCK FILL - Note: Along foundation wall, bottom 15-16 inches encountered 3 distinct forms, the bottom of which, under the building wall was slightly undulating, extending less than an inch out from the rest of the wall, rough, poured on the sand/gravel/cobbles fill.										
2	0.0/0.0													
	2.0-6.5	79.1 2.8	SP	Brown to light brown poorly-graded SAND with gravel (SP), no structure, no odor, moist, 10% small boulders around 1-2 ft, trace scrap metal - FILL -	15	10	15	40	20	0				
3														
4	0.0/0.0			Note: Bottom of concrete foundation at a depth of 4 ft below ground surface.										
5														
6	0.0/0.0			5% small boulders, trace large boulders, no obstructions										
		75.4 6.5		BOTTOM OF EXPLORATION 6.5 FT										

Obstructions: --

Remarks: Photographs Taken

Field Tests

Dilatancy R - Rapid S - Slow N - None
Toughness L - Low M - Medium H - High
Plasticity N - Nonplastic L - Low M - Medium H - High
Dry Strength N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth NE ft
measured after hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24		=
over 24		=

Test Pit Dimensions (ft)

Pit Length x Width (ft) 11x4.5
Pit Depth (ft) 6.5

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HALEY ALDRICH

TEST PIT LOG

DRAFT

Test Pit No. TP26-9

Project	MEDFORD HIGH SCHOOL
Location	MEDFORD, MA
Client	SMMA
Contractor	EARTHWORK INDUSTRIES, INC.
Equipment Used	Doosan DX 50 Excavator
File No.	0214380-000
H&A Rep	M. Dodson
Date	1/30/2026
Weather	

Ground El.: 80.8 **El. Datum:** NAVD88 | **Location:** See Plan | **Groundwater depths/entry rates (in./min.):** Not encountered.

Depth (ft)	Sample Data PID Readings (ppm)	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests Dilatancy	Toughness	Plasticity	Strength
0		80.4	OL/OH	Black to dark brown sandy ORGANIC SOIL (OL/OH), no structure, no odor, moist, frozen top few inches	0	10	5	10	25	50				
		0.4		- LOAMY FILL -										
			GP-GM	Gray-brown poorly-graded GRAVEL with silt and sand (GP-GM), 10% small pockets of dark brown organic soil, trace rebar and construction scrap metal	25	20	15	15	15	10				
1	0.0/0.0		SP	Note: 1 ft 2 in. asphalt apron at surface extends 1 ft from foundation wall.	5	5	5	20	60	5				
	1.3-7.5	79.5												
		1.3	GM	Tan poorly-graded SAND (SP), no structure, no odor, moist to dry	35	25	10	5	10	15				
2				Light brown silty GRAVEL with sand (GM), no structure, no odor, moist, 35% small to large angular cobbles, primarily angular bedrock pieces, 10% boulders - bedrock pieces and blocks, trace debris like aluminum can, small plastic sleeve, masking tape, small metal scrap										
				- BLAST BEDROCK FILL -										
3	0.0/0.0			10% small boulders, none over 2 ft, bedrock obstruction										
4														
5	0.0/0.0			Note: 2 ft wide footing extends out from foundation wall three inches. Wall and footing appear to be on bedrock at a depth of 4.5 ft.										
				Note: Footing located 20-22 ft from northern building corner										
6														
		74.1												
		6.7		BOTTOM OF EXPLORATION 6.7 FT										

Obstructions: Bedrock

Remarks: Photographs Taken

Field Tests

Dilatancy	R - Rapid S - Slow N - None
Toughness	L - Low M - Medium H - High
Plasticity	N - Nonplastic L - Low M - Medium H - High
Dry Strength	N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth NE ft
measured after hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24		=
over 24		=

Test Pit Dimensions (ft)

Pit Length x Width (ft) 11x5
Pit Depth (ft) 6.7

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

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HA TESTPIT-09-W PID PLOG-HA-LIB09-BOS STANDARD ONLY-MARCH 2024.GLB HA-TP09+FENCE.GDT C:\USERS\ADENSON\HARRISON\ONEDRIVE - HALEYALDRICH.COM_GINT PROJECTS\CITY OF MEDFORD, MA - 0214380.MEDFORD HIGH SCHOOL GEOTECHNICAL\GINT\0214380-TP.GPJ 4 May 26

HALEY ALDRICH

TEST PIT LOG

DRAFT

Test Pit No. TP26-10

Project MEDFORD HIGH SCHOOL
Location MEDFORD, MA
Client SMMA
Contractor EARTHWORK INDUSTRIES, INC.
Equipment Used Doosan DX 50 Excavator

File No. 0214380-000
H&A Rep M. Dodson
Date 1/29/2026
Weather

Ground El.: 82.8
El. Datum: NAVD88
Location: See Plan
Groundwater depths/entry rates (in./min.): Not encountered.

Depth (ft)	Sample Data / PID Readings (ppm)	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests Dilatancy	Toughness	Plasticity	Strength
0			OL/OH	Black to dark brown sandy ORGANIC SOIL (OL/OH), no structure, no odor, moist, frozen, asphalt apron between wall partitions at ground surface 2-3 inches thick - LOAMY FILL -	0	5	5	15	20	55				
1		81.8 1.0		65.0% Angular cobbles and coarse gravel, 30.0% silty well graded sand and fine gravel, brown to no structure, no odor, moist, trace construction debris (plastic scrap, coffe lids, caution tape etc.) Note: Under the apron is approximately 1 ft of 1-1.5 inch gravel on top of angular sandy processed cobble-sized granite, former bedrock, trace small boulders sized. - BLAST BEDROCK FILL -										
2	0.0/0.0													
3														
4	0.0/0.0			5% boulders under 2 ft, no large boulders, no obstructions Note: Concrete wall footing encountered. Bottom of footing 4.0 ft below ground surface.										
5														
6	0.0/0.0	76.8 6.0		BOTTOM OF EXPLORATION 6.0 FT										

Obstructions: --

Remarks: Photographs Taken

Field Tests

Dilatancy R - Rapid S - Slow N - None
Toughness L - Low M - Medium H - High
Plasticity N - Nonplastic L - Low M - Medium H - High
Dry Strength N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth NE ft
measured after hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24		=
over 24		=

Test Pit Dimensions (ft)

Pit Length x Width (ft) 11x5
Pit Depth (ft) 6.0

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

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HALEY ALDRICH

TEST PIT LOG

DRAFT

Test Pit No. TP26-11

Project	MEDFORD HIGH SCHOOL	**File No.**	0214380-000
Location	MEDFORD, MA	**H&A Rep**	M. Dodson
Client	SMMA	**Date**	1/27/2026
Contractor	EARTHWORK INDUSTRIES, INC.	**Weather**	
Equipment Used	Doosan DX 50 Excavator		

Ground El.: 95.8 **El. Datum:** NAVD88 | **Location:** See Plan | **Groundwater depths/entry rates (in./min.):**

Depth (ft)	Sample Data / PID Readings (ppm)	Stratum Change Elev./ Depth (ft)	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (color, natural grain size and artificial component percentage estimates, maximum particle size, manual test properties, structure, odors, moisture, other descriptions and observations GEOLOGIC INTERPRETATION)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Tests Dilatancy	Toughness	Plasticity	Strength
0			OL/OH	Black dark brown sandy ORGANIC SOIL (OL/OH), no structure, no odor, moist, 20% roots, frozen top 6 inches - LOAMY FILL -	5	0	10	10	20	55				
		95.1 0.7												
1			SM	Gray-brown silty SAND with gravel (SM), no structure, no odor, moist, 30% angular cobbles, 10% scrap metal, primarily rebar, mostly up against the foundation wall, 15% angular former bedrock blocks and pieces up to 3.5 ft, trace construction debris (primarily cinder blocks and concrete fragments), 5% tree roots up to 3 in. diameter	25	15	15	15	15	15				
2														
3														
4														
5				Note: Encountered 2 tiered concrete footing 5.3 to 6.7 ft from ground surface poured directly on bedrock. Bedrock drops at low angle away from the building to the SE.										
6														
		89.1 6.7		BOTTOM OF EXPLORATION 6.7 FT										

Obstructions: Bedrock

Remarks: Photographs Taken

Field Tests

Dilatancy R - Rapid S - Slow N - None
Toughness L - Low M - Medium H - High
Plasticity N - Nonplastic L - Low M - Medium H - High
Dry Strength N - None L - Low M - Medium H - High V - Very High

Standing Water in Completed Pit

at depth ft
measured after hours elapsed

Boulders

Diameter (in.)	Number	Approx. Vol. (cu.ft)
12 to 24		=
over 24		=

Test Pit Dimensions (ft)

Pit Length x Width (ft)
Pit Depth (ft) 6.7

NOTE: Soil identification based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

APPENDIX C
Test Pit Photo Logs



Photo 1: TP26-1



Photo 2: TP26-1



Photo 3: TP26-2



Photo 4: TP26-2



Photo 5: TP26-2



Photo 6: TP26-3



Photo 7: TP26-3



Photo 8: TP26-4



Photo 9: TP26-4



Photo 10: TP26-5



Photo 11: TP26-5



Photo 12: TP26-6



Photo 13: TP26-6



Photo 14: TP26-6



Photo 15: TP26-7



Photo 16: TP26-7



Photo 17: TP26-7



Photo 18: TP26-7



Photo 19: TP26-8



Photo 20: TP26-8



Photo 21: TP26-9



Photo 22: TP26-9



Photo 23: TP26-10

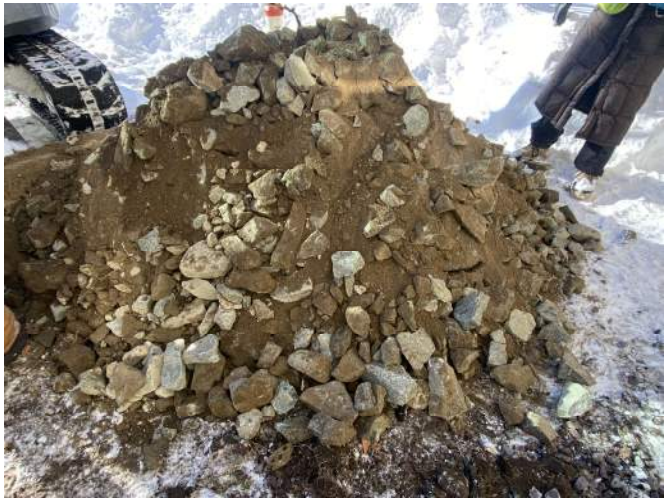


Photo 24: TP26-10



Photo 25: TP26-10



Photo 26: TP26-11



Photo 27: TP26-11



Photo 28: TP26-11

APPENDIX D
1967 Drawing

SENIOR HIGH SCHOOL
MEDFORD, MASSACHUSETTS.

ARCHITECTS
RICH, PHINNEY, LANG + COTÉ
350 PARK SQ. BUILDING, BOSTON, MASS.

SITE CONTRACTOR

ELEVATION
1/2"=1'-0"

SECTION
1/2"=1'-0"

COLOR SCHEDULE
* COLOR SPEC'D BELOW (COLD)
#2 " " " (COLD)
#6 " " " (BLUE)
LETTERS BLACK
FRAMES (HEAT) + (CAST) WHITE

JOB SIGN DETAIL

PLAN
1/2"=1'-0"

PRACTICE FOOTBALL FIELD #2
AREA 2
(ALTERNATE #1)

TOPSOIL STOCKPILE AREA #2

FIELD HOCKEY #2

STOCKPILE TOPSOIL AREA #2

STOCKPILE AREA ALTERNATE #1

PRACTICE FOOTBALL FIELD #1

TOPSOIL STOCKPILE AREA #1

AREA #2 PLAYFIELDS (ALTERNATE #1)

FIELD HOCKEY #1

BASEBALL FIELD

AREA #1 BUILDING AREA

WINTHROP ST.

ACCESS DRIVEWAY

BRIDLE PATH

LIMIT OF WORK AREA #2

LIMIT OF WORK AREA #1

FUTURE 12 LANDER RUNNING TRACK

FUTURE PARKING

FUTURE TENNIS 4 COURTS

PIT

FL. EL. 90.0

NOTE: EXCAVATE THIS AREA TO A LEVEL 9' BELOW FINISHED FINISH GRADE AND PLACE IN SCATTER "PIT" AS SPECIFIED AND AS DIRECTED. CONSTRUCT SUBGRADE WITH CONTROLLED FILL IN THIS AREA.

F.F. EL. 90.0

FL. EL. 102.87

FL. EL. 102.83

FL. EL. 83.0

FL. EL. 116.67

BOILER ROOM FL. EL. 140

FUTURE BUILDING

BUILDING BASELINE

EDGE OF PAVEMENT

APPROXIMATE EDGE OF PIT (APRIL 1968)

SITE PLAN
SCALE 1" = 40'-0"

GENERAL NOTES

1. EXISTING CONDITIONS TAKEN FROM TOPOGRAPHICAL PLAN OF LAND IN MEDFORD, MASS. DATED 6 MAY '66, "PLAN OF LAND FOR SITE OF PROPOSED MEDFORD HIGH SCHOOL" JAN. 1967; "ADDITIONAL TOPOGRAPHY AT PROPOSED MEDFORD HIGH SCHOOL SITE, APRIL 1967, BY ROWLAND F. BARNES & CO. CIVIL ENGINEERS, WALTHAM, MASS.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS & GRADES ON THE GROUND. ALL DISCREPANCIES MUST BE REPORTED IMMEDIATELY TO THE ARCHITECT FOR DECISION.
3. ALL LEDGE NOT REQUIRING GRADING SHALL BE LEFT UNDISTURBED. THE CONTRACTOR SHALL KEEP OUT OF THESE AREAS AND PRESERVE THE EXISTING PLANTING THEREIN.

EARTHWORK NOTES

1. CONTRACTOR SHALL BEGIN SUBGRADE AT TOP OF SLOPE FOR ALL RIP-RAP, STEPS & RETAINING WALLS AND GRADE TO TOP OF SLOPE, CONSTRUCTING A BANK HAVING A STEEPNESS NO FLATTER THAN 2:1 (2' HORIZONTAL TO 1' VERTICAL) & NO STEEPER THAN 1:1.
2. GRADE OF FILL TO BE PLACED IN "PIT" (EXCAVATED FROM EXISTING "PIT AREA") SHALL BE A MIN. OF 10' BELOW PROPOSED FIN. GRADES. FILL REQUIRED TO COMPLETE THE SUBGRADE IN "PIT AREA" OVER THE ABOVE PLACED FILL SHALL BE MATERIAL SUITABLE FOR FILL & COMPACTED AS SPECIFIED.

LEGEND

- 115 — EXISTING CONTOUR
- 115 — PROPOSED CONTOUR
- +(110.0) EXISTING SPOT ELEVATION
- + 115.0 PROPOSED SPOT ELEVATION
- PROPERTY LINE
- SURFACE WATER FLOW LINE
- BORING LOCATION
- TEST PIT LOCATION
- LEDGE OUTCROP
- EXISTING TREE LINE
- EXISTING STONE WALL
- LIMIT OF WORK
- CUTTING OF GRADE IN LEDGE
- F.W. FUTURE RETAINING WALL

SITE PREPARATION PLAN

1813-P

MEDFORD HIGH SCHOOL
WINTHROP ST. MEDFORD, MASS.

RICH, PHINNEY, LANG & COTÉ, INC.
ARCHITECTS
350 PARK SQUARE BUILDING BOSTON 16, MASS.

SCALE: AS SHOWN DATE: APRIL 12, 1967
DRAWN BY: C.A. REV.
CHECKED BY: B.G. REV.

REGISTERED ARCHITECT RICHARD H. PHINNEY No. 1176 BOSTON MASS. COMMONWEALTH OF MASSACHUSETTS

SHEET NUMBER
SITE 1

APPENDIX E
Seismic Refraction Survey Report

SEISMIC REFRACTION SURVEY
MEDFORD HIGH SCHOOL
489 WITHROP STREET
MEDFORD, MASSACHUSETTS

Prepared for:

Haley & Aldrich
465 Medford Street
Boston, MA

Prepared by:

Hager-Richter Geoscience, Inc.
26 Kendall Pond Road
Derry, New Hampshire 03038

File 25MB23
May 2026

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GEOPHYSICS FOR THE ENGINEERING & ENVIRONMENTAL COMMUNIITIES

Hager-Richter Geoscience

26 Kendall Pond Road, Derry, NH 03038 (603.893.9944)
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www.hager-richter.com

May 8,2026
File 25MB23

Scott Goldkamp, P.E.
Principal
Haley & Aldrich
465 Medford Street
Boston, MA

Mob: 617.908.2770
Email: sgoldkamp@haleyaldrich.com

RE: Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts

Dear Mr. Goldkamp:

In this report, we summarize the results of a surface geophysical survey conducted by Hager-Richter Geoscience, Inc. (HRGS) in April 2026 at the above referenced site located in Medford, Massachusetts for Haley & Aldrich (H&A) in support of future expansion and construction of new school buildings. The scope of the survey and areas of interest for this project were specified by H&A.

INTRODUCTION

H&A is conducting a geotechnical investigation at the location of a proposed school expansion in Medford, Massachusetts. The investigation aims to map the depth and configuration of the bedrock surface in the accessible portions of the specified area of interest at the site. H&A required a surface geophysical survey to support the investigation.

The area of interest was open along grass athletic fields, synthetic turf athletic fields, asphalt driveways, and paved parking lots. Haley & Aldrich proposed 8 seismic refraction transects, for a total of 4,757 linear feet. Figure 1 shows the general location of the Site. The surface geophysical survey was conducted using seismic refraction method to characterize overburden soil and shallow bedrock at the site.

The locations of the eight (8) geophysical transects were specified by H&A. Seismic refraction profiling was conducted along all eight transects. The lines are identified as Lines 1 through 8, and their locations are shown in Figure 2.

Boring information provided by H&A for the area indicates that the overburden generally consists of sand, gravel, clay, and till. Bedrock was encountered at depths from about 0 to 31 feet in the area of the geophysical survey.

Hager-Richter Geoscience

OBJECTIVES

The objectives of the geophysical survey are to determine the depth and configuration of the bedrock surface in the accessible portions of the specified area of interest at the site.

THE SURVEY

Peter Giger, Amber Carlson, GIT, David Foy, and Alex Brown of HRGS conducted the geophysical surveys between April 20 and April 23, 2026. The project was coordinated with Ms. Lysandra Reed, P.E. of H&A. Original data and field notes reside in the HRGS files and will be retained for a minimum of three years.

H&A specified eight (8) transects for surface geophysics (Line 1 - 8). Figure 2 shows the locations of the eight lines where data were acquired. Some transects were split up in segments labeled alphabetically A-C. Photos 1 - 2 below show the varying site conditions at the site.



Photo 1. Seismic refraction data acquisition along Line SR-1A within parking lot



Photo 2. Seismic refraction data acquisition along Line SR-4 on field turf

The geophysical survey was conducted using seismic refraction method. The transects locations were surveyed with a Trimble GeoX7 DGPS system and were superimposed on site plans provided by H&A. Elevations along the geophysical transects were taken from topographic plans provided by H&A and are relative to NAVD88.

EQUIPMENT AND PROCEDURES

Seismic refraction data were acquired along eight (8) transects totaling 4,757 linear feet. Seismic refraction profiling is the industry standard for determining the depth and configuration of bedrock. It is based on measured compressional wave velocities which provide a means for evaluating whether detected rock is weathered and/or fractured, where discernable. Seismic refraction profiling may also help discriminate between overburden layers such as saturated soils or tills, depending on the thicknesses and velocity contrast between the layers.

The seismic refraction survey was conducted using our 48-channel seismograph (two 24-channel Geometrics Geodes) coupled to up to 48 14-Hz geophones. A geophone spacing of 5 to 6 feet was used

for the seismic lines. An 8-pound sledgehammer was used as the energy source. Up to seven shot points were acquired per seismic spread where possible- three located internal to the spread, one at each end of the spread, and offset shots located in-line but outside of each end of the geophone spread. The seismograph is connected to and controlled by a laptop computer. The software provides for the acquisition, display, plotting, filtering, and storage of seismic data in the field.

The seismic refraction data were interpreted with the Generalized Reciprocal Method (GRM). For the GRM interpretation, we used IXRefraX, commercially licensed software from Interpex Limited. GRM allows the depth of bedrock to be determined for *each* geophone location, rather than only at the shot points as for most other methods, and it is less sensitive to the presence of dipping interfaces and hidden layers. The GRM method requires at least one shot at each end of the cable. This configuration provides reversed profiles.

LIMITATIONS OF THE METHODS

> HAGER-RICHTER GEOSCIENCE, INC. MAKES NO GUARANTEE THAT ALL THE TARGETS OF INTEREST WERE DETECTED IN THIS SURVEY. HAGER-RICHTER GEOSCIENCE, INC. IS NOT RESPONSIBLE FOR DETECTING TARGETS THAT CANNOT BE DETECTED DUE TO SITE CONDITIONS OR DUE TO THE LIMITATIONS OF THE METHODS. IN GENERAL, THE ACCURACY (STANDARD DEVIATION) OF THE APPARENT DEPTHS OF RELATIVELY COMPETENT BEDROCK BY THE SEISMIC REFRACTION METHOD IS ABOUT ± 10% OF THE APPARENT DEPTH OF BEDROCK, OR ± 2 FEET, WHICHEVER IS GREATER. THE BEDROCK MODEL SHOWN AS A PROFILE OR LISTED AS TABULAR DATA SHOULD NOT BE USED SOLELY FOR CONTRACT BEDROCK REMOVAL QUANTITIES.

As with all geophysical methods, the seismic refraction method assumes that the local geology is relatively uncomplicated. In particular, the seismic refraction method assumes that interfaces between geologic materials correlate with sharp increases in seismic velocity and that the interfaces between geologic units are relatively flat lying. The method is not very sensitive to lateral variations within layers, and relatively subtle features such as fracture zones within bedrock generally cannot be detected unless there is a topographic expression of the feature and/or a significant drop in bedrock velocity. The accuracy of the method is degraded in areas with strong topographic relief and/or where the interfaces have apparent dips greater than about 20. ***In general, the accuracy of depths determined is estimated to be about 10% or 2 feet, whichever is greater. The results of this survey should not be relied upon for contract bedrock removal quantities.***

Where two materials do not exhibit contrasting velocities, or where velocities gradually increase with depth, a clear refracted signal is not generated, and the seismic refraction method cannot be used to distinguish the two materials. In some cases, the "geophysical contact" between materials with contrasting velocities does not correlate exactly with the "geologic contact." For example, where a highly weathered bedrock is overlain by a dense material such as till, the velocity range of the weathered bedrock might overlap or approach the velocity range of the till, and the two materials cannot be distinguished seismically. In such cases, the depth determined by seismic refraction is the depth of *competent* bedrock, which might be located at some depth below the geologic contact.

The depth relations of the water table and bedrock may constitute a significant problem for the seismic refraction technique. This problem is that of a "blind layer." A blind layer occurs where the thickness of the saturated overburden is less than about half the depth of bedrock. In such cases, the water-saturated material immediately above bedrock is "blind" in the sense that no refracted seismic energy from it will be received as a first arrival of seismic energy, and all methods used to reduce the seismic data to determine the depth of bedrock, the objective of this survey, use *only* first arrivals. Thus, the saturated layer will not be detected where it is close to bedrock, and most methods of seismic data reduction will indicate that bedrock is considerably shallower than it is. Although GRM, the method used by HRGS to reduce the seismic refraction data, does not use first arrivals through the water saturated zone (because there is none to use) in such cases, GRM determines the depth of bedrock correctly by using the *average* velocity of the saturated and unsaturated zones.

A "hidden layer" occurs where a lower velocity material underlies a higher velocity material, a common situation in stratified sediments. An example is where sand is present under layers of clay or till. As in the case of a "blind layer," most methods of seismic refraction data reduction will indicate that bedrock is deeper than it is if a hidden layer is present but not detected. Internal tests in the seismic refraction data reduction software that we use (IXRefraX by Interpex) indicate that such layers might be present, and an average velocity of the two layers is used to determine the depth of bedrock.

RESULTS

Seismic Refraction Survey. Seismic refraction data were acquired along eight (8) transects totaling 4,757 linear feet and their locations are shown in Figure 2. The results of the seismic refraction survey are shown in profile form in Figures 3 - 9 for Lines 1 - 8, respectively. The results of the seismic refraction survey are also listed in tabular form in Table 1.

Data Quality. The quality of the seismic refraction data ranges from fair to good. If not for the traffic noise and asphalt arrivals on some of the transects, the data quality would have been excellent. Additional stacking was required in these areas to attempt to improve the signal to noise ratio.

A measure of the accuracy (standard deviation) of the data can be obtained by comparing the seismically determined depths with depths of bedrock recorded in nearby borings (Table 2A) and by comparing the results at seismic line intersections (Table 2B). For the area of interest, nine borings and test pits were close enough to the seismic lines (i.e., closer than about 45 feet) for direct comparison. An examination of Table 2A shows that the average depths determined seismically differ by about 2 feet from the depth of bedrock encountered in nearby borings.

For the area of interest, four seismic lines intersections are available for comparison. An examination of Table 2B shows that the average depths determined seismically for the intersection are relatively internally consistent with an average difference of 1 foot.

As noted above in the Limitations of the Methods, the depth determined by seismic refraction is the depth of relatively *competent* bedrock, which might be located at a depth somewhat below the depth of drilling refusal. As also indicated in the limitations section, the accuracy (standard deviation) of depths determined from seismic refraction is estimated to be in general about 10% or 2 feet, whichever is greater, and we infer this dataset is consistent with that.

Interpretation of Velocities. Figures 3 - 9 show the seismic refraction results in profile form for Seismic Lines 1 - 8, respectively. Based on the interpretation obtained with the GRM method, materials with two distinct velocity ranges were detected.

The uppermost material exhibits compressional wave velocities ranging from about 1000 feet per second (fps) to about 2,700 fps, inferred to represent a combination of less dense unsaturated soil and more dense overburden soils. The lowermost material exhibits compressional wave velocities ranging from about 7,100 fps to about 29,000 fps and is inferred to represent competent bedrock. Where the bedrock exhibits velocities at the lower end of the range, it is likely fractured or weathered.

Bedrock Depths and Configuration. The results of the seismic refraction survey are shown in profile form in Figures 3 - 9 and are listed in tabular form in Table 1. The depth of competent bedrock varies between about 4 and 41 feet below ground surface, and bedrock elevation varies between 39 and 118 feet, an apparent relief of about 79 feet.

CONCLUSIONS

Based on the results of a surface geophysical survey conducted by Hager-Richter Geoscience, Inc. (HRGS) in April 2026 at Medford High School in Medford, Massachusetts in support of geotechnical investigations by H&A, we conclude the following:

- In general, two distinct layers were detected seismically in the area of interest.
- The depth of bedrock based on the seismic refraction data varies between about 4 and 41 feet below ground surface in the areas surveyed.
- Bedrock elevation based on the seismic refraction data varies between 39 and 118 feet, an apparent relief of about 79 feet.

LIMITATIONS ON USE OF THIS REPORT

This letter report was prepared for the exclusive use of H&A (Client). No other party shall be entitled to rely on this Report, or any information, documents, records, data, interpretations, advice, or opinions given to Client by Hager-Richter Geoscience, Inc. (HRGS) in the performance of its work. The Report relates solely to the specific project for which HRGS has been retained and shall not be used or relied upon by Client or any third party for any variation or extension of this project, any other project, or any other purpose without the express written permission of HRGS. Any unpermitted use by Client or any third party shall be at Client's or such third party's own risk and without any liability to HRGS.

HRGS has used reasonable care, skill, competence, and judgment in the performance of' its services for this project consistent with professional standards for those providing similar services at the same time, in the same locale, and under like circumstances. Unless otherwise stated, the work performed by HRGS should be understood to be exploratory and interpretational in character and any results, findings or recommendations contained in this Report or resulting from the work proposed may include decisions which are judgmental in nature and not necessarily based solely on pure science or engineering. It should be noted that our conclusions might be modified if subsurface conditions were better delineated with additional subsurface exploration including, but not limited to, test pits, soil borings with collection of soil and water samples, and laboratory testing.

Except as expressly provided in this limitations section, HRGS makes no other representation or warranty of any kind whatsoever, oral or written, expressed or implied; and all implied warranties of merchantability and fitness for a particular purpose, are hereby disclaimed. If you have any questions or comments on this letter report, please contact us at your convenience. It has been a pleasure to work with H&A on this project. We look forward to working with you again in the future.

Sincerely yours,
HAGER-RICHTER GEOSCIENCE, INC.

Vanja Dezelic, Ph.D.
Senior Geophysicist

Attachments: Tables 1 and 2
Figures 1 - 9

Hager-Richter Geoscience

TABLE 1
SEISMIC REFRACTION RESULTS
MEDFORD HIGH SCHOOL
489 WINTHROP STREET
MEDFORD, MASSACHUSETTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-1A	0+00	757217	2981466	69	13	56
SR-1A	0+06	757222	2981468	69	13	56
SR-1A	0+12	757228	2981471	70	13	56
SR-1A	0+18	757233	2981473	70	13	57
SR-1A	0+24	757239	2981475	70	14	57
SR-1A	0+30	757244	2981477	71	14	57
SR-1A	0+36	757250	2981480	71	14	57
SR-1A	0+42	757255	2981482	71	13	58
SR-1A	0+48	757261	2981484	71	13	58
SR-1A	0+54	757267	2981486	71	13	59
SR-1A	0+60	757272	2981489	72	13	59
SR-1A	0+66	757278	2981491	72	13	58
SR-1A	0+72	757283	2981493	72	16	56
SR-1A	0+78	757289	2981495	72	16	56
SR-1A	0+84	757294	2981498	72	16	56
SR-1A	0+90	757300	2981500	72	17	56
SR-1A	0+96	757306	2981502	73	18	54
SR-1A	1+02	757311	2981504	73	18	54
SR-1A	1+08	757317	2981507	73	18	55
SR-1A	1+14	757322	2981509	73	19	54
SR-1A	1+20	757328	2981511	73	19	54
SR-1A	1+26	757333	2981513	73	20	54
SR-1A	1+32	757339	2981515	73	20	53
SR-1A	1+38	757345	2981518	74	21	53
SR-1A	1+44	757350	2981520	74	22	52
SR-1A	1+50	757356	2981522	74	23	51
SR-1A	1+56	757361	2981524	74	22	52
SR-1A	1+62	757367	2981527	74	22	52
SR-1A	1+68	757372	2981529	75	22	53
SR-1A	1+74	757378	2981531	75	21	53
SR-1A	1+80	757383	2981533	75	20	55
SR-1A	1+86	757389	2981536	75	19	56
SR-1A	1+92	757395	2981538	75	17	58
SR-1A	1+98	757400	2981540	76	14	61
SR-1A	2+04	757406	2981542	76	14	62
SR-1A	2+10	757411	2981545	76	13	63
SR-1A	2+16	757417	2981547	76	12	64
SR-1A	2+22	757422	2981549	76	12	64

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts
File 25MB23 Table 1

Hager-Richter Geoscience

TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-1A	2+28	757428	2981551	77	12	65
SR-1A	2+34	757434	2981554	77	12	65
SR-1A	2+40	757439	2981556	77	12	65
SR-1A	2+46	757445	2981558	77	12	65
SR-1A	2+52	757450	2981560	77	12	65
SR-1A	2+58	757456	2981563	77	12	66
SR-1A	2+64	757461	2981565	77	12	66
SR-1A	2+70	757467	2981567	77	12	66
SR-1A	2+76	757473	2981569	77	12	66
SR-1A	2+82	757478	2981572	77	12	66
SR-1B	-2+40	756995	2981532	75	10	65
SR-1B	-2+35	757000	2981533	75	10	65
SR-1B	-2+30	757005	2981534	75	10	66
SR-1B	-2+25	757010	2981535	76	10	66
SR-1B	-2+20	757015	2981537	76	10	66
SR-1B	-2+15	757019	2981538	76	10	66
SR-1B	-2+10	757024	2981539	76	10	66
SR-1B	-2+05	757029	2981540	76	10	67
SR-1B	-2+00	757034	2981541	77	10	66
SR-1B	-1+95	757039	2981542	77	11	66
SR-1B	-1+90	757044	2981543	77	11	66
SR-1B	-1+85	757049	2981544	77	12	66
SR-1B	-1+80	757054	2981545	77	12	65
SR-1B	-1+75	757058	2981547	77	12	65
SR-1B	-1+70	757063	2981548	78	12	66
SR-1B	-1+65	757068	2981549	78	12	66
SR-1B	-1+60	757073	2981550	78	12	66

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-1B	-1+55	757078	2981551	78	12	66
SR-1B	-1+50	757083	2981552	78	12	66
SR-1B	-1+45	757088	2981553	78	12	66
SR-1B	-1+40	757093	2981554	78	12	66
SR-1B	-1+35	757097	2981555	78	13	65
SR-1B	-1+30	757102	2981557	79	15	64
SR-1B	-1+25	757107	2981558	79	16	63
SR-1B	-1+20	757112	2981559	79	17	61
SR-1B	-1+15	757117	2981560	79	19	60
SR-1B	-1+10	757122	2981561	79	19	60
SR-1B	-1+05	757127	2981562	79	21	58
SR-1B	-1+00	757132	2981563	79	22	58
SR-1B	-0+95	757136	2981564	79	22	57
SR-1B	-0+90	757141	2981566	79	23	57
SR-1B	-0+85	757146	2981567	79	24	55
SR-1B	-0+80	757151	2981568	79	25	54
SR-1B	-0+75	757156	2981569	79	28	52
SR-1B	-0+70	757161	2981570	79	28	52
SR-1B	-0+65	757166	2981571	79	31	49
SR-1B	-0+60	757171	2981572	79	35	44
SR-1B	-0+55	757175	2981573	80	36	43
SR-1B	-0+50	757180	2981574	80	38	42
SR-1B	-0+45	757185	2981576	80	38	41
SR-1B	-0+40	757190	2981577	80	39	41
SR-1B	-0+35	757195	2981578	80	39	41
SR-1B	-0+30	757200	2981579	80	40	40
SR-1B	-0+25	757205	2981580	80	40	40

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts
File 25MB23 Table 1

Hager-Richter Geoscience

TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-1B	-0+20	757210	2981581	80	40	40
SR-1B	-0+15	757214	2981582	80	41	39
SR-1B	-0+10	757219	2981583	80	40	40
SR-1B	-0+05	757224	2981585	80	40	40
SR-1B	0+00	757229	2981586	80	40	40
SR-1B	0+05	757234	2981587	80	41	40
SR-1B	0+10	757239	2981588	80	40	40
SR-1B	0+15	757244	2981589	80	35	45
SR-1B	0+20	757249	2981590	80	34	46
SR-1B	0+25	757253	2981591	80	33	48
SR-1B	0+30	757258	2981592	80	31	50
SR-1B	0+35	757263	2981593	80	30	50
SR-1B	0+40	757268	2981595	80	29	51
SR-1B	0+45	757273	2981596	81	28	52
SR-1B	0+50	757278	2981597	81	27	53
SR-1B	0+55	757283	2981598	81	27	53
SR-1B	0+60	757288	2981599	81	28	53
SR-1B	0+65	757292	2981600	81	26	55
SR-1B	0+70	757297	2981601	81	26	55
SR-1B	0+75	757302	2981602	81	26	55
SR-1B	0+80	757307	2981603	81	25	56
SR-1B	0+85	757312	2981605	81	25	56
SR-1B	0+90	757317	2981606	81	26	55
SR-1B	0+95	757322	2981607	81	26	55
SR-1B	1+00	757327	2981608	81	26	55
SR-1B	1+05	757331	2981609	81	26	55
SR-1B	1+10	757336	2981610	81	25	56
SR-1B	1+15	757341	2981611	81	25	57
SR-1B	1+20	757346	2981612	81	24	57
SR-1B	1+25	757351	2981614	81	24	57
SR-1B	1+30	757356	2981615	81	24	57
SR-1B	1+35	757361	2981616	81	24	58
SR-1B	1+40	757366	2981617	81	23	58
SR-1B	1+45	757370	2981618	81	23	58
SR-1B	1+50	757375	2981619	81	22	59
SR-1B	1+55	757380	2981620	81	17	64
SR-1B	1+60	757385	2981621	81	16	65
SR-1B	1+65	757390	2981622	81	12	69
SR-1B	1+70	757395	2981624	81	12	69
SR-1B	1+75	757400	2981625	81	12	69
SR-1B	1+80	757404	2981626	81	10	71
SR-1B	1+85	757409	2981627	81	9	72
SR-1B	1+90	757414	2981628	81	9	72
SR-1B	1+95	757419	2981629	81	8	73
SR-1B	2+00	757424	2981630	81	8	73
SR-1B	2+05	757429	2981631	81	8	73
SR-1B	2+10	757434	2981632	81	7	74
SR-1B	2+15	757439	2981634	81	6	76
SR-1B	2+20	757443	2981635	81	4	77
SR-1B	2+25	757448	2981636	81	4	77
SR-1B	2+30	757453	2981637	81	4	77
SR-1B	2+35	757458	2981638	82	4	77
SR-2A	0+00	757708	2981760	84	14	70
SR-2A	0+05	757707	2981765	84	15	69

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts
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TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-2A	0+10	757706	2981770	85	15	70
SR-2A	0+15	757704	2981775	85	16	69
SR-2A	0+20	757703	2981779	85	16	69
SR-2A	0+25	757702	2981784	86	14	71
SR-2A	0+30	757701	2981789	86	14	72
SR-2A	0+35	757700	2981794	86	12	74
SR-2A	0+40	757699	2981799	86	10	76
SR-2A	0+45	757698	2981804	87	10	77
SR-2A	0+50	757697	2981809	87	10	78
SR-2A	0+55	757696	2981814	87	10	78
SR-2A	0+60	757695	2981819	88	10	78
SR-2A	0+65	757694	2981824	88	10	78
SR-2A	0+70	757693	2981828	88	10	78
SR-2A	0+75	757692	2981833	89	10	79
SR-2A	0+80	757691	2981838	89	10	79
SR-2A	0+85	757690	2981843	89	10	80
SR-2A	0+90	757689	2981848	89	10	80
SR-2A	0+95	757688	2981853	90	10	80
SR-2A	1+00	757687	2981858	90	10	80
SR-2A	1+05	757686	2981863	90	9	81
SR-2A	1+10	757685	2981868	91	9	81
SR-2A	1+15	757684	2981872	91	9	82
SR-2A	1+20	757683	2981877	91	8	83
SR-2A	1+25	757682	2981882	91	8	83
SR-2A	1+30	757681	2981887	91	8	83
SR-2A	1+35	757680	2981892	91	8	83
SR-2A	1+40	757679	2981897	91	9	82
SR-2A	1+45	757678	2981902	91	9	82
SR-2A	1+50	757677	2981907	91	10	81
SR-2A	1+55	757676	2981912	91	12	80
SR-2A	1+60	757675	2981917	92	12	80
SR-2B	1+60	757696	2981921	93	7	86
SR-2B	1+66	757694	2981926	93	7	86
SR-2B	1+72	757693	2981932	93	7	86
SR-2B	1+78	757691	2981938	93	6	87
SR-2B	1+84	757690	2981944	93	6	87
SR-2B	1+90	757689	2981950	94	7	87
SR-2B	1+96	757687	2981956	94	7	86
SR-2B	2+02	757686	2981961	94	8	86
SR-2B	2+08	757684	2981967	94	9	85
SR-2B	2+14	757683	2981973	94	9	85
SR-2B	2+20	757681	2981979	94	9	85
SR-2B	2+26	757680	2981985	94	9	85
SR-2B	2+32	757678	2981990	94	9	85
SR-2B	2+38	757677	2981996	94	9	85
SR-2B	2+44	757675	2982002	94	10	85
SR-2B	2+50	757674	2982008	94	9	85
SR-2B	2+56	757672	2982014	95	10	85
SR-2B	2+62	757671	2982020	95	10	85
SR-2B	2+68	757669	2982025	95	10	85
SR-2B	2+74	757668	2982031	95	10	85
SR-2B	2+80	757666	2982037	95	10	85
SR-2B	2+86	757665	2982043	95	10	85
SR-2B	2+92	757664	2982049	96	10	85

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts
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TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-2B	2+98	757662	2982054	96	11	85
SR-2B	3+04	757661	2982060	96	10	85
SR-2B	3+10	757659	2982066	96	10	85
SR-2B	3+16	757658	2982072	96	11	85
SR-2B	3+22	757656	2982078	96	10	86
SR-2B	3+28	757655	2982084	96	10	86
SR-2B	3+34	757653	2982089	96	10	86
SR-2B	3+40	757652	2982095	96	10	86
SR-2B	3+46	757650	2982101	96	10	86
SR-2B	3+52	757649	2982107	96	10	86
SR-2B	3+58	757647	2982113	96	10	86
SR-2B	3+64	757646	2982118	96	9	87
SR-2B	3+70	757644	2982124	96	9	87
SR-2B	3+76	757643	2982130	96	8	88
SR-2B	3+82	757642	2982136	96	8	88
SR-2B	3+88	757640	2982142	96	8	89
SR-2B	3+94	757639	2982148	96	7	89
SR-2B	4+00	757637	2982153	96	7	89
SR-2B	4+06	757636	2982159	96	8	89
SR-2B	4+12	757634	2982165	96	8	88
SR-2B	4+18	757633	2982171	96	8	88
SR-2B	4+24	757631	2982177	96	8	88
SR-2B	4+30	757630	2982182	96	8	88
SR-2B	4+36	757628	2982188	96	7	89
SR-2B	4+42	757627	2982194	96	7	89
SR-2B	4+48	757625	2982200	96	6	90
SR-2B	4+54	757624	2982206	96	6	90
SR-2B	4+60	757622	2982212	96	6	90
SR-2B	4+66	757621	2982217	96	6	91
SR-2B	4+72	757620	2982223	96	6	90
SR-2B	4+78	757618	2982229	96	6	90
SR-2B	4+84	757617	2982235	96	6	91
SR-2B	4+90	757615	2982241	96	5	91
SR-2B	4+96	757614	2982246	96	5	91
SR-2B	5+02	757612	2982252	96	6	91
SR-2B	5+08	757611	2982258	96	5	91
SR-2B	5+14	757609	2982264	96	6	91
SR-2B	5+20	757608	2982270	96	5	91
SR-2B	5+26	757606	2982276	96	6	90
SR-2B	5+32	757605	2982281	96	6	90
SR-2B	5+38	757603	2982287	96	6	90
SR-2B	5+44	757602	2982293	96	7	89
SR-2B	5+50	757600	2982299	96	7	89
SR-2B	5+56	757599	2982305	96	7	89
SR-2B	5+62	757598	2982310	96	7	89
SR-2B	5+68	757596	2982316	96	8	88
SR-2B	5+74	757595	2982322	96	8	88
SR-2B	5+80	757593	2982328	96	8	88
SR-2B	5+86	757592	2982334	96	8	88
SR-2B	5+92	757590	2982340	96	8	88
SR-2B	5+98	757589	2982345	96	8	88
SR-2B	6+04	757587	2982351	96	8	88
SR-2B	6+10	757586	2982357	96	8	88
SR-2B	6+16	757584	2982363	96	8	88

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
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TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-2B	6+22	757583	2982369	96	8	88
SR-2B	6+28	757581	2982374	96	8	88
SR-2B	6+34	757580	2982380	96	8	88
SR-2B	6+40	757578	2982386	96	9	88
SR-2B	6+46	757577	2982392	96	9	88
SR-2B	6+52	757576	2982398	97	9	88
SR-2B	6+58	757574	2982403	97	9	88
SR-2B	6+64	757573	2982409	97	9	88
SR-2B	6+70	757571	2982415	97	9	88
SR-2B	6+76	757570	2982421	97	9	88
SR-2B	6+82	757568	2982427	97	9	88
SR-2B	6+88	757567	2982433	98	10	88
SR-2B	6+94	757565	2982438	98	10	88
SR-2B	7+00	757564	2982444	98	10	88
SR-2B	7+06	757562	2982450	98	10	88
SR-2B	7+12	757561	2982456	98	10	88
SR-2B	7+18	757559	2982462	98	10	88
SR-2B	7+24	757558	2982467	98	10	88
SR-2B	7+30	757556	2982473	98	10	88
SR-2C	0+00	757535	2982512	101	6	95
SR-2C	0+05	757534	2982517	101	6	95
SR-2C	0+10	757533	2982522	101	6	95
SR-2C	0+15	757532	2982527	101	6	95
SR-2C	0+20	757531	2982531	101	5	96
SR-2C	0+25	757530	2982536	101	5	96
SR-2C	0+30	757529	2982541	101	6	95
SR-2C	0+35	757528	2982546	101	6	95
SR-2C	0+40	757527	2982551	101	7	94
SR-2C	0+45	757526	2982556	101	7	94
SR-2C	0+50	757525	2982561	101	7	94
SR-2C	0+55	757524	2982566	101	7	94
SR-2C	0+60	757523	2982571	101	8	93
SR-2C	0+65	757522	2982576	101	8	93
SR-2C	0+70	757521	2982580	101	8	93
SR-2C	0+75	757520	2982585	101	8	93
SR-2C	0+80	757518	2982590	101	8	93
SR-2C	0+85	757517	2982595	101	8	93
SR-2C	0+90	757516	2982600	101	8	93
SR-2C	0+95	757515	2982605	101	8	93
SR-2C	1+00	757514	2982610	101	8	94
SR-2C	1+05	757513	2982615	101	8	93
SR-2C	1+10	757512	2982620	101	8	93
SR-2C	1+15	757511	2982624	101	8	93
SR-3	0+00	756888	2982373	111	9	102
SR-3	0+05	756893	2982374	111	9	102
SR-3	0+10	756898	2982376	111	9	102
SR-3	0+15	756903	2982377	111	9	102
SR-3	0+20	756907	2982379	111	9	102
SR-3	0+25	756912	2982380	110	9	102
SR-3	0+30	756917	2982382	110	9	102
SR-3	0+35	756922	2982384	110	9	101
SR-3	0+40	756926	2982385	110	9	101
SR-3	0+45	756931	2982387	110	10	100
SR-3	0+50	756936	2982388	110	9	101

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts
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TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-3	0+55	756941	2982390	110	9	101
SR-3	0+60	756945	2982391	109	8	101
SR-3	0+65	756950	2982393	109	8	102
SR-3	0+70	756955	2982395	109	8	102
SR-3	0+75	756960	2982396	109	8	101
SR-3	0+80	756964	2982398	109	7	102
SR-3	0+85	756969	2982399	109	8	101
SR-3	0+90	756974	2982401	109	8	101
SR-3	0+95	756979	2982402	109	8	101
SR-3	1+00	756983	2982404	109	8	101
SR-3	1+05	756988	2982405	109	8	101
SR-3	1+10	756993	2982407	109	8	101
SR-3	1+15	756998	2982409	109	8	101
SR-3	1+20	757002	2982410	109	8	100
SR-3	1+25	757007	2982412	109	8	100
SR-3	1+30	757012	2982413	109	8	100
SR-3	1+35	757017	2982415	108	8	100
SR-3	1+40	757021	2982416	108	8	100
SR-3	1+45	757026	2982418	108	8	100
SR-3	1+50	757031	2982420	108	8	100
SR-3	1+55	757036	2982421	108	9	100
SR-3	1+60	757040	2982423	108	8	100
SR-3	1+65	757045	2982424	108	7	101
SR-3	1+70	757050	2982426	108	6	102
SR-3	1+75	757055	2982427	108	6	102
SR-3	1+80	757059	2982429	108	6	102
SR-3	1+85	757064	2982431	108	6	102
SR-3	1+90	757069	2982432	108	6	103
SR-3	1+95	757074	2982434	108	5	103
SR-3	2+00	757078	2982435	108	6	102
SR-3	2+05	757083	2982437	108	6	102
SR-3	2+10	757088	2982438	108	8	100
SR-3	2+15	757093	2982440	108	8	100
SR-3	2+20	757097	2982441	108	9	99
SR-3	2+25	757102	2982443	108	10	99
SR-3	2+30	757107	2982445	108	10	98
SR-3	2+35	757112	2982446	108	10	98
SR-3	2+40	757116	2982448	108	10	98
SR-3	2+45	757121	2982449	108	11	97
SR-3	2+50	757126	2982451	108	11	97
SR-3	2+55	757131	2982452	108	11	97
SR-3	2+60	757135	2982454	108	11	97
SR-3	2+65	757140	2982456	108	12	96
SR-3	2+70	757145	2982457	108	11	97
SR-3	2+75	757150	2982459	108	12	96
SR-3	2+80	757154	2982460	108	12	97
SR-3	2+85	757159	2982462	108	11	97
SR-3	2+90	757164	2982463	108	11	97
SR-3	2+95	757169	2982465	108	11	97
SR-3	3+00	757173	2982466	108	10	98
SR-3	3+05	757178	2982468	108	10	98
SR-3	3+10	757183	2982470	108	9	99
SR-3	3+15	757188	2982471	108	10	98
SR-3	3+20	757192	2982473	108	10	98

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
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TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-3	3+25	757197	2982474	108	10	99
SR-3	3+30	757202	2982476	108	10	98
SR-3	3+35	757207	2982477	108	11	97
SR-3	3+40	757211	2982479	108	12	96
SR-3	3+45	757216	2982481	108	12	96
SR-3	3+50	757221	2982482	108	13	95
SR-3	3+55	757226	2982484	108	14	95
SR-3	3+60	757230	2982485	108	13	95
SR-3	3+65	757235	2982487	108	14	94
SR-3	3+70	757240	2982488	108	13	94
SR-3	3+75	757245	2982490	108	13	94
SR-3	3+80	757249	2982492	108	14	94
SR-3	3+85	757254	2982493	107	14	93
SR-3	3+90	757259	2982495	107	14	93
SR-3	3+95	757264	2982496	107	14	93
SR-3	4+00	757268	2982498	107	14	94
SR-3	4+05	757273	2982499	107	13	94
SR-3	4+10	757278	2982501	107	13	94
SR-3	4+15	757283	2982502	107	13	93
SR-3	4+20	757287	2982504	106	13	93
SR-3	4+25	757292	2982506	106	13	93
SR-3	4+30	757297	2982507	106	13	93
SR-3	4+35	757301	2982509	106	13	93
SR-3	4+40	757306	2982510	105	12	93
SR-3	4+45	757311	2982512	105	12	93
SR-3	4+50	757316	2982513	105	12	93
SR-3	4+55	757320	2982515	104	13	92
SR-3	4+60	757325	2982517	104	13	91
SR-3	4+65	757330	2982518	103	12	91
SR-3	4+70	757335	2982520	103	13	90
SR-3	4+75	757339	2982521	103	13	90
SR-3	4+80	757344	2982523	103	14	89
SR-3	4+85	757349	2982524	103	14	89
SR-3	4+90	757354	2982526	103	14	89
SR-3	4+95	757358	2982528	102	14	88
SR-3	5+00	757363	2982529	102	14	88
SR-3	5+05	757368	2982531	102	14	88
SR-3	5+10	757373	2982532	102	14	88
SR-3	5+15	757377	2982534	102	14	88
SR-3	5+20	757382	2982535	102	14	88
SR-3	5+25	757387	2982537	102	14	88
SR-3	5+30	757392	2982538	102	13	89
SR-3	5+35	757396	2982540	102	13	89
SR-3	5+40	757401	2982542	102	13	89
SR-3	5+45	757406	2982543	102	11	90
SR-3	5+50	757411	2982545	102	11	91
SR-3	5+55	757415	2982546	102	11	91
SR-3	5+60	757420	2982548	102	11	91
SR-3	5+65	757425	2982549	102	10	91
SR-3	5+70	757430	2982551	102	11	91
SR-3	5+75	757434	2982553	102	11	91
SR-3	5+80	757439	2982554	102	11	91
SR-3	5+85	757444	2982556	102	11	91
SR-3	5+90	757449	2982557	102	11	91

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
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TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-3	5+95	757453	2982559	102	11	91
SR-3	6+00	757458	2982560	102	10	92
SR-3	6+05	757463	2982562	102	10	92
SR-3	6+10	757468	2982564	102	9	93
SR-3	6+15	757472	2982565	102	9	93
SR-3	6+20	757477	2982567	101	9	93
SR-3	6+25	757482	2982568	101	9	93
SR-3	6+30	757487	2982570	101	8	93
SR-3	6+35	757491	2982571	101	9	93
SR-3	6+40	757496	2982573	101	9	92
SR-3	6+45	757501	2982574	101	10	91
SR-3	6+50	757506	2982576	101	10	91
SR-3	6+55	757510	2982578	101	10	91
SR-3	6+60	757515	2982579	101	11	91
SR-3	6+65	757520	2982581	101	11	90
SR-3	6+70	757525	2982582	101	12	89
SR-3	6+75	757529	2982584	101	12	89
SR-3	6+80	757534	2982585	101	12	89
SR-3	6+85	757539	2982587	101	13	88
SR-3	6+90	757544	2982589	101	14	88
SR-3	6+95	757548	2982590	101	14	88
SR-3	7+00	757553	2982592	101	14	87
SR-3	7+05	757558	2982593	101	14	87
SR-3	7+10	757563	2982595	101	14	87
SR-3	7+15	757567	2982596	101	14	87
SR-4	0+00	756739	2982715	126	13	113
SR-4	0+06	756745	2982716	126	13	113
SR-4	0+12	756751	2982718	126	13	113
SR-4	0+18	756757	2982719	126	13	114
SR-4	0+24	756763	2982720	126	13	113
SR-4	0+30	756769	2982722	126	13	113
SR-4	0+36	756774	2982723	126	13	113
SR-4	0+42	756780	2982724	126	13	113
SR-4	0+48	756786	2982726	126	12	114
SR-4	0+54	756792	2982727	126	12	114
SR-4	0+60	756798	2982728	126	13	113
SR-4	0+66	756804	2982729	126	14	113
SR-4	0+72	756810	2982731	126	15	111
SR-4	0+78	756815	2982732	126	14	112
SR-4	0+84	756821	2982733	126	14	112
SR-4	0+90	756827	2982735	126	14	112
SR-4	0+96	756833	2982736	126	14	112
SR-4	1+02	756839	2982737	126	15	111
SR-4	1+08	756845	2982738	126	14	112
SR-4	1+14	756851	2982740	126	14	112
SR-4	1+20	756856	2982741	126	14	112
SR-4	1+26	756862	2982742	126	14	112
SR-4	1+32	756868	2982744	126	14	112
SR-4	1+38	756874	2982745	126	14	112
SR-4	1+44	756880	2982746	126	15	111
SR-4	1+50	756886	2982748	126	15	111
SR-4	1+56	756892	2982749	126	15	111
SR-4	1+62	756897	2982750	126	16	110
SR-4	1+68	756903	2982751	126	16	110

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts
File 25MB23 Table 1

Hager-Richter Geoscience

TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-4	1+74	756909	2982753	126	16	110
SR-4	1+80	756915	2982754	126	16	110
SR-4	1+86	756921	2982755	126	14	112
SR-4	1+92	756927	2982757	126	14	112
SR-4	1+98	756933	2982758	126	13	113
SR-4	2+04	756938	2982759	126	13	113
SR-4	2+10	756944	2982761	126	12	114
SR-4	2+16	756950	2982762	126	10	116
SR-4	2+22	756956	2982763	126	9	117
SR-4	2+28	756962	2982764	126	10	116
SR-4	2+34	756968	2982766	126	9	118
SR-4	2+40	756974	2982767	126	8	118
SR-4	2+46	756979	2982768	126	9	118
SR-4	2+52	756985	2982770	126	10	116
SR-4	2+58	756991	2982771	126	10	116
SR-4	2+64	756997	2982772	126	11	115
SR-4	2+70	757003	2982774	126	11	115
SR-4	2+76	757009	2982775	126	12	114
SR-4	2+82	757015	2982776	126	13	114
SR-4	2+88	757020	2982777	126	13	113
SR-4	2+94	757026	2982779	126	13	113
SR-4	3+00	757032	2982780	126	13	113
SR-4	3+06	757038	2982781	126	13	113
SR-4	3+12	757044	2982783	126	13	113
SR-4	3+18	757050	2982784	126	13	113
SR-4	3+24	757056	2982785	126	13	113
SR-4	3+30	757061	2982786	126	13	113
SR-4	3+36	757067	2982788	126	13	113
SR-4	3+42	757073	2982789	126	13	113
SR-4	3+48	757079	2982790	126	14	112
SR-4	3+54	757085	2982792	126	14	112
SR-4	3+60	757091	2982793	126	14	112
SR-4	3+66	757097	2982794	126	14	112
SR-4	3+72	757102	2982796	126	14	112
SR-4	3+78	757108	2982797	126	14	113
SR-4	3+84	757114	2982798	126	13	113
SR-4	3+90	757120	2982799	126	12	114
SR-4	3+96	757126	2982801	126	13	113
SR-4	4+02	757132	2982802	126	13	113
SR-4	4+08	757138	2982803	126	13	113
SR-4	4+14	757143	2982805	126	13	113
SR-4	4+20	757149	2982806	126	13	113
SR-4	4+26	757155	2982807	126	13	113
SR-4	4+32	757161	2982809	126	13	113
SR-4	4+38	757167	2982810	126	13	113
SR-4	4+44	757173	2982811	126	14	112
SR-4	4+50	757179	2982812	126	14	113
SR-4	4+56	757184	2982814	126	13	113
SR-4	4+62	757190	2982815	126	13	113
SR-4	4+68	757196	2982816	126	13	114
SR-4	4+74	757202	2982818	126	12	114
SR-4	4+80	757208	2982819	126	10	116
SR-4	4+86	757214	2982820	126	9	117
SR-4	4+92	757220	2982822	126	9	117

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts
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TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-4	4+98	757225	2982823	126	10	116
SR-4	5+04	757231	2982824	126	10	116
SR-4	5+10	757237	2982825	126	10	116
SR-4	5+16	757243	2982827	126	10	116
SR-4	5+22	757249	2982828	126	11	115
SR-4	5+28	757255	2982829	126	11	115
SR-4	5+34	757261	2982831	126	11	115
SR-4	5+40	757266	2982832	126	11	115
SR-4	5+46	757272	2982833	126	11	115
SR-4	5+52	757278	2982834	126	11	115
SR-4	5+58	757284	2982836	126	11	115
SR-4	5+64	757290	2982837	126	11	115
SR-4	5+70	757296	2982838	126	11	115
SR-5	0+00	757155	2982511	124	11	113
SR-5	0+05	757154	2982516	124	11	113
SR-5	0+10	757153	2982520	124	11	114
SR-5	0+15	757152	2982525	124	11	114
SR-5	0+20	757151	2982530	124	11	114
SR-5	0+25	757150	2982535	124	11	114
SR-5	0+30	757149	2982540	124	11	114
SR-5	0+35	757148	2982545	124	11	114
SR-5	0+40	757147	2982550	125	11	114
SR-5	0+45	757146	2982555	125	10	114
SR-5	0+50	757145	2982560	125	11	114
SR-5	0+55	757144	2982564	125	11	114
SR-5	0+60	757143	2982569	125	10	115
SR-5	0+65	757142	2982574	125	10	115
SR-5	0+70	757141	2982579	125	10	115
SR-5	0+75	757140	2982584	125	10	115
SR-5	0+80	757139	2982589	125	11	114
SR-5	0+85	757138	2982594	125	12	113
SR-5	0+90	757137	2982599	125	13	112
SR-5	0+95	757136	2982604	125	13	112
SR-5	1+00	757134	2982609	125	13	113
SR-5	1+05	757133	2982613	125	12	113
SR-5	1+10	757132	2982618	125	12	113
SR-5	1+15	757131	2982623	125	13	113
SR-5	1+20	757130	2982628	125	11	114
SR-5	1+25	757129	2982633	125	11	114
SR-5	1+30	757128	2982638	126	11	114
SR-5	1+35	757127	2982643	126	11	114
SR-5	1+40	757126	2982648	126	11	114
SR-5	1+45	757125	2982653	126	11	114
SR-5	1+50	757124	2982657	126	12	113
SR-5	1+55	757123	2982662	126	13	113
SR-5	1+60	757122	2982667	126	13	113
SR-5	1+65	757121	2982672	126	13	113
SR-5	1+70	757120	2982677	126	12	114
SR-5	1+75	757119	2982682	126	11	115
SR-5	1+80	757118	2982687	126	10	116
SR-5	1+85	757117	2982692	126	10	116
SR-5	1+90	757116	2982697	126	10	116
SR-5	1+95	757115	2982702	126	10	116
SR-5	2+00	757114	2982706	126	10	116

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

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TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-5	2+05	757113	2982711	126	11	115
SR-5	2+10	757112	2982716	126	11	115
SR-5	2+15	757111	2982721	126	11	115
SR-5	2+20	757110	2982726	126	12	114
SR-5	2+25	757109	2982731	126	12	114
SR-5	2+30	757108	2982736	126	12	114
SR-5	2+35	757107	2982741	126	13	114
SR-5	2+40	757106	2982746	126	13	113
SR-5	2+45	757105	2982750	126	13	113
SR-5	2+50	757104	2982755	126	13	114
SR-5	2+55	757103	2982760	126	12	114
SR-5	2+60	757102	2982765	126	12	114
SR-5	2+65	757101	2982770	126	12	114
SR-5	2+70	757100	2982775	126	12	114
SR-5	2+75	757099	2982780	126	12	114
SR-5	2+80	757098	2982785	126	11	115
SR-5	2+85	757097	2982790	126	11	115
SR-5	2+90	757096	2982795	126	11	116
SR-5	2+95	757095	2982799	126	10	116
SR-5	3+00	757094	2982804	126	9	117
SR-5	3+05	757093	2982809	126	9	117
SR-5	3+10	757092	2982814	126	9	117
SR-5	3+15	757091	2982819	126	10	117
SR-5	3+20	757090	2982824	126	10	117
SR-5	3+25	757089	2982829	126	10	116
SR-5	3+30	757088	2982834	126	11	115
SR-5	3+35	757086	2982839	126	12	114
SR-5	3+40	757085	2982843	126	12	114
SR-5	3+45	757084	2982848	126	12	114
SR-5	3+50	757083	2982853	126	13	113
SR-5	3+55	757082	2982858	126	13	113
SR-5	3+60	757081	2982863	126	14	113
SR-5	3+65	757080	2982868	126	14	112
SR-5	3+70	757079	2982873	126	15	111
SR-5	3+75	757078	2982878	126	15	111
SR-5	3+80	757077	2982883	126	15	111
SR-5	3+85	757076	2982888	126	15	111
SR-5	3+90	757075	2982892	126	15	112
SR-5	3+95	757074	2982897	126	15	111
SR-5	4+00	757073	2982902	126	15	111
SR-5	4+05	757072	2982907	126	15	111
SR-5	4+10	757071	2982912	126	15	111
SR-5	4+15	757070	2982917	126	15	111
SR-5	4+20	757069	2982922	126	15	111
SR-5	4+25	757068	2982927	126	14	112
SR-5	4+30	757067	2982932	126	15	112
SR-5	4+35	757066	2982936	126	15	112
SR-5	4+40	757065	2982941	126	14	112
SR-5	4+45	757064	2982946	126	14	112
SR-5	4+50	757063	2982951	126	14	112
SR-5	4+55	757062	2982956	126	15	111
SR-5	4+60	757061	2982961	126	16	111
SR-5	4+65	757060	2982966	126	16	110
SR-5	4+70	757059	2982971	126	16	110

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts
File 25MB23 Table 1

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TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-5	4+75	757058	2982976	126	16	110
SR-6A	0+00	757178	2981507	71	7	64
SR-6A	0+05	757177	2981512	71	7	64
SR-6A	0+10	757175	2981517	71	7	64
SR-6A	0+15	757174	2981522	71	7	64
SR-6A	0+20	757173	2981527	71	7	64
SR-6A	0+25	757172	2981532	71	7	64
SR-6A	0+30	757171	2981537	71	7	64
SR-6A	0+35	757170	2981542	72	7	65
SR-6A	0+40	757169	2981546	72	7	65
SR-6A	0+45	757168	2981551	72	7	66
SR-6A	0+50	757167	2981556	73	7	66
SR-6A	0+55	757166	2981561	73	7	66
SR-6A	0+60	757165	2981566	73	7	66
SR-6A	0+65	757164	2981571	74	7	66
SR-6A	0+70	757163	2981576	74	7	67
SR-6A	0+75	757161	2981581	74	7	67
SR-6A	0+80	757160	2981585	74	7	68
SR-6A	0+85	757159	2981590	75	7	68
SR-6A	0+90	757158	2981595	75	7	68
SR-6A	0+95	757157	2981600	75	7	68
SR-6A	1+00	757156	2981605	75	7	69
SR-6A	1+05	757155	2981610	76	7	69
SR-6A	1+10	757154	2981615	76	7	69
SR-6A	1+15	757153	2981620	76	7	69
SR-6A	1+20	757152	2981625	76	7	70
SR-6A	1+25	757151	2981629	76	7	70
SR-6A	1+30	757150	2981634	77	7	70
SR-6A	1+35	757148	2981639	77	7	70
SR-6A	1+40	757147	2981644	77	7	70
SR-6A	1+45	757146	2981649	77	7	70
SR-6A	1+50	757145	2981654	77	7	70
SR-6A	1+55	757144	2981659	77	7	70
SR-6A	1+60	757143	2981664	77	7	70
SR-6A	1+65	757142	2981668	78	8	70
SR-6A	1+70	757141	2981673	78	8	70
SR-6A	1+75	757140	2981678	78	8	70
SR-6A	1+80	757139	2981683	78	8	70
SR-6A	1+85	757138	2981688	78	9	70
SR-6A	1+90	757137	2981693	78	9	70
SR-6A	1+95	757135	2981698	78	9	70
SR-6A	2+00	757134	2981703	79	9	70
SR-6A	2+05	757133	2981708	79	9	70
SR-6A	2+10	757132	2981712	79	9	70
SR-6A	2+15	757131	2981717	79	9	70
SR-6A	2+20	757130	2981722	79	9	70
SR-6A	2+25	757129	2981727	79	9	70
SR-6A	2+30	757128	2981732	79	9	70
SR-6A	2+35	757127	2981737	79	9	70
SR-6A	2+40	757126	2981742	79	9	70
SR-6A	2+45	757125	2981747	79	9	70
SR-6A	2+50	757124	2981751	79	9	70
SR-6A	2+55	757122	2981756	79	9	70
SR-6A	2+60	757121	2981761	79	9	71

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts
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TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-6A	2+65	757120	2981766	80	9	71
SR-6A	2+70	757119	2981771	80	9	71
SR-6A	2+75	757118	2981776	80	9	71
SR-6A	2+80	757117	2981781	80	9	71
SR-6A	2+85	757116	2981786	80	9	71
SR-6A	2+90	757115	2981791	80	8	71
SR-6A	2+95	757114	2981795	80	8	72
SR-6A	3+00	757113	2981800	80	9	72
SR-6A	3+05	757112	2981805	80	9	72
SR-6A	3+10	757111	2981810	80	8	72
SR-6A	3+15	757109	2981815	80	9	72
SR-6A	3+20	757108	2981820	80	9	72
SR-6A	3+25	757107	2981825	80	9	72
SR-6A	3+30	757106	2981830	80	9	72
SR-6A	3+35	757105	2981834	80	9	72
SR-6A	3+40	757104	2981839	81	9	72
SR-6A	3+45	757103	2981844	81	9	72
SR-6A	3+50	757102	2981849	81	9	72
SR-6A	3+55	757101	2981854	81	8	72
SR-6A	3+60	757100	2981859	81	9	72
SR-6A	3+65	757099	2981864	81	8	73
SR-6A	3+70	757098	2981869	81	8	73
SR-6A	3+75	757097	2981873	81	8	74
SR-6A	3+80	757095	2981878	81	7	74
SR-6A	3+85	757094	2981883	81	7	74
SR-6A	3+90	757093	2981888	81	7	74
SR-6A	3+95	757092	2981893	81	7	74
SR-6A	4+00	757091	2981898	81	7	74
SR-6A	4+05	757090	2981903	81	6	75
SR-6A	4+10	757089	2981908	81	6	74
SR-6A	4+15	757088	2981913	81	6	74
SR-6A	4+20	757087	2981917	81	6	75
SR-6A	4+25	757086	2981922	81	6	75
SR-6A	4+30	757085	2981927	81	6	75
SR-6A	4+35	757084	2981932	81	5	76
SR-6A	4+40	757082	2981937	81	5	76
SR-6A	4+45	757081	2981942	81	5	76
SR-6A	4+50	757080	2981947	81	5	76
SR-6A	4+55	757079	2981952	81	5	76
SR-6A	4+60	757078	2981956	81	5	76
SR-6A	4+65	757077	2981961	81	5	76
SR-6A	4+70	757076	2981966	81	5	75
SR-6A	4+75	757075	2981971	81	5	75
SR-6A	4+80	757074	2981976	81	5	75
SR-6A	4+85	757073	2981981	81	5	75
SR-6A	4+90	757072	2981986	81	5	75
SR-6A	4+95	757071	2981991	81	6	75
SR-6A	5+00	757069	2981996	80	6	75
SR-6A	5+05	757068	2982000	80	6	75
SR-6A	5+10	757067	2982005	80	6	75
SR-6A	5+15	757066	2982010	80	6	74
SR-6A	5+20	757065	2982015	80	6	74
SR-6A	5+25	757064	2982020	80	6	74
SR-6A	5+30	757063	2982025	80	6	74

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts
File 25MB23 Table 1

Hager-Richter Geoscience

TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-6A	5+35	757062	2982030	80	6	74
SR-6A	5+40	757061	2982035	80	6	74
SR-6A	5+45	757060	2982039	80	7	74
SR-6A	5+50	757059	2982044	80	6	74
SR-6A	5+55	757058	2982049	80	6	74
SR-6A	5+60	757056	2982054	80	6	74
SR-6A	5+65	757055	2982059	80	6	74
SR-6A	5+70	757054	2982064	80	6	74
SR-6A	5+75	757053	2982069	80	6	74
SR-6A	5+80	757052	2982074	80	6	74
SR-6A	5+85	757051	2982079	80	7	73
SR-6A	5+90	757050	2982083	80	7	73
SR-6A	5+95	757049	2982088	80	7	73
SR-6A	6+00	757048	2982093	80	7	73
SR-6A	6+05	757047	2982098	80	7	73
SR-6A	6+10	757046	2982103	80	8	73
SR-6A	6+15	757045	2982108	80	7	73
SR-6A	6+20	757043	2982113	80	7	73
SR-6A	6+25	757042	2982118	80	7	73
SR-6A	6+30	757041	2982122	80	7	73
SR-6A	6+35	757040	2982127	80	7	73
SR-6A	6+40	757039	2982132	80	7	73
SR-6A	6+45	757038	2982137	80	7	73
SR-6A	6+50	757037	2982142	80	7	73
SR-6A	6+55	757036	2982147	80	7	73
SR-6A	6+60	757035	2982152	80	7	73
SR-6A	6+65	757034	2982157	80	7	73
SR-6A	6+70	757033	2982162	80	7	73
SR-6A	6+75	757032	2982166	80	7	74
SR-6A	6+80	757031	2982171	80	6	74
SR-6A	6+85	757029	2982176	80	6	74
SR-6A	6+90	757028	2982181	80	5	75
SR-6A	6+95	757027	2982186	80	5	75
SR-6A	7+00	757026	2982191	80	5	75
SR-6A	7+05	757025	2982196	80	5	75
SR-6A	7+10	757024	2982201	80	5	75
SR-6A	7+15	757023	2982205	80	5	75
SR-6B	0+00	757019	2982218	86	6	80
SR-6B	0+05	757018	2982223	86	6	80
SR-6B	0+10	757017	2982228	86	6	80
SR-6B	0+15	757016	2982233	86	7	79
SR-6B	0+20	757015	2982238	87	7	80
SR-6B	0+25	757014	2982243	88	6	82
SR-6B	0+30	757013	2982248	89	6	83
SR-6B	0+35	757011	2982253	90	5	85
SR-6B	0+40	757010	2982257	92	5	86
SR-6B	0+45	757009	2982262	93	5	88
SR-6B	0+50	757008	2982267	94	5	89
SR-6B	0+55	757007	2982272	95	6	90
SR-6B	0+60	757006	2982277	97	7	89
SR-6B	0+65	757005	2982282	98	8	90
SR-6B	0+70	757004	2982287	99	10	90
SR-6B	0+75	757003	2982292	100	10	90
SR-6B	0+80	757002	2982296	101	12	89

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts
File 25MB23 Table 1

Hager-Richter Geoscience

TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-6B	0+85	757001	2982301	102	12	90
SR-6B	0+90	756999	2982306	102	13	90
SR-6B	0+95	756998	2982311	103	12	91
SR-6B	1+00	756997	2982316	103	13	91
SR-6B	1+05	756996	2982321	104	12	92
SR-6B	1+10	756995	2982326	105	12	92
SR-6B	1+15	756994	2982331	105	12	93
SR-6B	1+20	756993	2982335	106	12	94
SR-6B	1+25	756992	2982340	106	11	95
SR-6B	1+30	756991	2982345	107	11	96
SR-6B	1+35	756990	2982350	107	10	97
SR-6B	1+40	756988	2982355	107	10	98
SR-6B	1+45	756987	2982360	108	9	99
SR-6B	1+50	756986	2982365	108	8	99
SR-6B	1+55	756985	2982370	108	8	100
SR-6B	1+60	756984	2982374	108	8	100
SR-6B	1+65	756983	2982379	109	9	100
SR-6B	1+70	756982	2982384	109	9	100
SR-6B	1+75	756981	2982389	109	8	101
SR-6B	1+80	756980	2982394	109	8	101
SR-6B	1+85	756979	2982399	109	8	102
SR-6B	1+90	756978	2982404	109	7	103
SR-6B	1+95	756976	2982409	109	6	103
SR-6B	2+00	756975	2982414	109	6	103
SR-6B	2+05	756974	2982418	109	5	104
SR-6B	2+10	756973	2982423	110	6	104
SR-6B	2+15	756972	2982428	110	6	105
SR-6B	2+20	756971	2982433	113	6	107
SR-6B	2+25	756970	2982438	113	6	108
SR-6B	2+30	756969	2982443	114	6	108
SR-6B	2+35	756968	2982448	116	6	110
SR-7	0+00	756876	2981805	109	13	96
SR-7	0+04	756875	2981809	109	13	96
SR-7	0+08	756875	2981813	109	13	96
SR-7	0+12	756874	2981817	109	13	96
SR-7	0+16	756873	2981821	109	13	96
SR-7	0+20	756873	2981825	109	13	96
SR-7	0+24	756872	2981829	109	13	96
SR-7	0+28	756871	2981833	109	11	98
SR-7	0+32	756871	2981837	109	10	99
SR-7	0+36	756870	2981841	109	10	99
SR-7	0+40	756870	2981845	109	10	99
SR-7	0+44	756869	2981849	109	10	99
SR-7	0+48	756868	2981853	109	11	98
SR-7	0+52	756868	2981857	109	11	98
SR-7	0+56	756867	2981861	109	11	98
SR-7	0+60	756866	2981865	109	11	98
SR-7	0+64	756866	2981869	109	11	98
SR-7	0+68	756865	2981872	109	11	98
SR-7	0+72	756864	2981876	109	12	97
SR-7	0+76	756864	2981880	109	12	97
SR-7	0+80	756863	2981884	109	12	97
SR-7	0+84	756862	2981888	109	11	98
SR-7	0+88	756862	2981892	109	11	98

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Hager-Richter Geoscience

TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-7	0+92	756861	2981896	109	12	97
SR-7	0+96	756860	2981900	109	11	98
SR-7	1+00	756860	2981904	109	11	98
SR-7	1+04	756859	2981908	109	11	98
SR-7	1+08	756859	2981912	109	11	98
SR-7	1+12	756858	2981916	109	11	98
SR-7	1+16	756857	2981920	109	11	98
SR-7	1+20	756857	2981924	109	11	98
SR-7	1+24	756856	2981928	109	11	98
SR-7	1+28	756855	2981932	109	11	98
SR-7	1+32	756855	2981936	109	11	98
SR-7	1+36	756854	2981940	109	11	98
SR-7	1+40	756853	2981944	109	12	98
SR-7	1+44	756853	2981947	109	12	97
SR-7	1+48	756852	2981951	109	13	96
SR-7	1+52	756851	2981955	109	13	96
SR-7	1+56	756851	2981959	109	15	95
SR-7	1+60	756850	2981963	109	15	94
SR-7	1+64	756849	2981967	109	15	94
SR-7	1+68	756849	2981971	109	15	94
SR-7	1+72	756848	2981975	109	15	94
SR-7	1+76	756847	2981979	109	15	94
SR-7	1+80	756847	2981983	109	15	94
SR-7	1+84	756846	2981987	109	15	94
SR-7	1+88	756846	2981991	109	14	95
SR-7	1+92	756845	2981995	109	14	95
SR-7	1+96	756844	2981999	109	14	95
SR-7	2+00	756844	2982003	109	13	96
SR-7	2+04	756843	2982007	109	12	97
SR-7	2+08	756842	2982011	109	12	97
SR-7	2+12	756842	2982015	109	12	97
SR-7	2+16	756841	2982019	109	12	97
SR-7	2+20	756840	2982022	109	12	97
SR-7	2+24	756840	2982026	109	12	97
SR-7	2+28	756839	2982030	109	12	97
SR-7	2+32	756838	2982034	109	12	97
SR-7	2+36	756838	2982038	109	12	97
SR-7	2+40	756837	2982042	109	11	98
SR-7	2+44	756836	2982046	109	10	99
SR-7	2+48	756836	2982050	109	10	99
SR-7	2+52	756835	2982054	109	9	100
SR-7	2+56	756834	2982058	109	9	100
SR-7	2+60	756834	2982062	109	9	100
SR-7	2+64	756833	2982066	109	9	100
SR-7	2+68	756833	2982070	109	9	100
SR-7	2+72	756832	2982074	109	9	101
SR-7	2+76	756831	2982078	109	8	101
SR-7	2+80	756831	2982082	109	9	100
SR-7	2+84	756830	2982086	109	9	100
SR-7	2+88	756829	2982090	109	9	100
SR-7	2+92	756829	2982094	109	9	100
SR-7	2+96	756828	2982097	109	9	100
SR-7	3+00	756827	2982101	109	9	100
SR-7	3+04	756827	2982105	109	9	100

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts
File 25MB23 Table 1

Hager-Richter Geoscience

TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-7	3+08	756826	2982109	109	9	100
SR-7	3+12	756825	2982113	109	9	100
SR-7	3+16	756825	2982117	109	10	99
SR-7	3+20	756824	2982121	109	10	99
SR-7	3+24	756823	2982125	109	10	99
SR-7	3+28	756823	2982129	109	10	99
SR-7	3+32	756822	2982133	109	7	102
SR-7	3+36	756821	2982137	109	7	102
SR-7	3+40	756821	2982141	109	6	103
SR-7	3+44	756820	2982145	109	6	103
SR-7	3+48	756820	2982149	109	6	103
SR-7	3+52	756819	2982153	109	6	103
SR-7	3+56	756818	2982157	109	5	104
SR-7	3+60	756818	2982161	109	6	103
SR-7	3+64	756817	2982165	109	6	103
SR-7	3+68	756816	2982168	109	7	102
SR-7	3+72	756816	2982172	109	7	102
SR-7	3+76	756815	2982176	109	7	102
SR-7	3+80	756814	2982180	109	7	102
SR-8	0+00	756774	2981879	109	9	100
SR-8	0+04	756778	2981879	109	9	100
SR-8	0+08	756782	2981880	109	9	100
SR-8	0+12	756786	2981881	109	9	100
SR-8	0+16	756790	2981882	109	9	100
SR-8	0+20	756794	2981882	109	10	99
SR-8	0+24	756798	2981883	109	11	98
SR-8	0+28	756801	2981884	109	11	98

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-8	0+32	756805	2981884	109	11	98
SR-8	0+36	756809	2981885	109	12	97
SR-8	0+40	756813	2981886	109	12	97
SR-8	0+44	756817	2981887	109	11	98
SR-8	0+48	756821	2981887	109	11	98
SR-8	0+52	756825	2981888	109	11	98
SR-8	0+56	756829	2981889	109	11	98
SR-8	0+60	756833	2981889	109	11	98
SR-8	0+64	756837	2981890	109	11	98
SR-8	0+68	756841	2981891	109	11	98
SR-8	0+72	756845	2981892	109	10	99
SR-8	0+76	756849	2981892	109	10	99
SR-8	0+80	756853	2981893	109	10	99
SR-8	0+84	756857	2981894	109	10	99
SR-8	0+88	756860	2981895	109	11	98
SR-8	0+92	756864	2981895	109	12	97
SR-8	0+96	756868	2981896	109	13	97
SR-8	1+00	756872	2981897	109	12	97
SR-8	1+04	756876	2981897	109	12	97
SR-8	1+08	756880	2981898	109	13	96
SR-8	1+12	756884	2981899	109	13	96
SR-8	1+16	756888	2981900	109	13	96
SR-8	1+20	756892	2981900	109	14	95
SR-8	1+24	756896	2981901	109	14	95
SR-8	1+28	756900	2981902	109	13	96
SR-8	1+32	756904	2981902	109	13	96
SR-8	1+36	756908	2981903	109	13	96

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts
File 25MB23 Table 1

Hager-Richter Geoscience

TABLE 1 (CONTINUED)
SEISMIC REFRACTION RESULTS

Line	Station (ft)	Easting (ft)	Northing (ft)	Surface Elevation (ft)	Bedrock Depth (ft)	Bedrock Elevation (ft)
SR-8	1+40	756912	2981904	109	15	94
SR-8	1+44	756916	2981905	109	15	94
SR-8	1+48	756919	2981905	109	14	95
SR-8	1+52	756923	2981906	109	14	95
SR-8	1+56	756927	2981907	109	14	95
SR-8	1+60	756931	2981908	109	14	95
SR-8	1+64	756935	2981908	109	13	96
SR-8	1+68	756939	2981909	109	11	98
SR-8	1+72	756943	2981910	109	11	98
SR-8	1+76	756947	2981910	108	10	98
SR-8	1+80	756951	2981911	108	10	98

Estimated standard deviation of depth of interfaces for seismic lines is normally taken as 10% or 2 feet, whichever is greater. Depths and elevations of bedrock determined here are for competent bedrock. Heavily weathered or highly fractured bedrock may occur at shallower depths. The easting and northing coordinates are relative to Massachusetts State Plane NAD83 in US survey feet. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Seismic Refraction Survey
Medford High School
489 Winthrop Street
Medford, Massachusetts
File 25MB23 Table 2

Hager-Richter Geoscience

TABLE 2A
COMPARISON OF ELEVATIONS BETWEEN
SEISMIC DATA AND BORINGS
MEDFORD HIGH SCHOOL
489 WINTHROP STREET
MEDFORD, MASSACHUSETTS

Location of Boring Relative to Seismic Line				Bedrock Elevations (feet)		Bedrock Depth from Boring (feet)	Difference
Seismic Line and Station		Boring	Distance from Seismic Line To Boring	Seismic Line	Boring		Feet
1B	-0+68	TB 26-4(OW)	20'S	49	47	31	2
2B	2+52	TP 26-5	14'W	85	88	7	3
2B	5+87	TP26-6	3'W	88	88	7	0
3	1+11	TP 26-1	23'S	101	102	6	1
3	3+38	TB 26-2(OW)	8'N	96	100	6	4
4	0+89	TB 26-1	45'N	112	111	15	1
6A	2+67	TP 26-3	4'W	72	73	6	1
6A	3+32	TP 26-9	48'E	72	73	5	1
6B	1+59	TP 26-1	18'E	101	102	6	1
7	2+69	TB 26-3	On Line	101	102	7	1
				Average			2

Each listed difference in feet reflects the absolute difference between bedrock elevation determined seismically and at a nearby boring. Each percentage difference was calculated by dividing the absolute difference in feet by the depth of bedrock reported for the nearby boring. Only borings located less than about 30 feet from a seismic line were used in this comparison. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.

Hager-Richter Geoscience

TABLE 2B
COMPARISON OF ELEVATIONS AT
SEISMIC LINE INTERSECTIONS
MEDFORD HIGH SCHOOL
489 WINTHROP STREET
MEDFORD, MASSACHUSETTS

Location of Seismic Line Intersection				Bedrock Elevations (feet)		Shallower Bedrock Depth (feet)	Difference
Seismic Line A and Station		Seismic Line B and Station		Seismic Line A	Seismic Line B		Feet
SR-2C	0+69	SR-3	6+67	93	91	11	2
SR-3	0+94	SR-6B	1+82	101	101	9	0
SR-4	3+65	SR-5	2+90	112	115	9	3
SR-7	0+91	SR-8	0+89	98	98	10	0
				Average			1

Each listed difference in feet reflects the absolute difference between bedrock elevation determined seismically at a seismic line intersection. Each percentage difference was calculated by dividing the absolute difference in feet by the shallower of the two seismically determined depths of bedrock at a seismic line intersection.. Elevations along the seismic lines were determined from plans provided by H&A and are relative to the NAVD 1988 datum.



N

H-R

APPROXIMATE SCALE (feet)

0 1000 2000

MASS

LOCATION

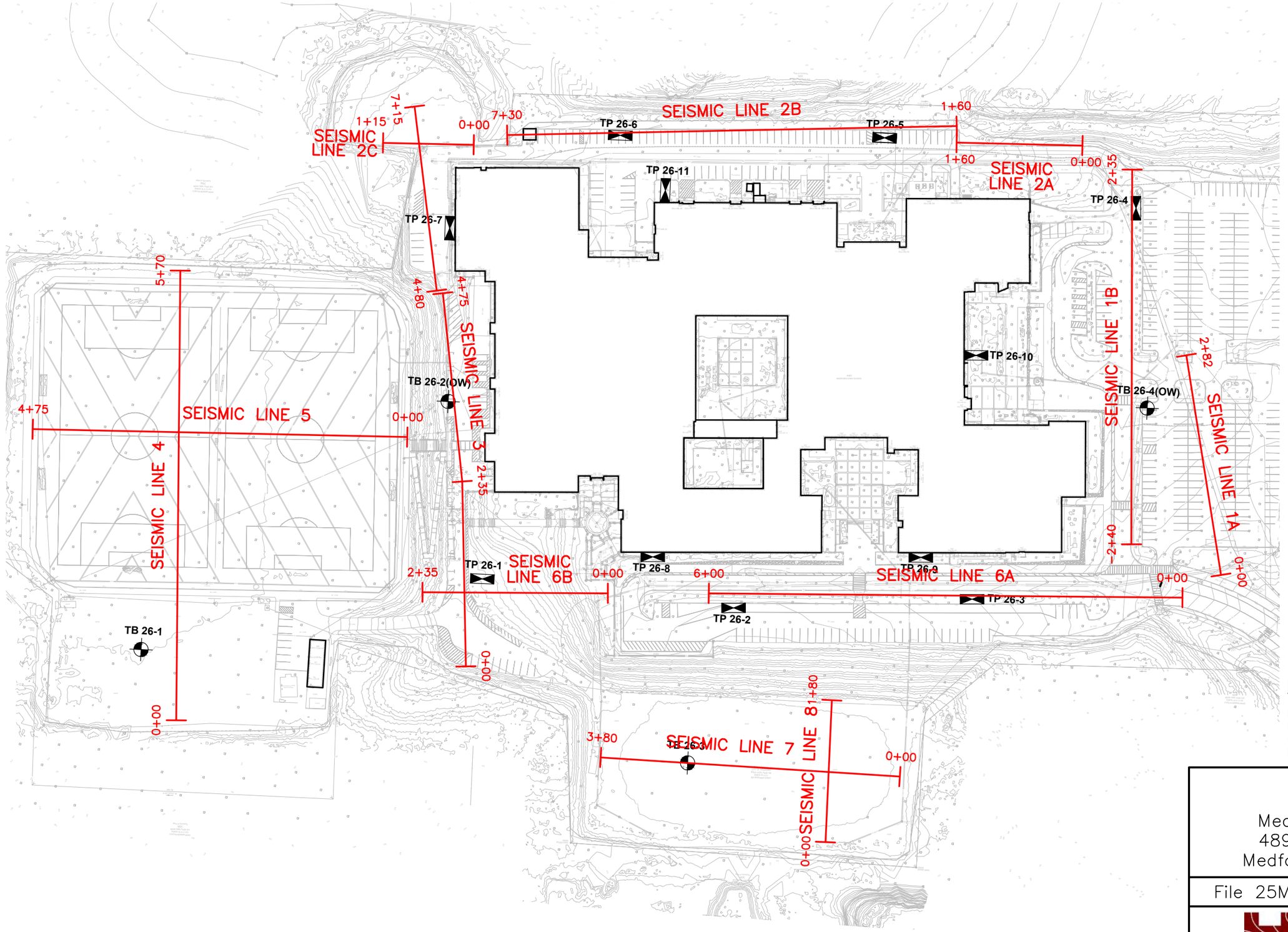
NOTE:

Modified from Google Earth Pro aerial photograph.

Figure 1
General Site Location
Medford High School
489 Winthrop Street
Medford, Massachusetts

File 25MB23 | May, 2026

HRGS



LEGEND

- SEISMIC LINE
- BORING
- TEST PIT

SCALE (feet)

0 120 240

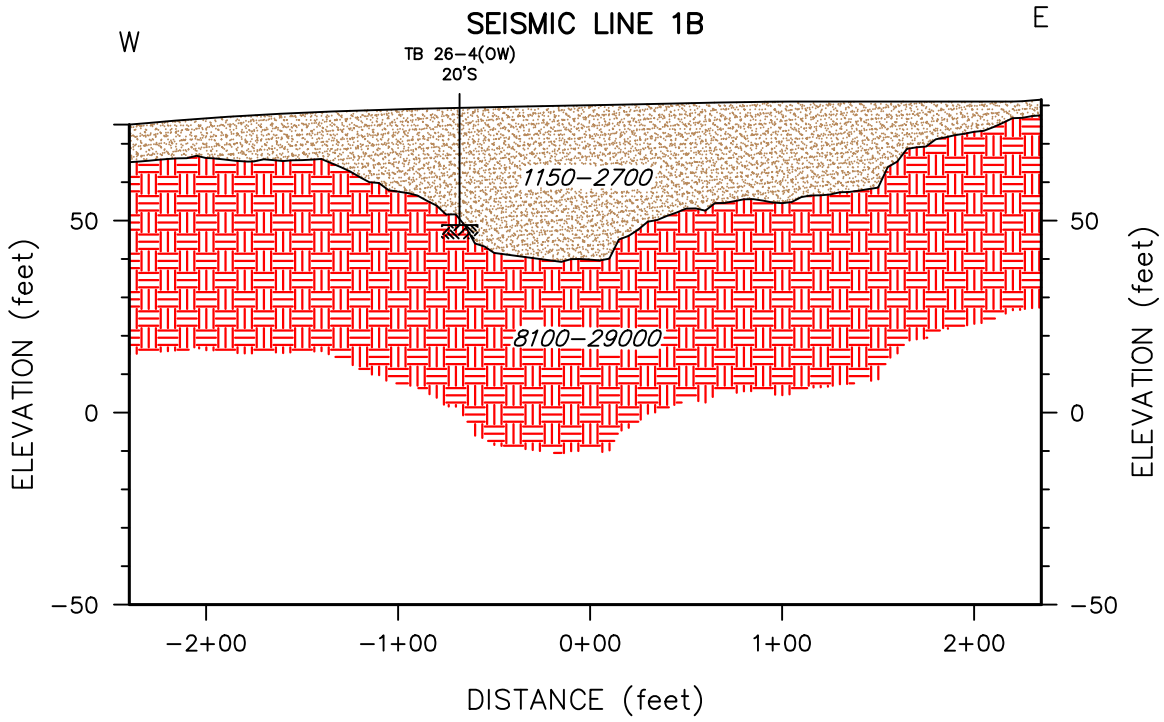
NOTES:

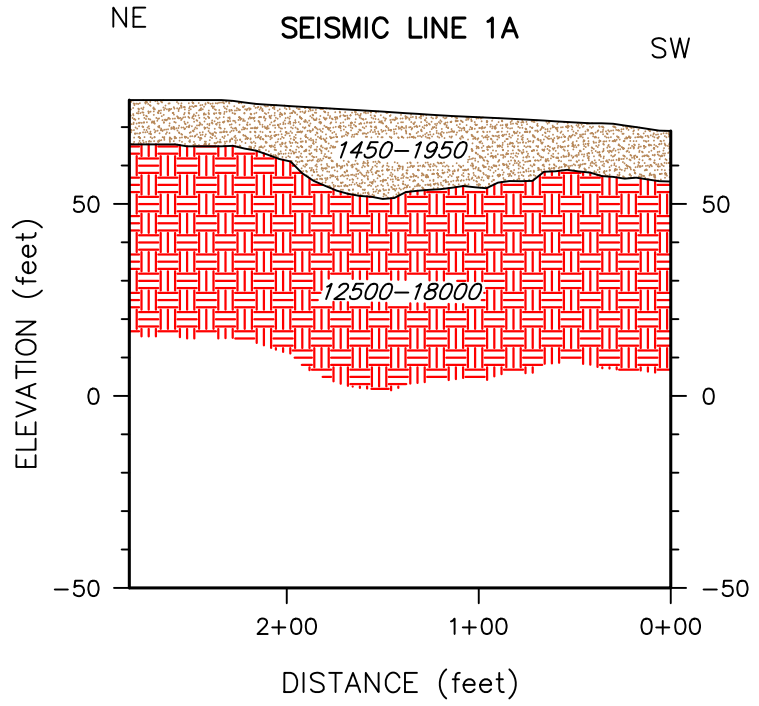
Modified from site plan provided by Haley & Aldrich, identified as 0214380-000-B001_EXPL_LOC_PLAN_Sentout_4May2026.dwg.

Figure 2
Site Plan
Medford High School
489 Winthrop Street
Medford, Massachusetts

File 25MB23 | May, 2026

HRGS





HORIZONTAL SCALE (feet)

0 100 200

Vertical Exaggeration = 2X

LEGEND

- Unsaturated soils
- Competent bedrock
- *12700-16800* — Velocity (fps)
- Interface determined from seismic refraction data
- SEISMIC LINE 3 6+67 — Intersecting seismic line with depth of bedrock
- TP 265-5 14'W — Boring/test pit with identification, distance and direction from traverse, and depth of bedrock based on logs provided by Haley & Aldrich.

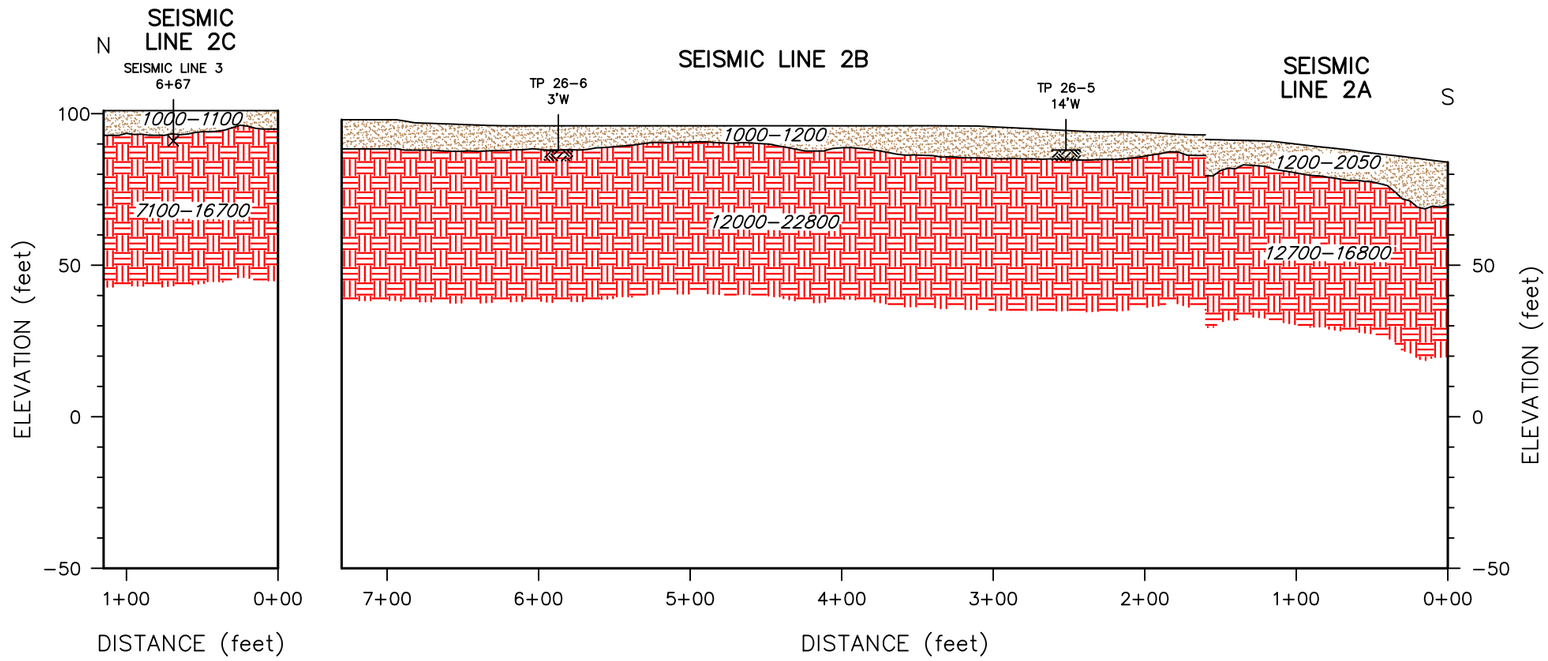
NOTES:

1. Estimated accuracy (standard deviation) of depth of bedrock is ±10% or 2 feet, whichever is greater.
2. The depths determined for bedrock are depths of competent rock; weathered and/or fractured bedrock might occur at shallower depths.
3. Surface elevations determined from plans provided by Haley & Aldrich.
4. Data were analyzed using the Generalized Reciprocal Method.

Figure 3
Seismic Lines 1A & 1B
Medford High School
489 Winthrop Street
Medford, Massachusetts

File 25MB23 | May, 2026

HRGS



NOTES:

1. Estimated accuracy (standard deviation) of depth of bedrock is ±10% or 2 feet, whichever is greater.
2. The depths determined for bedrock are depths of competent rock; weathered and/or fractured bedrock might occur at shallower depths.
3. Surface elevations estimated from plans provided by Haley & Aldrich.
4. Data were analyzed using the Generalized Reciprocal Method.

LEGEND

Unsaturated soils

Competent bedrock

12700–16800 — Velocity (fps)

Interface determined from seismic refraction data

SEISMIC LINE 3 6+67 — Intersecting seismic line with depth of bedrock

TP 265–5 14'W — Boring/test pit with identification, distance and direction from traverse, and depth of bedrock based on logs provided by Haley & Aldrich.

HORIZONTAL SCALE (feet)

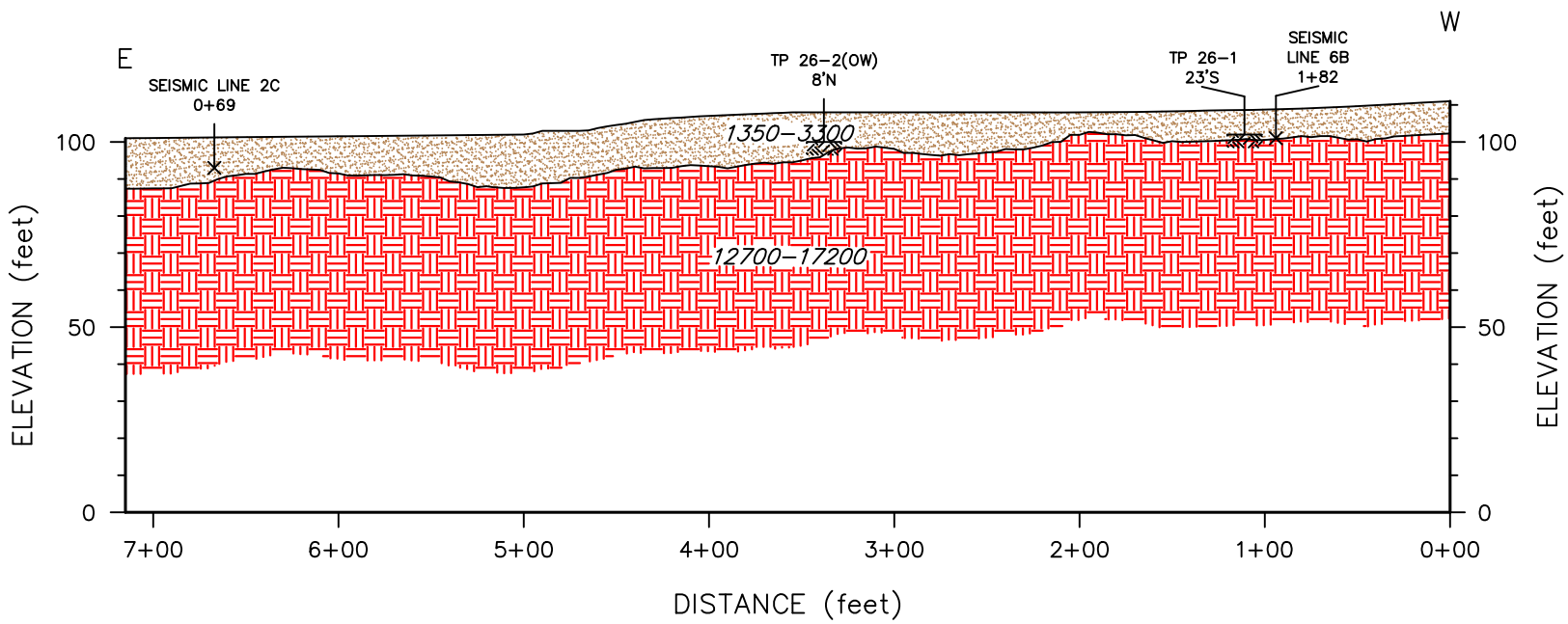
0 100 200

Vertical Exaggeration = 2X

Figure 4
Seismic Line 2
Medford High School
489 Winthrop Street
Medford, Massachusetts

File 25MB23 | May, 2026

HRGS



LEGEND

Unsaturated soils

Competent bedrock

12700-16800 — Velocity (fps)

Interface determined from seismic refraction data

SEISMIC LINE 3
6+67 — Intersecting seismic line with depth of bedrock

TP 265-5
14'W — Boring/test pit with identification, distance and direction from traverse, and depth of bedrock based on logs provided by Haley & Aldrich.

HORIZONTAL SCALE (feet)

0 100 200

Vertical Exaggeration = 2X

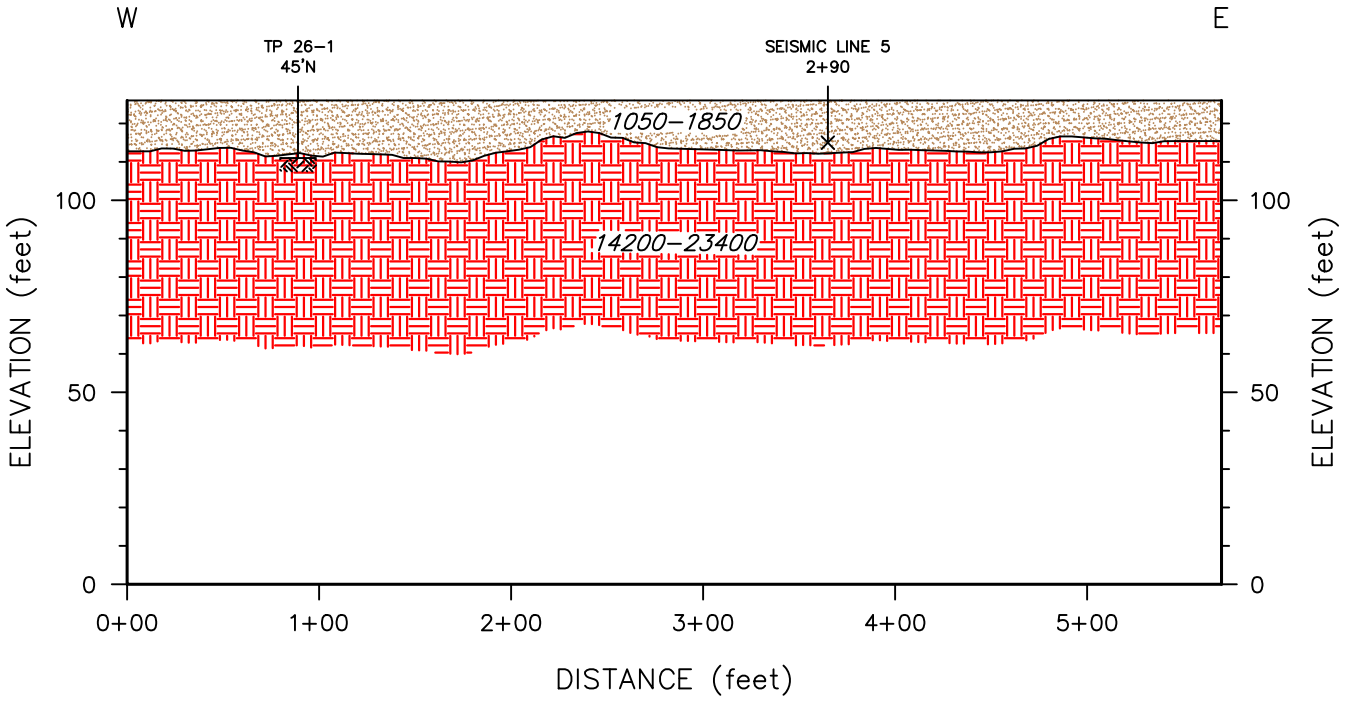
NOTES:

1. Estimated accuracy (standard deviation) of depth of bedrock is ±10% or 2 feet, whichever is greater.
2. The depths determined for bedrock are depths of competent rock; weathered and/or fractured bedrock might occur at shallower depths.
3. Surface elevations determined from plans provided by Haley & Aldrich.
4. Data were analyzed using the Generalized Reciprocal Method.

Figure 5
Seismic Line 3
Medford High School
489 Winthrop Street
Medford, Massachusetts

File 25MB23 | May, 2026

HRGS



LEGEND

Unsaturated soils

Competent bedrock

12700–16800 — Velocity (fps)

Interface determined from seismic refraction data

SEISMIC LINE 3
6+67 — Intersecting seismic line with depth of bedrock

TP 265–5
14'W — Boring/test pit with identification, distance and direction from traverse, and depth of bedrock based on logs provided by Haley & Aldrich.

HORIZONTAL SCALE (feet)

0 100 200

Vertical Exaggeration = 2X

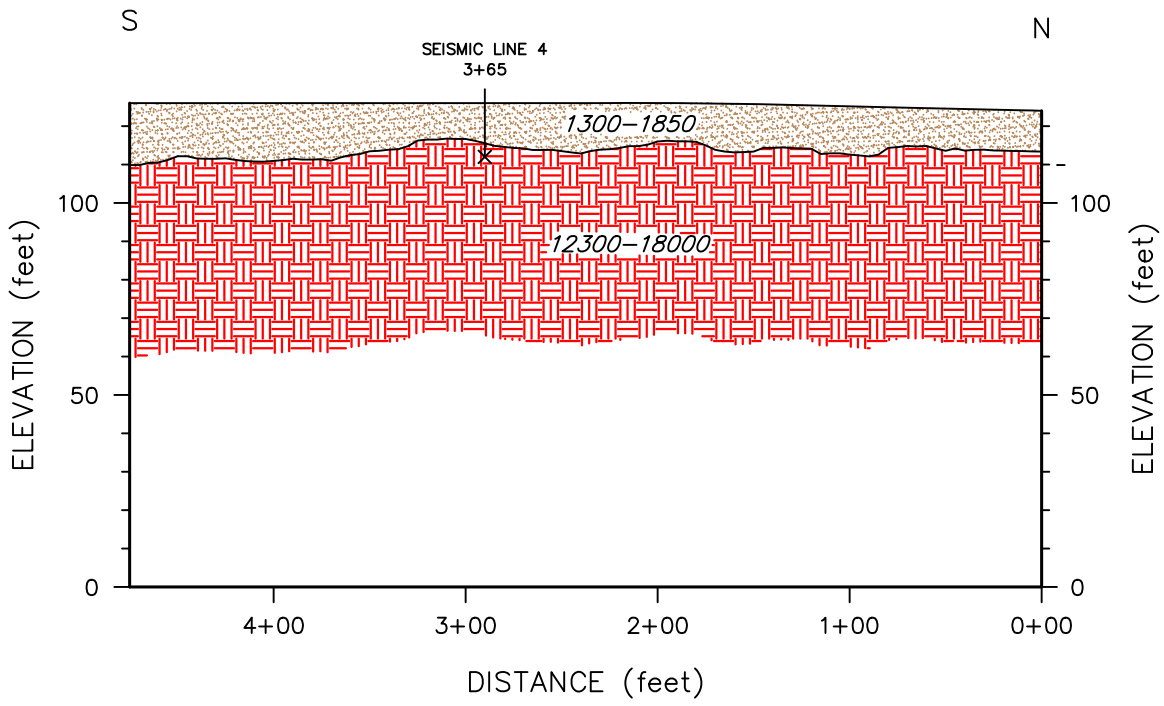
NOTES:

1. Estimated accuracy (standard deviation) of depth of bedrock is ±10% or 2 feet, whichever is greater.
2. The depths determined for bedrock are depths of competent rock; weathered and/or fractured bedrock might occur at shallower depths.
3. Surface elevations determined from plans provided by Haley & Aldrich.
4. Data were analyzed using the Generalized Reciprocal Method.

Figure 6
Seismic Line 4
Medford High School
489 Winthrop Street
Medford, Massachusetts

File 25MB23 | May, 2026

HRGS



LEGEND

	Unsaturated soils
	Competent bedrock
12700–16800	Velocity (fps)
	Interface determined from seismic refraction data
SEISMIC LINE 3 6+67	Intersecting seismic line with depth of bedrock
TP 265–5 14'W	Boring/test pit with identification, distance and direction from traverse, and depth of bedrock based on logs provided by Haley & Aldrich.

HORIZONTAL SCALE (feet)

0 100 200

Vertical Exaggeration = 2X

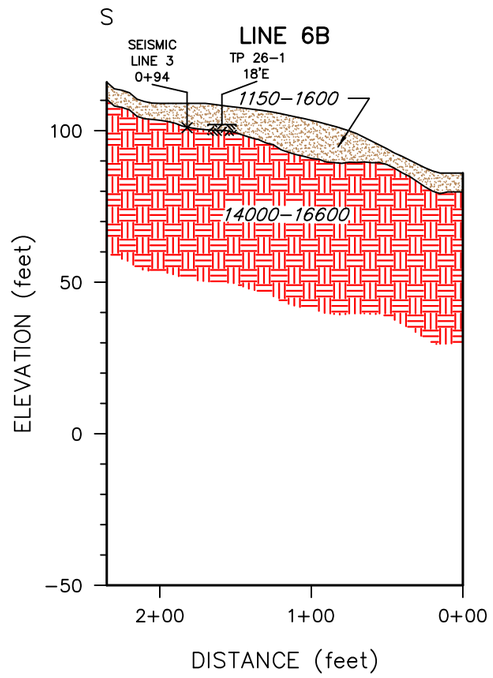
NOTES:

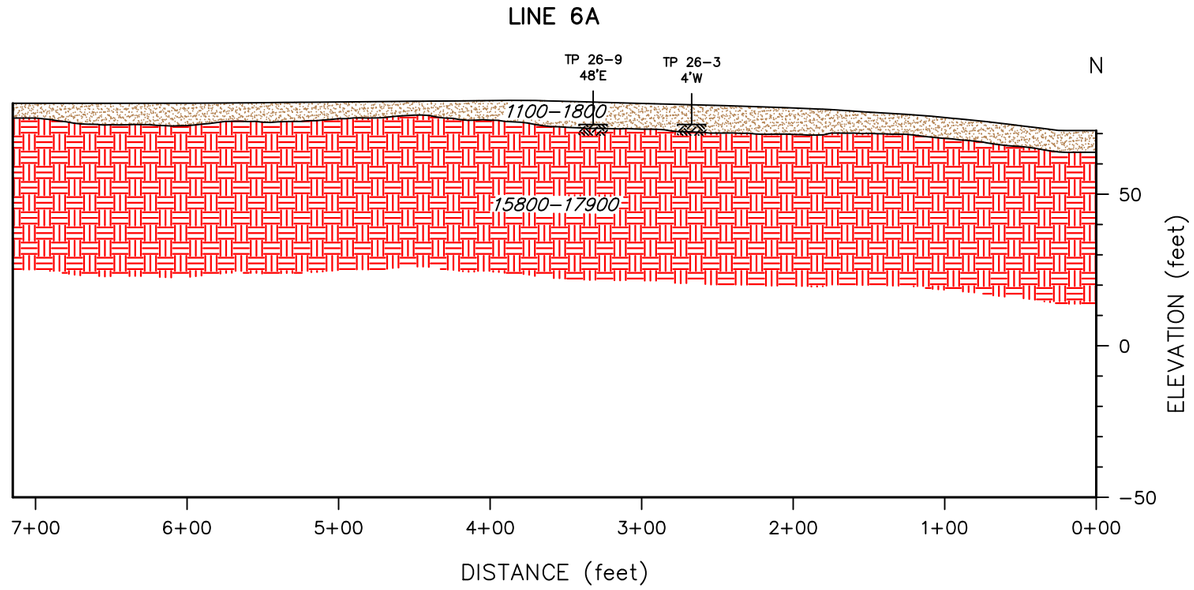
1. Estimated accuracy (standard deviation) of depth of bedrock is ±10% or 2 feet, whichever is greater.
2. The depths determined for bedrock are depths of competent rock; weathered and/or fractured bedrock might occur at shallower depths.
3. Surface elevations determined from plans provided by Haley & Aldrich.
4. Data were analyzed using the Generalized Reciprocal Method.

Figure 7
Seismic Line 5
Medford High School
489 Winthrop Street
Medford, Massachusetts

File 25MB23 | May, 2026

HRGS





NOTES:

1. Estimated accuracy (standard deviation) of depth of bedrock is ±10% or 2 feet, whichever is greater.
2. The depths determined for bedrock are depths of competent rock; weathered and/or fractured bedrock might occur at shallower depths.
3. Surface elevations estimated from plans provided by Haley & Aldrich.
4. Data were analyzed using the Generalized Reciprocal Method.

LEGEND

Unsaturated soils

Competent bedrock

12700-16800 — Velocity (fps)

Interface determined from seismic refraction data

SEISMIC LINE 3 6+67 — Intersecting seismic line with depth of bedrock

TP 265-5 14'W — Boring/test pit with identification, distance and direction from traverse, and depth of bedrock based on logs provided by Haley & Aldrich.

HORIZONTAL SCALE (feet)

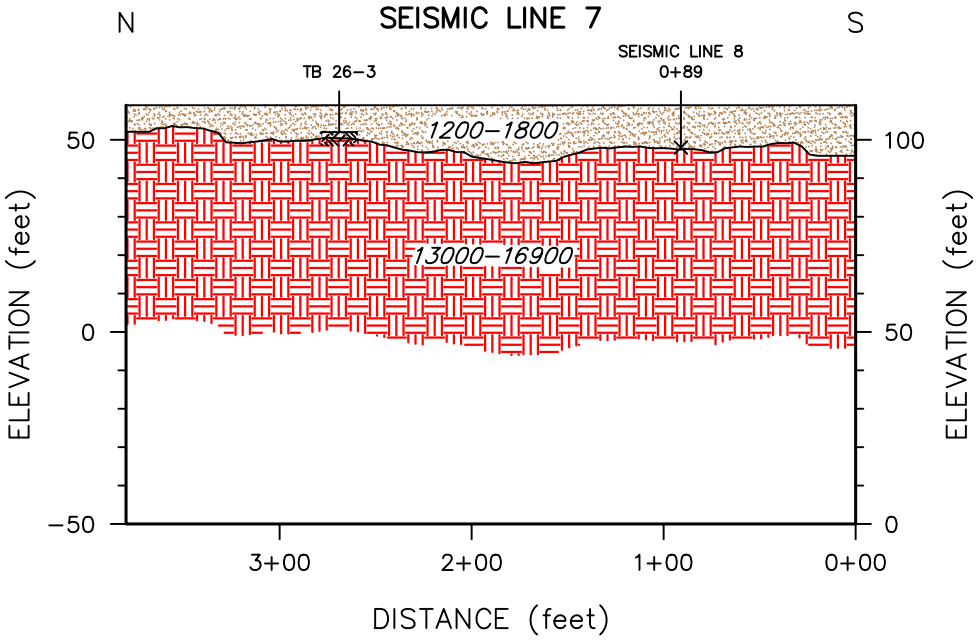
0 100 200

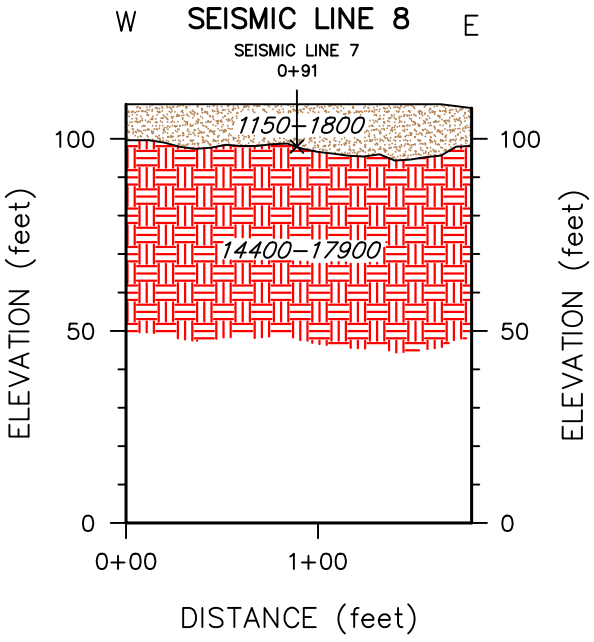
Vertical Exaggeration = 2X

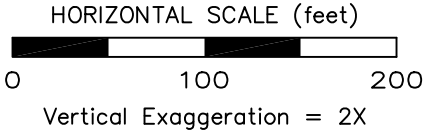
Figure 8
Seismic LineS 6B & 6A
Medford High School
489 Winthrop Street
Medford, Massachusetts

File 25MB23 | May, 2026

HRGS







LEGEND

- Unsaturated soils
- Competent bedrock
- 12700-16800 — Velocity (fps)
- Interface determined from seismic refraction data
- SEISMIC LINE 3 6+67 — Intersecting seismic line with depth of bedrock
- TP 265-5 14'W — Boring/test pit with identification, distance and direction from traverse, and depth of bedrock based on logs provided by Haley & Aldrich.

NOTES:

1. Estimated accuracy (standard deviation) of depth of bedrock is ±10% or 2 feet, whichever is greater.
2. The depths determined for bedrock are depths of competent rock; weathered and/or fractured bedrock might occur at shallower depths.
3. Surface elevations determined from plans provided by Haley & Aldrich.
4. Data were analyzed using the Generalized Reciprocal Method.

Figure 9
Seismic Lines 7 & 8
Medford High School
489 Winthrop Street
Medford, Massachusetts

File 25MB23 | May, 2026

HRGS

ADS Environmental Engineering, LLC

April 17, 2026 (REV May 13, 2026)
File No. 0225.01

Symmes Maini & McKee Associates
1000 Massachusetts Avenue
Cambridge, MA 02138

Attention: Ms. Helen Fantini, AIA, LEED AP, MCPPO

RE: Subsurface Exploration Program
Medford High School
489 Winthrop Street
Medford, MA
SMMA PO 2510001_01R C/O 1

Dear Helen:

This letter presents the findings of a preliminary subsurface soil characterization program conducted by ADS Environmental Engineering, LLC (ADS) at the Medford High School in Medford, Massachusetts. ADS observed subsurface explorations conducted for the geotechnical engineering exploration program by Haley & Aldrich at the subject property in January 2026 in order to gain preliminary environmental characterization information on the general site soils at the Medford High School. The objective of this work was to assess areas of the subject property that may be excavated during future school improvements, including preliminary field screening and analytical laboratory testing of the soil materials to evaluate potential future offsite disposal/reuse options if excess soils are generated during construction. This work was conducted in general accordance with our proposal dated October 16, 2025 and the Limitations of work attached to this letter.

ADS previously conducted a Phase I Environmental Site Assessment of the Medford High School property and prepared a draft environmental site assessment report dated December 31, 2025. The report describes information on the environmental site history, some of which is summarized below.

BACKGROUND

The school is currently heated by natural gas. Previously the school was heated using fuel oil (#2, #4 and #6 fuel oils were referenced in municipal files reviewed) stored in two 20,000 gallon former underground storage tanks located north of the boiler room (see attached Figure 2). These tanks are documented to have been removed in December 2001.

Smaller underground tanks were also known to be located on the subject property including outside/east of the Automotive Shop (500 gallon waste oil), and a tank is located beneath the paved access drive to the east of the mechanical room that is reported to contain fuel oil for the backup generator in the mechanical room (tank size was unknown). The backup generator is reportedly not currently working and has not been in use for a while, therefore the existing tank is likely considered to be an abandoned tank and should be removed from the ground as discussed later in this letter.

The 500 gallon waste oil tank for the automotive shop was documented to have been removed in September 2010. This area was assessed with a test pit in January 2026 as discussed herein.

There were no records provided to ADS during the Phase I Environmental Site Assessment research conducted in 2025 that described the condition of the removed underground storage tanks or the soil around them at the time of their removal.

In addition to underground fuel storage tanks, a portion of the subject property was reportedly used as a municipal dump for a short period of time when another town dump location had to be closed. The property was used historically as an almshouse and later an infirmary, and a rock mining and crushing operation was documented at the subject property when it was occupied by the almshouse in the early 1900s (historic maps dated 1903 show the City Alms House). An infirmary was noted to occupy the subject property on maps dated 1936 and 1956. "Pit" areas are noted on a Site Preparation Plan reviewed by ADS dated April 12, 1967 in the southern region of the subject property, in the current southern parking lot area and the southern school building entrance area. These are likely the result of the rock mining operation, and may have been filled with landfill debris although this has not been confirmed to ADS' knowledge.

A test boring (TB-4) and a test pit (TP-10) were conducted in a southern "Pit" area of the subject property as part of the January 2026 geotechnical exploration program as discussed below. There was insufficient soil recovered from test boring TB-4 to analyze the soil that appeared to be potentially representative of the landfill material. Fill material extended to the bottom of the exploration, approximately 31 feet below the ground surface, and may extend deeper. Test pit TP-10 was conducted at the building foundation to the east of the southern school entrance door, but did not encounter soils representative of landfill material.

SUBSURFACE EXPLORATIONS AND ANALYTICAL TESTING

Haley & Aldrich (H&A) coordinated and subcontracted a test pit excavation contractor and a test boring contractor to assess subsurface soils for their geotechnical engineering investigation program in January 2026. Test pits were conducted January 6 through 8, 2026 throughout the school property, and also on January 27 through 29, 2026 to assess the existing building foundations. Test borings were conducted at the subject school property January 12 through 16, 2026. ADS observed a majority of the explorations and collected soil samples for preliminary field screening and analytical laboratory testing. Locations of the explorations are shown on a plan in the Figures attachment titled Site and Subsurface Exploration Location Plan, prepared by H&A.

Field Screening and Soil Description

ADS conducted field screening for volatile organic compounds using an Ion Science Tiger photoionization detector (PID) with a 10.6 eV lamp. The field screening results ranged from 0.0 ppm to 0.7 parts per million per volume per volume (ppmv/v). These readings are not indicative of the significant presence of volatile organic compounds (VOCs). PID screening data are attached to this letter. ADS did not note obvious signs of significant contamination in the soil samples collected.

The soil profile generally consisted of topsoil in non-paved areas, underlain by sand and gravel and then a mixture of sand with what appeared to be blasted rock fill. Natural soils and/or bedrock were noted at varying depths, typically within 7 to 10 feet of ground surface, although test boring TB-4 extended to approximately 31 feet and did not reach natural soils or bedrock. As discussed above, the property was historically used to mine and crush rock when it was occupied by an almshouse in the early 1900s (historic maps dated 1903 show the City Alms House). The fill at the High School property appeared consistent with blasted rock throughout most areas of the property that were explored.

Test boring TB-4 conducted south of the school building in a possible former landfill area exhibited fill material to depths of approximately 31 feet. The fill material from four feet to roughly 31 feet at the bottom of the exploration contained traces of asphalt, ash, glass, and metal. Traces of construction related debris including brick, metal pieces, metal reinforcement bar, concrete block and metal piping were noted in the fill in a few of the other explorations (TP-2, TP-3, TP-5, TP-7, TP-10 and TP-11). A segment of what appeared to be an asphaltic and fiber piping (possibly Orangeburg piping) was identified at approximately 6 feet below the ground surface in test pit TP-2. Test boring and test pit logs are being prepared by H&A and will be attached to the Preliminary Geotechnical Report.

There were no unusual odors or other obvious indications of the significant presence of contamination noted in the explorations observed by ADS.

Analytical Laboratory Testing

ADS submitted soil samples to Pace Analytical Laboratories of Westborough, Massachusetts for quantitative analytical laboratory testing. Analyses included offsite disposal characterizations for volatile organic compounds (VOCs), total petroleum hydrocarbons (TPH), semi-volatile organic compounds (SVOCs), MCP14 metals, PCBs, pesticides, pH, ignitability, reactivity and conductivity. Samples were composited for characterization, and were representative of soil that may be excavated during site redevelopment and could require off site reuse/disposal. Two composite samples, one of the topsoil material and another of the underlying fill material, were submitted for analytical characterization. Discrete samples were selected for the VOC testing.

The samples submitted for analytical testing are summarized below:

COMP S-1 (Topsoil Composite): TP-1, TP-2, TP-3, TP-4, and TB-1,S-1. Sample TP-1,S-1 was used as the discrete sample for VOC analysis.

COMP 2 (Fill Composite sample from 1 ft. to approximately 6 ft. below the ground surface): TP-1,S-1; TP-2,S-2 and S-3; TP-4,S-3; TP-5,S-1 and S-2; TP-5,S-1 and S-2. Sample TP-5,S-2 was used as the discrete sample for VOC analysis.

Analytical test results are attached to this letter and summarized on attached Table 1. Table 1 compares the data to the Massachusetts Contingency Plan (MCP) RCS-1 Reportable Concentrations, and Method 1 Risk Based Standards for soil categories S-1/GW-2 and S-1/GW-3. According to the Massachusetts Department of Environmental Protection (MassDEP) Bureau of Waste Site Cleanup Phase 1 Site Assessment Map dated December 5, 2025 provided by MassGIS, the subject property is not located within a Zone II, Interim Water Protection Aquifer Area, nor a Zone A of a surface water supply body. It is also not located within a potentially productive Medium or High Yield Aquifer Area. Therefore, soil standards for GW-1 groundwater areas do not apply, however soil standards for GW-3 areas apply and soil standards for groundwater category GW-2 apply to areas near the occupied school building.

Analytical results for PCBs and VOCs were below detection. Trace concentrations of pesticides, PAH compounds (semi-VOCs), TPH and heavy metals were detected but at concentrations well below the reportable and risk based standards of the MCP and are at concentrations that are judged to be commonly present naturally in the environment.

CONCLUSIONS AND RECOMMENDATIONS

In summary, results of the field screening and chemical testing program at the Medford High School in Medford, Massachusetts did not indicate the presence of significant contamination in the subsurface soils. Analytical data did not indicate that the general site soils would require special handling, offsite disposal restrictions and/or onsite reuse restrictions for soil that was characterized by the subsurface explorations and analytical laboratory testing as summarized herein.

It should be noted, however, that there are some gaps in the site characterization data. They are as follows:

Former Landfill Area: Test Boring TB-4 was completed in an area that was potentially used temporarily as a landfill. The recovery of soil from this test boring was poor, with several sampling intervals having no recovery. However, traces of brick, glass, ash and metal (wire and a nail) were noted in the fill material. The fill appeared to extend to the bottom of the exploration at 31 feet. Test pit TP-10 was also conducted in the estimated landfill area adjacent to the building foundation, but did not encounter fill material that would be indicative of a landfill, and depths of only approximately 6 feet could be reached due to the unstable nature of the soil. Therefore, the possible landfill area soils were not characterized for offsite disposal. Field photoionization detector (PID) screening data for the samples within the estimated former landfill area ranged from 0.0 to 0.7 ppmv/v and did not suggest the significant presence of VOCs. If future excavation is anticipated in the presumed former landfill area, it would be prudent to conduct additional explorations and characterize the soil in advance in order to review offsite disposal options and costs.

UST Areas: Test pit TP-7 was conducted adjacent to the school building foundation, in the vicinity of the former documented two 20,000 gallon heating oil USTs north of the boiler room. Obvious indications of a significant fuel oil release were not noted in the test pit. Field screening levels using the field PID were 0.0 to 0.1 units which does not suggest the significant presence of VOCs. It should be noted however that due to the historic presence of these tanks and the lack of documentation identified by ADS on the condition of the tanks and the soil around them when removed, there could be residual fuel oil impacted soils encountered during future excavation in this area.

Similarly, test pit TP-11 was conducted east of the automotive shop near where a former 500 gallon waste oil tank (removed in 2010) was documented to exist. Again, there was no indication of petroleum contamination in the soils observed and sampled during excavation of the test pit. PID readings were 0.0 ppmv/v.

Although the limited explorations in the areas of these removed tanks did not suggest contamination, it may be prudent to carry a contingency budget to manage a limited quantity of impacted soils during construction if excavation in these areas is planned as part of future building renovations.

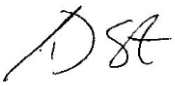
Another tank believed to be associated with the backup generator in the mechanical room appears to exist underground in the roadway to the east of the mechanical room. The condition of this tank is not known. It is recommended that the contents of this tank be pumped and disposed of in the short term, and that the tank be removed since it is no longer in use and considered to be an abandoned tank. Environmental assessment would take place at the time of the tank removal. ADS can assist in documenting environmental conditions around the tank at the time of its removal.

Finally, given that the environmental site history of the subject property includes underground storage and use of fuel oil to heat the school building, and the use of automobile maintenance fluids and petroleum products associated with the automotive shop and other shops, it is possible that isolated areas of soil exhibiting petroleum odors could be encountered during construction or demolition of the existing building. If odors or indications of petroleum or other products are noted during future excavation activities, work should stop in these areas, and the suspect soils should be stockpiled separately until an environmental professional can assess the conditions and make recommendations on how to proceed.

It has been a pleasure to assist you in this project. Please contact me if you have any questions regarding the work completed and the findings to date.

Sincerely,

ADS ENVIRONMENTAL ENGINEERING, LLC



Andrea D. Stiller, LSP
Principal

Attachments:
Limitations
Locus Plan, Figure 1
MassDEP Phase I Environmental Site Assessment Map (MassGIS)
Site Plan, Figure 2
H&A Site and Subsurface Exploration Location Plan, Figure 2
PID Field Screening Results
Table 1 – Soil Disposal Characterization Data
Pace Analytical Laboratory Report

LIMITATIONS

LIMITATIONS

1. In preparing this Report, ADS gathered information from interviews with various parties and review of the files of various public agencies. In addition, work completed by others was referenced by ADS. The accuracy of this work cannot be verified by ADS. Due to the potential for errors, omissions or inaccuracies that may exist there is some risk associated with reliance on such information. Although there may have been some corroboration provided by multiple sources, ADS cannot be responsible for the accuracy or completeness of the information reviewed or received during the course of this work

2. Observations were made of the site as indicated within the Report. If areas exist which were inaccessible and therefore not observed, ADS can render no opinion as to the conditions in that area. This includes but is not limited to the areas covered by fill, stockpiles, structures, snow and vegetation.

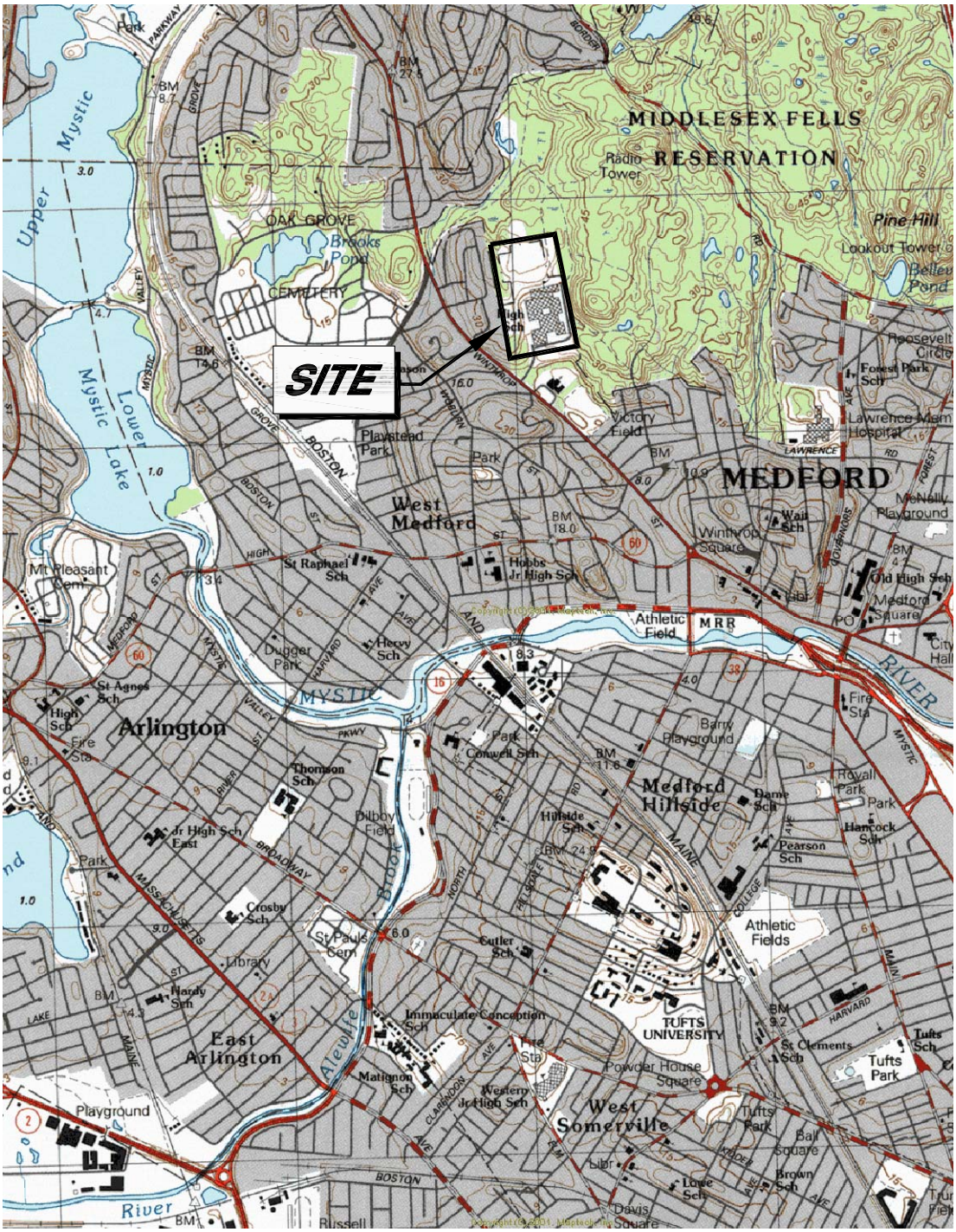
3. The conclusions and recommendations contained in this Report are based in part upon the data obtained from soil samples collected from subsurface explorations completed at the referenced property. The nature and extent of variations between these explorations may not become evident until additional work is undertaken at the site. If variations or latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

4. Groundwater was encountered in the explorations on-site at the times and under the conditions stated in this report. However, it must be noted that fluctuations in the level of groundwater may occur due to rainfall, temperature, subterranean structures and other factors.

5. The purpose of this Report was to provide environmental services at the subject site with respect to the presence in the environment of hazardous material or oil, as defined in Massachusetts General Laws Chapter 21E. No specific attempt was made to check on the compliance of present or past owners or operators of the site with federal, state, or local laws and regulations, environmental or otherwise.

6. This report was prepared for the exclusive use of Symmes Maini & McKee Associates, solely for use in connection with environmental studies of the property located at the Medford High School, 489 Winthrop Street, Medford, Massachusetts. This report was prepared in accordance with generally accepted environmental engineering practice. No other warranty, expressed or implied, is made.

FIGURES







ADS Environmental Engineering, LLC
205 Woodland Street
Sherborn, Ma. 01770
Tel: (781) 727-6646
www.adslsp.com

REV No.	DATE	INT.	- DESCRIPTION -

DRAWN BY: JJP | REVIEWED BY: ADS

DATE: 12/7/2025 | JOB No. 0225

MEDFORD HIGH SCHOOL

WINTHROP STREET MEDFORD, MA

LOCUS PLAN

SOURCE

1985 USGS BOSTON NORTH, MASS. QUADRANGLE MAP

(NOT TO SCALE)

FIGURE No. 1

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

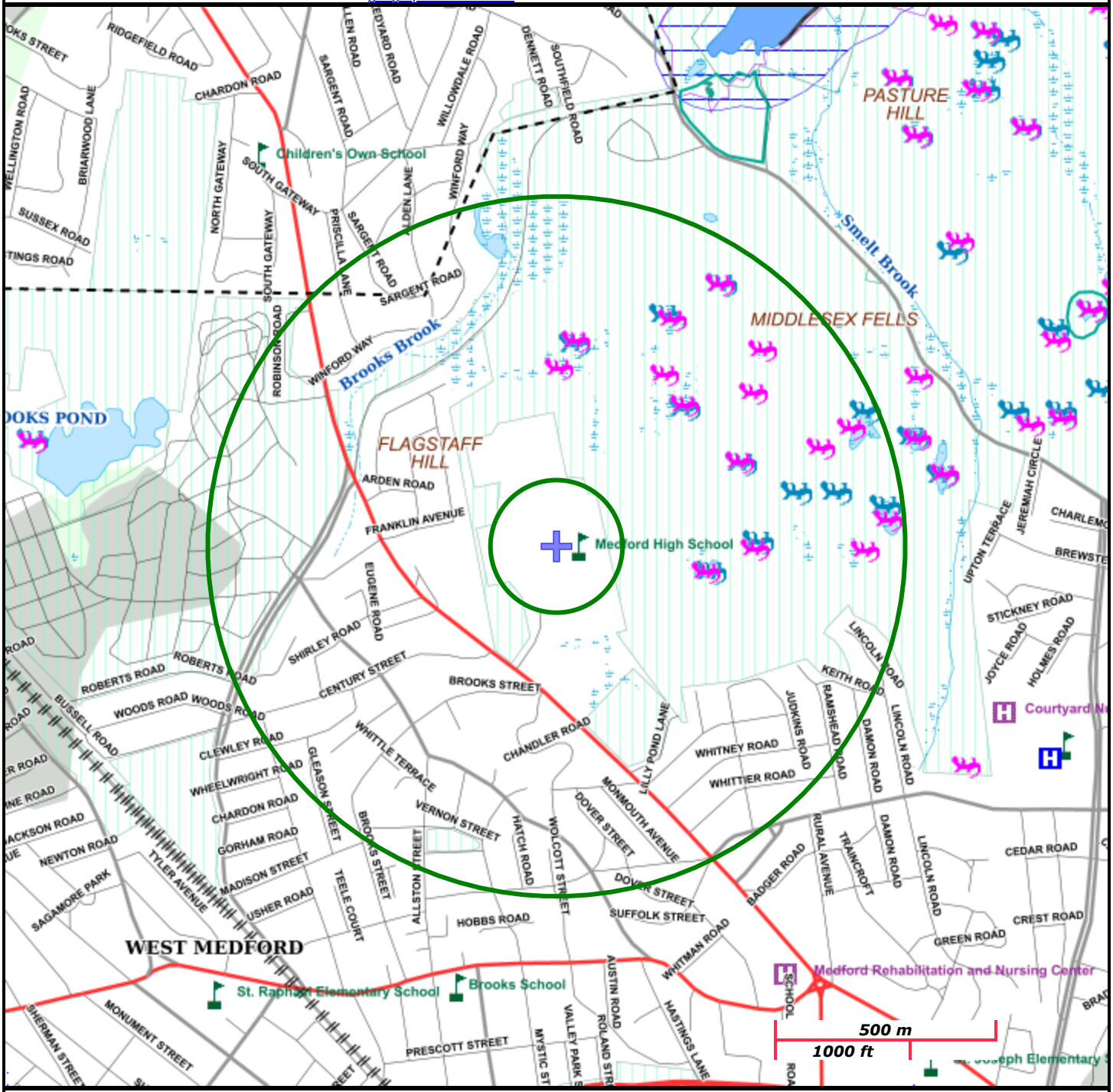
Site Information:

489 WINTHROP STREET MEDFORD, MA

NAD83 UTM Meters:
4699748mN , 325169mE (Zone: 19)
December 5, 2025

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: https://www.mass.gov/orgs/massgis-bureau-of-geographic-information.

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

NHESP Pri-Hab of Rare Species; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.

NOTE:

1. BASE MAP DEVELOPED FROM PLAN TITLED "GRADING PLAN", PREPARED BY RICH PHINNEY LANG & COTE, INC., ORIGINAL SCALE: 1"=40', DATED JULY 31, 1967, SHEET NUMBER SITE 1.

LEGEND:

APPROXIMATE LOCATION OF AREAS NOTED "PIT" ON SITE PREPARATION PLAN - SITE 1, DATED APRIL 18, 1967.

APPROXIMATE EDGE OF PIT - APRIL 1948

PIT

PIT

APPROXIMATE AREA WHERE OLD CAR FRAME WAS DISCOVERED

APPROXIMATE LOCATION OF FORMER 500 GAL UNDERGROUND WASTE OIL TANK (REMOVED SEPTEMBER 2010)

APPROXIMATE LOCATION OF TWO FORMER 20,000 GAL UNDERGROUND WASTE OIL TANKS (REMOVED SEPTEMBER 2001)

APPROXIMATE LOCATION OF UNDERGROUND STORAGE TANK FOR BACKUP GENERATOR (NOT IN USE)

SCALE: 1"=130'

0 65' 130' 260'

ADS ENVIRONMENTAL ENGINEERING, LLC
205 Woodland Street
Sherborn, Ma. 01770
Tel: (781) 727-6646
www.adslsp.com

REV No.	DATE	INT.	- DESCRIPTION -

DRAWN BY: JJP | REVIEWED BY: ADS

DATE: 12/7/2025 | SCALE: 1"=130' | JOB No. 0225

MEDFORD HIGH SCHOOL
WINTHROP STREET
MEDFORD, MA

SITE PLAN

FIGURE No. 2

TP 26-6
GS El. 96.0
FILL 1.9 ft
LOESS 1.6 ft
TILL 2.5 ft
TOR El. 90.0

TP 26-5
GS El. 94.0
FILL 7.0
TOR 87.0

TP 26-11
GS El. 95.8
FILL 6.7
TOR 89.1

TP 26-7
GS El. 100.7
FILL >10.5
TOR ND

TP 26-4
GS El. 81.0
FILL >8.5
TOR ND

"PIT"-2

"PIT"-3 LIMITS NOT SHOWN ON HISTORIC DRAWINGS

"PIT"-3

TP 26-10
GS El. 82.8
FILL >6.0 ft
TOR ND

TB 26-4
GS El. 77.2
FILL 30.9 ft
TOR El. 46.3

"PIT"-1

TB 26-2
GS El. 108.2
FILL 5.0 ft
TOR El. 103.2

GS El. 81.9
FILL >6.5
TOR ND

GS El. 80.8
FILL 6.5 ft
TOR El. 74.3

TP 26-9

TP 26-8

TP 26-1
GS El. 108.0
FILL 2.3 ft
LOESS 1.7 ft
TILL 2.0 ft
TOR El. 102.0

TP 26-3
GS El. 79.8
FILL 2.3 ft
TILL 3.7 ft
TOR El. 73.8 to 77.5

TP 26-2
GS El. 81.6
FILL >6.5
TOR ND

TB 26-1
GS El. 126.0
FILL 8.4 ft
TILL 6.4 ft
TOR El. 111.2

TB 26-3
GS El. 110.0
FILL 6.3 ft
TOR El. 102.9

TBM/JS1
TBM/JS2
TBM/JS3
TBM/JS4
TBM/JS5
TBM/JS6
TBM/JS7
TBM/JS9
TBM/JS10

STATE WATER DRIVE

LEGEND

TB 26-1 — DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY CARR-DEE ON JANUARY 12 TO 16, 2026

TP 26-1 — DESIGNATION AND APPROXIMATE LOCATION OF TEST PIT EXCAVATED BY EARTHWORKS ON JANUARY 6 TO 8, 2026 AND JANUARY 27 TO 30, 2026

NOTES

1. BASE PLAN TAKEN FROM AN ELECTRONIC FILE TITLED "25558-EC(sbmt02-19-2026).dwg" PROVIDED BY SMMA ON FEBRUARY 19, 2026.
2. ELEVATIONS ARE IN FEET AND REFERENCE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
3. LOCATIONS OF THE "PITS" FROM 1967 "SITE PREPARATION PLAN, MEDFORD HIGH SCHOOL, MEDFORD, MA."

STRATIGRAPHY

GS ELEVATION
FILL THICKNESS
LOESS THICKNESS
TILL THICKNESS
TOP OF ROCK ELEVATION

"ND" - INDICATES NOT DETERMINED IN DEPTH OF TEST PIT.

0 120 240
SCALE IN FEET

HALEY ALDRICH

PROPOSED MEDFORD HIGH SCHOOL
MEDFORD, MASSACHUSETTS

SITE AND SUBSURFACE EXPLORATION LOCATION PLAN

SCALE: AS SHOWN
MAY 2026

FIGURE 2

Saved by: DTE Printed: 3/12/2026 10:10 AM Sheet: EXPL LOC PLAN
\\HALEYALDRICH.COM\SHARE\CF\PROJECTS\02143801\CAD\02143801-000-8001 EXPL LOC PLAN.DWG

PID FIELD SCREENING DATA

PID

Project Name: Medford High School **Location:** 489 Winthrop St, Medford MA

File No. 0225.01 **Sample Volume:** headspace **Sample Temperature:** Ambient

Operator: A. Stiller **Date Collected:** 1/6/2026 to 1/8/2026 **Dated Tested:** Same Day

NUMBER	SAMPLE NUMBER	DEPTH (ft.)	PID	COMMENT
TP-1	S-1	0-1	0.2	Topsoil; 1/6/26
	S-2	1-2	0.1	
	S-3	2-4	0.1	
	S-4	4-6	0.2	
TP-2	S-1	0-0.5	0.0	Topsoil; 1/7/26
	S-2	0.5-1	0.0	
	S-3	1-6	0.0	
TP-3	S-1	0-0.5	0.0	Topsoil; 1/7/26
	S-2	1-3.5	0.0	
	S-3	4-5.5	0.0	
TP-4	S-1	0-1	0.0	Topsoil; 1/8/26
	S-2	1-4	0.0	
	S-3	4-8	0.0	
TP-5	S-1	0.4-1	0.0	
	S-2	1-6	0.0	1/7/26
TP-6	S-1	0.4-1.5	0.0	
	S-2	1.5-6	0.0	

PID

Project Name: Medford High School **Location:** 489 Winthrop St, Medford MA

File No. 0225.01 **Sample Volume:** headspace **Sample Temperature:** Ambient

Operator: A. Stiller **Date Collected:** 1/12/2026 to 1/16/26 **Dated Tested:** Same Day

NUMBER	SAMPLE NUMBER	DEPTH (ft.)	PID	COMMENT
TB-3	S-1	0-1.5	0.2	1/12/26
	S-2	1.5-2	0.3	
	S-3	4-6	0.3	
	S-4	6-7	0.3	
TB-1	S-1	0-1	0.1	1/13/26
	S-2	1-2	0.4	
	S-3	4-6	0.2	
	S-4	6-7	0.1	
	S-5	7-8	0.1	
	S-6	9-11	0.2	
	S-7	14-14.9	0.2	
TB-2	S-1	0-2	0.3	1/14/26
	S-2	2-3.5	0.5	
TB-4	S-1	0-1	0.0	Topsoil; 1/15 to 1/16 2026
	S-2	1-2	0.0	
	S-3	2-3	0.1	
	S-4	3-4	0.5	
	S-5	4-5.5	0.4	
	S-6	5.5-6	0.1	
	S-7	6-8	0.2	
	S-7 DUP	6-8	0.2	
	S-8	8-10	0.0	
	S-9	12-14	0.4	
	S-10	25-27	0.7	No recovery 18 to 22 ft
	S-11	27-29	0.0	
	S-12	29-31	0.4	Still in Fill

PID

Project Name: Medford High School **Location:** 489 Winthrop St, Medford MA

File No. 0225.01 **Sample Volume:** headspace **Sample Temperature:** Ambient

Operator: A. Stiller **Date Collected:** 1/27/2026 to 1/29/26 **Dated Tested:** Same Day

NUMBER	SAMPLE NUMBER	DEPTH (ft.)	PID	COMMENT
TP-7	S-1	0-2	0.0	1/27/26
	S-2	2-6	0.0	
	S-3	7-8	0.1	
	S-4	10.5	0.0	
TP-9	S-1	0-0.8	0.0	1/29/26
	S-2	1-3	0.0	
	S-3	3-7	0.0	
TP-10	S-1	0-1.5	0.0	Topsoil; 1/29/26
	S-2	2-4	0.0	
	S-3	5-6	0.0	Moved south attempted to get deeper – reached 6 ft, caving in
TP-11	S-1	0-1	0.0	Topsoil; 1/27/26
	S-2	1.5-3	0.0	
	S-3	3-6	0.0	
	S-4	7-7.5	0.0	

TABLE 1

Medford High School - 489 Winthrop St., Medford, MA
TABLE 1 - Soil Disposal Characterization Data
January 2026

ADS Environmental Engineering, LLC

	LOCATION						TP-1, S-1	COMP S-1	TP-5, S-2	COMP 2
	SAMPLING DATE						1/7/2026	1/14/2026	1/7/2026	1/14/2026
	LAB SAMPLE ID						L2603186-01	L2603186-02	L2603186-03	L2603186-04
	SAMPLE TYPE						SOIL	SOIL	SOIL	SOIL
	SAMPLE DEPTH (ft.)									
		CasNum	RCS-1-24	S1/G2-24	S1/G3-24	Units				
General Chemistry										
	Specific Conductance @ 25 C	NONE				umhos/cm	-	17	-	130
	Solids, Total	NONE				%	68	81.2	75	76.3
	pH (H)	12408-02-5				SU	-	7.16	-	7.71
	Flash Point	NONE				deg F	-	>150	-	>150
	Cyanide, Reactive	57-12-5				mg/kg	-	ND(10)	-	ND(10)
	Sulfide, Reactive	NONE				mg/kg	-	ND(10)	-	ND(10)
MCP Organochlorine Pesticides										
	Delta-BHC	319-86-8	10			mg/kg	-	ND(0.00192)	-	ND(0.00201)
	Lindane	58-89-9	0.003	2	0.5	mg/kg	-	ND(0.00064)	-	ND(0.000671)
	Alpha-BHC	319-84-6	50			mg/kg	-	ND(0.0008)	-	ND(0.000839)
	Beta-BHC	319-85-7	10			mg/kg	-	ND(0.00192)	-	ND(0.00201)
	Heptachlor	76-44-8	0.3	0.3	0.3	mg/kg	-	ND(0.00096)	-	ND(0.00101)
	Aldrin	309-00-2	0.09	0.09	0.09	mg/kg	-	ND(0.00192)	-	ND(0.00201)
	Heptachlor epoxide	1024-57-3	0.2	0.2	0.2	mg/kg	-	ND(0.0036)	-	ND(0.00378)
	Endrin	72-20-8	20	20	20	mg/kg	-	ND(0.0008)	-	ND(0.000839)
	Endrin ketone	53494-70-5				mg/kg	-	ND(0.00192)	-	ND(0.00201)
	Dieldrin	60-57-1	0.09	0.09	0.09	mg/kg	-	ND(0.0012)	-	ND(0.00126)
	4,4'-DDE	72-55-9	7	7	7	mg/kg	-	0.00636	-	ND(0.00201)
	4,4'-DDD	72-54-8	10	10	10	mg/kg	-	ND(0.00192)	-	ND(0.00201)
	4,4'-DDT	50-29-3	7	7	7	mg/kg	-	0.00458	-	ND(0.00378)
	Endosulfan I	959-98-8	0.6	300	1	mg/kg	-	ND(0.00192)	-	ND(0.00201)
	Endosulfan II	33213-65-9	0.6	300	1	mg/kg	-	ND(0.00192)	-	ND(0.00201)
	Endosulfan sulfate	1031-07-8				mg/kg	-	ND(0.0008)	-	ND(0.000839)
	Methoxychlor	72-43-5	300	300	300	mg/kg	-	ND(0.0036)	-	ND(0.00378)
	Chlordane	57-74-9	0.7	6	6	mg/kg	-	ND(0.016)	-	ND(0.0168)
	Hexachlorobenzene	118-74-1	0.7	0.7	0.7	mg/kg	-	ND(0.00192)	-	ND(0.00201)
MCP Polychlorinated Biphenyls										
	Aroclor 1016	12674-11-2	1	1	1	mg/kg	-	ND(0.0604)	-	ND(0.064)
	Aroclor 1221	11104-28-2	1	1	1	mg/kg	-	ND(0.0604)	-	ND(0.064)
	Aroclor 1232	11141-16-5	1	1	1	mg/kg	-	ND(0.0604)	-	ND(0.064)
	Aroclor 1242	53469-21-9	1	1	1	mg/kg	-	ND(0.0604)	-	ND(0.064)
	Aroclor 1248	12672-29-6	1	1	1	mg/kg	-	ND(0.0604)	-	ND(0.064)
	Aroclor 1254	11097-69-1	1	1	1	mg/kg	-	ND(0.0604)	-	ND(0.064)
	Aroclor 1260	11096-82-5	1	1	1	mg/kg	-	ND(0.0604)	-	ND(0.064)
	Aroclor 1262	37324-23-5	1	1	1	mg/kg	-	ND(0.0604)	-	ND(0.064)
	Aroclor 1268	11100-14-4	1	1	1	mg/kg	-	ND(0.0604)	-	ND(0.064)
	PCBs, Total	1336-36-3	1	1	1	mg/kg	-	ND(0.0604)	-	ND(0.064)
	SUM						-	-	-	-
MCP Semivolatile Organics										
	Acenaphthene	83-32-9	4	1000	1000	mg/kg	-	ND(0.16)	-	ND(0.17)
	1,2,4-Trichlorobenzene	120-82-1	2	6	700	mg/kg	-	ND(0.2)	-	ND(0.22)
	Hexachlorobenzene	118-74-1	0.7	0.7	0.7	mg/kg	-	ND(0.086)	-	ND(0.091)
	Bis(2-chloroethyl)ether	111-44-4	0.7	0.7	2	mg/kg	-	ND(0.086)	-	ND(0.091)
	2-Chloronaphthalene	91-58-7	1000			mg/kg	-	ND(0.2)	-	ND(0.22)
	1,2-Dichlorobenzene	95-50-1	9	100	300	mg/kg	-	ND(0.2)	-	ND(0.22)
	1,3-Dichlorobenzene	541-73-1	3	100	100	mg/kg	-	ND(0.2)	-	ND(0.22)
	1,4-Dichlorobenzene	106-46-7	0.7	1	100	mg/kg	-	ND(0.086)	-	ND(0.091)
	3,3'-Dichlorobenzidine	91-94-1	3	3	3	mg/kg	-	ND(0.2)	-	ND(0.22)
	2,4-Dinitrotoluene	121-14-2	0.7	2	2	mg/kg	-	ND(0.086)	-	ND(0.091)
	2,6-Dinitrotoluene	606-20-2	100			mg/kg	-	ND(0.2)	-	ND(0.22)
	Azobenzene	103-33-3	50			mg/kg	-	ND(0.2)	-	ND(0.22)
	Fluoranthene	206-44-0	1000	1000	1000	mg/kg	-	0.44	-	0.2
	4-Bromophenyl phenyl ether	101-55-3	100			mg/kg	-	ND(0.2)	-	ND(0.22)
	Bis(2-chloroisopropyl)ether	108-60-1	0.7	0.7	30	mg/kg	-	ND(0.086)	-	ND(0.091)
	Bis(2-chloroethoxy)methane	111-91-1	500			mg/kg	-	ND(0.22)	-	ND(0.23)
	Hexachlorobutadiene	87-68-3	30	30	30	mg/kg	-	ND(0.2)	-	ND(0.22)
	Hexachloroethane	67-72-1	0.7	3	50	mg/kg	-	ND(0.086)	-	ND(0.091)
	Isophorone	78-59-1	100			mg/kg	-	ND(0.18)	-	ND(0.19)
	Naphthalene	91-20-3	4	20	500	mg/kg	-	ND(0.2)	-	ND(0.22)
	Nitrobenzene	98-95-3	500			mg/kg	-	ND(0.18)	-	ND(0.19)
	Bis(2-ethylhexyl)phthalate	117-81-7	100	100	100	mg/kg	-	ND(0.2)	-	ND(0.22)
	Butyl benzyl phthalate	85-68-7	100			mg/kg	-	ND(0.2)	-	ND(0.22)
	Di-n-butylphthalate	84-74-2	50			mg/kg	-	ND(0.2)	-	ND(0.22)
	Di-n-octylphthalate	117-84-0	1000			mg/kg	-	ND(0.2)	-	ND(0.22)
	Diethyl phthalate	84-66-2	10	200	300	mg/kg	-	ND(0.2)	-	ND(0.22)
	Dimethyl phthalate	131-11-3	0.7	50	600	mg/kg	-	ND(0.086)	-	ND(0.091)
	Benzo(a)anthracene	56-55-3	20	20	20	mg/kg	-	0.23	-	0.13
	Benzo(a)pyrene	50-32-8	2	2	2	mg/kg	-	0.21	-	ND(0.17)

	Benzo(b)fluoranthene	205-99-2	20	20	20	mg/kg	-	0.3	-	0.17
	Benzo(k)fluoranthene	207-08-9	200	200	200	mg/kg	-	ND(0.12)	-	ND(0.13)
	Chrysene	218-01-9	200	200	200	mg/kg	-	0.25	-	0.14
	Acenaphthylene	208-96-8	2	600	10	mg/kg	-	ND(0.16)	-	ND(0.17)
	Anthracene	120-12-7	1000	1000	1000	mg/kg	-	ND(0.12)	-	ND(0.13)
	Benzo(ghi)perylene	191-24-2	1000	1000	1000	mg/kg	-	ND(0.16)	-	ND(0.17)
	Fluorene	86-73-7	1000	1000	1000	mg/kg	-	ND(0.2)	-	ND(0.22)
	Phenanthrene	85-01-8	10	500	500	mg/kg	-	0.28	-	ND(0.13)
	Dibenzo(a,h)anthracene	53-70-3	2	2	2	mg/kg	-	ND(0.086)	-	ND(0.091)
	Indeno(1,2,3-cd)pyrene	193-39-5	20	20	20	mg/kg	-	ND(0.16)	-	ND(0.17)
	Pyrene	129-00-0	1000	1000	1000	mg/kg	-	0.34	-	0.18
	Aniline	62-53-3	1000			mg/kg	-	ND(0.24)	-	ND(0.26)
	4-Chloroaniline	106-47-8	1	7	3	mg/kg	-	ND(0.2)	-	ND(0.22)
	Dibenzofuran	132-64-9	100			mg/kg	-	ND(0.2)	-	ND(0.22)
	2-Methylnaphthalene	91-57-6	0.7	80	300	mg/kg	-	ND(0.086)	-	ND(0.091)
	Acetophenone	98-86-2	1000			mg/kg	-	ND(0.2)	-	ND(0.22)
	2,4,6-Trichlorophenol	88-06-2	0.7	20	20	mg/kg	-	ND(0.086)	-	ND(0.091)
	2-Chlorophenol	95-57-8	0.7	100	100	mg/kg	-	ND(0.086)	-	ND(0.091)
	2,4-Dichlorophenol	120-83-2	0.7	70	40	mg/kg	-	ND(0.086)	-	ND(0.091)
	2,4-Dimethylphenol	105-67-9	0.7	100	500	mg/kg	-	ND(0.086)	-	ND(0.091)
	2-Nitrophenol	88-75-5	100			mg/kg	-	ND(0.44)	-	ND(0.47)
	4-Nitrophenol	100-02-7	100			mg/kg	-	ND(0.29)	-	ND(0.3)
	2,4-Dinitrophenol	51-28-5	3	50	50	mg/kg	-	ND(0.98)	-	ND(1)
	Pentachlorophenol	87-86-5	3	3	3	mg/kg	-	ND(0.41)	-	ND(0.43)
	Phenol	108-95-2	0.9	50	20	mg/kg	-	ND(0.2)	-	ND(0.22)
	2-Methylphenol	95-48-7	500			mg/kg	-	ND(0.2)	-	ND(0.22)
	3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	500			mg/kg	-	ND(0.29)	-	ND(0.31)
	2,4,5-Trichlorophenol	95-95-4	4	1000	600	mg/kg	-	ND(0.2)	-	ND(0.22)
	Biphenyl	92-52-4	0.05			mg/kg	-	ND(0.041)	-	ND(0.043)
	SUM						-	2.05	-	0.82
MCP Total Metals										
	Antimony, Total	7440-36-0	20	20	20	mg/kg	-	ND(4.68)	-	ND(5.09)
	Arsenic, Total	7440-38-2	20	20	20	mg/kg	-	6.23	-	7.05
	Barium, Total	7440-39-3	1000	1000	1000	mg/kg	-	25.6	-	61.2
	Beryllium, Total	7440-41-7	100	100	100	mg/kg	-	ND(0.468)	-	ND(0.509)
	Cadmium, Total	7440-43-9	80	80	80	mg/kg	-	ND(0.935)	-	ND(1.02)
	Chromium, Total	7440-47-3	100	100	100	mg/kg	-	12.9	-	16.1
	Lead, Total	7439-92-1	200	200	200	mg/kg	-	36.9	-	25.4
	Mercury, Total	7439-97-6	20	20	20	mg/kg	-	ND(0.096)	-	ND(0.09)
	Nickel, Total	7440-02-0	700	700	700	mg/kg	-	6.57	-	10.9
	Selenium, Total	7782-49-2	400	400	400	mg/kg	-	ND(4.68)	-	ND(5.09)
	Silver, Total	7440-22-4	100	100	100	mg/kg	-	ND(0.935)	-	ND(1.02)
	Thallium, Total	7440-28-0	8	8	8	mg/kg	-	ND(4.68)	-	ND(5.09)
	Vanadium, Total	7440-62-2	500	500	500	mg/kg	-	17	-	26
	Zinc, Total	7440-66-6	1000	1000	1000	mg/kg	-	35.7	-	62.3
MCP Volatile Organics by EPA 5035/8260										
	Methylene chloride	75-09-2	0.1	3	300	mg/kg	ND(0.0087)	-	ND(0.0078)	-
	1,1-Dichloroethane	75-34-3	0.4	9	500	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	Chloroform	67-66-3	0.2	0.2	500	mg/kg	ND(0.0026)	-	ND(0.0023)	-
	Carbon tetrachloride	56-23-5	5	5	30	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	1,2-Dichloropropane	78-87-5	0.1	0.1	60	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	Dibromochloromethane	124-48-1	0.005	0.03	30	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	1,1,2-Trichloroethane	79-00-5	0.1	2	40	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	Tetrachloroethene	127-18-4	1	4	100	mg/kg	ND(0.00087)	-	ND(0.00078)	-
	Chlorobenzene	108-90-7	1	3	100	mg/kg	ND(0.00087)	-	ND(0.00078)	-
	Trichlorofluoromethane	75-69-4	1000			mg/kg	ND(0.007)	-	ND(0.0062)	-
	1,2-Dichloroethane	107-06-2	0.1	0.1	30	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	1,1,1-Trichloroethane	71-55-6	30	500	500	mg/kg	ND(0.00087)	-	ND(0.00078)	-
	Bromodichloromethane	75-27-4	0.1	0.1	40	mg/kg	ND(0.00087)	-	ND(0.00078)	-
	trans-1,3-Dichloropropene	10061-02-6	0.01	0.4	20	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	cis-1,3-Dichloropropene	10061-01-5	0.01	0.4	20	mg/kg	ND(0.00087)	-	ND(0.00078)	-
	1,3-Dichloropropene, Total	542-75-6	0.01	0.4	20	mg/kg	ND(0.00087)	-	ND(0.00078)	-
	1,1-Dichloropropene	563-58-6				mg/kg	ND(0.00087)	-	ND(0.00078)	-
	Bromoform	75-25-2	0.1	1	300	mg/kg	ND(0.007)	-	ND(0.0062)	-
	1,1,2,2-Tetrachloroethane	79-34-5	0.005	0.02	10	mg/kg	ND(0.00087)	-	ND(0.00078)	-
	Benzene	71-43-2	2	40	40	mg/kg	ND(0.00087)	-	ND(0.00078)	-
	Toluene	108-88-3	30	500	500	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	Ethylbenzene	100-41-4	40	500	500	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	Chloromethane	74-87-3	100			mg/kg	ND(0.007)	-	ND(0.0062)	-
	Bromomethane	74-83-9	0.5	0.5	30	mg/kg	ND(0.0035)	-	ND(0.0031)	-
	Vinyl chloride	75-01-4	0.3	0.3	0.3	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	Chloroethane	75-00-3	100			mg/kg	ND(0.0035)	-	ND(0.0031)	-
	1,1-Dichloroethene	75-35-4	3	40	500	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	trans-1,2-Dichloroethene	156-60-5	1	1	500	mg/kg	ND(0.0026)	-	ND(0.0023)	-
	Trichloroethene	79-01-6	0.3	0.3	30	mg/kg	ND(0.00087)	-	ND(0.00078)	-
	1,2-Dichlorobenzene	95-50-1	9	100	300	mg/kg	ND(0.0035)	-	ND(0.0031)	-
	1,3-Dichlorobenzene	541-73-1	3	100	100	mg/kg	ND(0.0035)	-	ND(0.0031)	-
	1,4-Dichlorobenzene	106-46-7	0.7	1	100	mg/kg	ND(0.0035)	-	ND(0.0031)	-
	Methyl tert butyl ether	1634-04-4	0.1	100	100	mg/kg	ND(0.0035)	-	ND(0.0031)	-
	p/m-Xylene	179601-23-1	100	100	500	mg/kg	ND(0.0035)	-	ND(0.0031)	-

	o-Xylene	95-47-6	100	100	500	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	Xylenes, Total	1330-20-7	100	100	500	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	cis-1,2-Dichloroethene	156-59-2	0.1	0.1	100	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	1,2-Dichloroethene, Total	540-59-0				mg/kg	ND(0.0017)	-	ND(0.0016)	-
	Dibromomethane	74-95-3	500			mg/kg	ND(0.0035)	-	ND(0.0031)	-
	1,2,3-Trichloropropane	96-18-4	100			mg/kg	ND(0.0035)	-	ND(0.0031)	-
	Styrene	100-42-5	3	4	80	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	Dichlorodifluoromethane	75-71-8	1000			mg/kg	ND(0.017)	-	ND(0.016)	-
	Acetone	67-64-1	6	50	400	mg/kg	ND(0.044)	-	ND(0.039)	-
	Carbon disulfide	75-15-0	100			mg/kg	ND(0.017)	-	ND(0.016)	-
	Methyl ethyl ketone	78-93-3	4	50	400	mg/kg	ND(0.017)	-	ND(0.016)	-
	Methyl isobutyl ketone	108-10-1	0.4	50	400	mg/kg	ND(0.017)	-	ND(0.016)	-
	2-Hexanone	591-78-6	100			mg/kg	ND(0.017)	-	ND(0.016)	-
	Bromochloromethane	74-97-5				mg/kg	ND(0.0035)	-	ND(0.0031)	-
	Tetrahydrofuran	109-99-9	500			mg/kg	ND(0.007)	-	ND(0.0062)	-
	2,2-Dichloropropane	594-20-7				mg/kg	ND(0.0035)	-	ND(0.0031)	-
	1,2-Dibromoethane	106-93-4	0.1	0.1	1	mg/kg	ND(0.0017)	-	ND(0.0016)	-
	1,3-Dichloropropane	142-28-9	500			mg/kg	ND(0.0035)	-	ND(0.0031)	-
	1,1,1,2-Tetrachloroethane	630-20-6	0.1	0.1	90	mg/kg	ND(0.00087)	-	ND(0.00078)	-
	Bromobenzene	108-86-1	100			mg/kg	ND(0.0035)	-	ND(0.0031)	-
	n-Butylbenzene	104-51-8				mg/kg	ND(0.0017)	-	ND(0.0016)	-
	sec-Butylbenzene	135-98-8				mg/kg	ND(0.0017)	-	ND(0.0016)	-
	tert-Butylbenzene	98-06-6	100			mg/kg	ND(0.0035)	-	ND(0.0031)	-
	o-Chlorotoluene	95-49-8	100			mg/kg	ND(0.0035)	-	ND(0.0031)	-
	p-Chlorotoluene	106-43-4				mg/kg	ND(0.0035)	-	ND(0.0031)	-
	1,2-Dibromo-3-chloropropane	96-12-8	10			mg/kg	ND(0.0052)	-	ND(0.0046)	-
	Hexachlorobutadiene	87-68-3	30	30	30	mg/kg	ND(0.007)	-	ND(0.0062)	-
	Isopropylbenzene	98-82-8	1000			mg/kg	ND(0.0017)	-	ND(0.0016)	-
	p-Isopropyltoluene	99-87-6	100			mg/kg	ND(0.0017)	-	ND(0.0016)	-
	Naphthalene	91-20-3	4	20	500	mg/kg	ND(0.007)	-	ND(0.0062)	-
	n-Propylbenzene	103-65-1	100			mg/kg	ND(0.0017)	-	ND(0.0016)	-
	1,2,3-Trichlorobenzene	87-61-6				mg/kg	ND(0.0035)	-	ND(0.0031)	-
	1,2,4-Trichlorobenzene	120-82-1	2	6	700	mg/kg	ND(0.0035)	-	ND(0.0031)	-
	1,3,5-Trimethylbenzene	108-67-8	10			mg/kg	ND(0.0035)	-	ND(0.0031)	-
	1,2,4-Trimethylbenzene	95-63-6	1000			mg/kg	ND(0.0035)	-	ND(0.0031)	-
	Diethyl ether	60-29-7	100			mg/kg	ND(0.0035)	-	ND(0.0031)	-
	Diisopropyl Ether	108-20-3	100			mg/kg	ND(0.0035)	-	ND(0.0031)	-
	Ethyl-Tert-Butyl-Ether	637-92-3				mg/kg	ND(0.0035)	-	ND(0.0031)	-
	Tertiary-Amyl Methyl Ether	994-05-8				mg/kg	ND(0.0035)	-	ND(0.0031)	-
	1,4-Dioxane	123-91-1	0.2	5	20	mg/kg	ND(0.14)	-	ND(0.12)	-
	SUM						-	-	-	-
Petroleum Hydrocarbon Quantitation										
	TPH (C10-C36)	NONE	1000	1000	1000	mg/kg	-	58.6	-	67.3

* Comparison is not performed on parameters with non-numeric criteria.

RCS-1-24: MCP 2024 RCS-1 Reportable Concentrations Criteria effective March 1, 2024.
S1/G2-24: MCP 2024 Method 1 S-1/GW-2 Soil Standards Criteria effective March 1, 2024.
S1/G3-24: MCP 2024 Method 1 S-1/GW-3 Soil Standards Criteria effective March 1, 2024.

ANALYTICAL LABORATORY REPORT

ANALYTICAL REPORT

Lab Number:	L2603186
Client:	ADS Environmental 205 Woodland St. Sherborn, MA 01770
ATTN:	Andrea Stiller
Phone:	(781) 727-6646
Project Name:	MEDFORD HIGH SCHOOL
Project Number:	0225
Report Date:	01/30/26

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Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Lab Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2603186-01	TP-1, S-1	SOIL	489 WINTHROP ST, MEDFORD	01/07/26 13:00	01/16/26
L2603186-02	COMP S-1	SOIL	489 WINTHROP ST, MEDFORD	01/14/26 13:00	01/16/26
L2603186-03	TP-5, S-2	SOIL	489 WINTHROP ST, MEDFORD	01/07/26 14:00	01/16/26
L2603186-04	COMP 2	SOIL	489 WINTHROP ST, MEDFORD	01/14/26 14:00	01/16/26

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E 1.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E 2.	PFAS Only: Were aqueous samples extracted without filtering?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits/lower limits of quantitation at or below all CAM reporting limits/lower limits of quantitation specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	MEDFORD HIGH SCHOOL	**Lab Number:**	L2603186
Project Number:	0225	**Report Date:**	01/30/26

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Pace Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Pace's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Pace Project Manager and made arrangements for Pace to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186
Project Number: 0225 **Report Date:** 01/30/26

Case Narrative (continued)

MCP Related Narratives

Sample Receipt

In reference to question H:

A Matrix Spike was not submitted for the analysis of Total Metals.

Volatile Organics

In reference to question H:

L2603186-01 and -03: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,4-dioxane (0.0018)

Average Response Factor: 1,4-dioxane

Verification: dichlorodifluoromethane (69%), acetone (65%)

L2603186-01 and -03: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. Associated results are considered to be biased high if the %D is negative and biased low if the %D is positive. A copy of the continuing calibration standard is included as an addendum to this report.

Total Metals

L2603186-02 and -04: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by the sample matrix.

In reference to question H:

The WG2167151-3 LCSD recoveries associated with L2603186-02 and -04 are outside the acceptance criteria for beryllium (135%), cadmium (135%), chromium (126%), nickel (130%) and thallium (133%). Re-analysis of the LCSD yielded unacceptable recoveries for beryllium (131%), cadmium (133%), chromium (123%), nickel (129%) and thallium (130%). The LCS recoveries are acceptable; therefore, no further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Kelly O'Neill

Title: Technical Director/Representative Date: 01/30/26

QC OUTLIER SUMMARY REPORT

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab								
8260D	Batch QC	WG2167066-3	2-Hexanone	LCS	68	70-130	01,03	potential low bias
8260D	Batch QC	WG2167066-4	Tetrahydrofuran	LCSD	37	70-130	01,03	non-directional bias
MCP Semivolatile Organics - Westborough Lab								
8270E	Batch QC	WG2167165-3	Aniline	LCSD	39	40-140	02,04	potential low bias
MCP Total Metals - Mansfield Lab								
6010D	Batch QC	WG2167151-3	Beryllium, Total	LCSD	135	82-118	02,04	potential high bias
6010D	Batch QC	WG2167151-3	Cadmium, Total	LCSD	135	82-118	02,04	potential high bias
6010D	Batch QC	WG2167151-3	Chromium, Total	LCSD	126	81-119	02,04	potential high bias
6010D	Batch QC	WG2167151-3	Nickel, Total	LCSD	130	82-118	02,04	potential high bias
6010D	Batch QC	WG2167151-3	Thallium, Total	LCSD	133	80-120	02,04	potential high bias

ORGANICS

VOLATILES

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-01 Date Collected: 01/07/26 13:00

Client ID: TP-1, S-1 Date Received: 01/16/26

Sample Location: 489 WINTHROP ST, MEDFORD Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 141,8260D

Analytical Date: 01/20/26 13:57

Analyst: JIC

Percent Solids: 68%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	8.7	--	1
1,1-Dichloroethane	ND		ug/kg	1.7	--	1
Chloroform	ND		ug/kg	2.6	--	1
Carbon tetrachloride	ND		ug/kg	1.7	--	1
1,2-Dichloropropane	ND		ug/kg	1.7	--	1
Dibromochloromethane	ND		ug/kg	1.7	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.7	--	1
Tetrachloroethene	ND		ug/kg	0.87	--	1
Chlorobenzene	ND		ug/kg	0.87	--	1
Trichlorofluoromethane	ND		ug/kg	7.0	--	1
1,2-Dichloroethane	ND		ug/kg	1.7	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.87	--	1
Bromodichloromethane	ND		ug/kg	0.87	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.7	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.87	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.87	--	1
1,1-Dichloropropene	ND		ug/kg	0.87	--	1
Bromoform	ND		ug/kg	7.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.87	--	1
Benzene	ND		ug/kg	0.87	--	1
Toluene	ND		ug/kg	1.7	--	1
Ethylbenzene	ND		ug/kg	1.7	--	1
Chloromethane	ND		ug/kg	7.0	--	1
Bromomethane	ND		ug/kg	3.5	--	1
Vinyl chloride	ND		ug/kg	1.7	--	1
Chloroethane	ND		ug/kg	3.5	--	1
1,1-Dichloroethene	ND		ug/kg	1.7	--	1
trans-1,2-Dichloroethene	ND		ug/kg	2.6	--	1

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-01 Date Collected: 01/07/26 13:00

Client ID: TP-1, S-1 Date Received: 01/16/26

Sample Location: 489 WINTHROP ST, MEDFORD Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.87	--	1
1,2-Dichlorobenzene	ND		ug/kg	3.5	--	1
1,3-Dichlorobenzene	ND		ug/kg	3.5	--	1
1,4-Dichlorobenzene	ND		ug/kg	3.5	--	1
Methyl tert butyl ether	ND		ug/kg	3.5	--	1
p/m-Xylene	ND		ug/kg	3.5	--	1
o-Xylene	ND		ug/kg	1.7	--	1
Xylenes, Total	ND		ug/kg	1.7	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.7	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.7	--	1
Dibromomethane	ND		ug/kg	3.5	--	1
1,2,3-Trichloropropane	ND		ug/kg	3.5	--	1
Styrene	ND		ug/kg	1.7	--	1
Dichlorodifluoromethane	ND		ug/kg	17	--	1
Acetone	ND		ug/kg	44	--	1
Carbon disulfide	ND		ug/kg	17	--	1
Methyl ethyl ketone	ND		ug/kg	17	--	1
Methyl isobutyl ketone	ND		ug/kg	17	--	1
2-Hexanone	ND		ug/kg	17	--	1
Bromochloromethane	ND		ug/kg	3.5	--	1
Tetrahydrofuran	ND		ug/kg	7.0	--	1
2,2-Dichloropropane	ND		ug/kg	3.5	--	1
1,2-Dibromoethane	ND		ug/kg	1.7	--	1
1,3-Dichloropropane	ND		ug/kg	3.5	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.87	--	1
Bromobenzene	ND		ug/kg	3.5	--	1
n-Butylbenzene	ND		ug/kg	1.7	--	1
sec-Butylbenzene	ND		ug/kg	1.7	--	1
tert-Butylbenzene	ND		ug/kg	3.5	--	1
o-Chlorotoluene	ND		ug/kg	3.5	--	1
p-Chlorotoluene	ND		ug/kg	3.5	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.2	--	1
Hexachlorobutadiene	ND		ug/kg	7.0	--	1
Isopropylbenzene	ND		ug/kg	1.7	--	1
p-Isopropyltoluene	ND		ug/kg	1.7	--	1
Naphthalene	ND		ug/kg	7.0	--	1
n-Propylbenzene	ND		ug/kg	1.7	--	1

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-01 Date Collected: 01/07/26 13:00

Client ID: TP-1, S-1 Date Received: 01/16/26

Sample Location: 489 WINTHROP ST, MEDFORD Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	3.5	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.5	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.5	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.5	--	1
Diethyl ether	ND		ug/kg	3.5	--	1
Diisopropyl Ether	ND		ug/kg	3.5	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	3.5	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	3.5	--	1
1,4-Dioxane	ND		ug/kg	140	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	104		70-130

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-03 Date Collected: 01/07/26 14:00

Client ID: TP-5, S-2 Date Received: 01/16/26

Sample Location: 489 WINTHROP ST, MEDFORD Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 141,8260D

Analytical Date: 01/20/26 14:18

Analyst: JIC

Percent Solids: 75%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	7.8	--	1
1,1-Dichloroethane	ND		ug/kg	1.6	--	1
Chloroform	ND		ug/kg	2.3	--	1
Carbon tetrachloride	ND		ug/kg	1.6	--	1
1,2-Dichloropropane	ND		ug/kg	1.6	--	1
Dibromochloromethane	ND		ug/kg	1.6	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	--	1
Tetrachloroethene	ND		ug/kg	0.78	--	1
Chlorobenzene	ND		ug/kg	0.78	--	1
Trichlorofluoromethane	ND		ug/kg	6.2	--	1
1,2-Dichloroethane	ND		ug/kg	1.6	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.78	--	1
Bromodichloromethane	ND		ug/kg	0.78	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.6	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.78	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.78	--	1
1,1-Dichloropropene	ND		ug/kg	0.78	--	1
Bromoform	ND		ug/kg	6.2	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.78	--	1
Benzene	ND		ug/kg	0.78	--	1
Toluene	ND		ug/kg	1.6	--	1
Ethylbenzene	ND		ug/kg	1.6	--	1
Chloromethane	ND		ug/kg	6.2	--	1
Bromomethane	ND		ug/kg	3.1	--	1
Vinyl chloride	ND		ug/kg	1.6	--	1
Chloroethane	ND		ug/kg	3.1	--	1
1,1-Dichloroethene	ND		ug/kg	1.6	--	1
trans-1,2-Dichloroethene	ND		ug/kg	2.3	--	1

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-03 Date Collected: 01/07/26 14:00

Client ID: TP-5, S-2 Date Received: 01/16/26

Sample Location: 489 WINTHROP ST, MEDFORD Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.78	--	1
1,2-Dichlorobenzene	ND		ug/kg	3.1	--	1
1,3-Dichlorobenzene	ND		ug/kg	3.1	--	1
1,4-Dichlorobenzene	ND		ug/kg	3.1	--	1
Methyl tert butyl ether	ND		ug/kg	3.1	--	1
p/m-Xylene	ND		ug/kg	3.1	--	1
o-Xylene	ND		ug/kg	1.6	--	1
Xylenes, Total	ND		ug/kg	1.6	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.6	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.6	--	1
Dibromomethane	ND		ug/kg	3.1	--	1
1,2,3-Trichloropropane	ND		ug/kg	3.1	--	1
Styrene	ND		ug/kg	1.6	--	1
Dichlorodifluoromethane	ND		ug/kg	16	--	1
Acetone	ND		ug/kg	39	--	1
Carbon disulfide	ND		ug/kg	16	--	1
Methyl ethyl ketone	ND		ug/kg	16	--	1
Methyl isobutyl ketone	ND		ug/kg	16	--	1
2-Hexanone	ND		ug/kg	16	--	1
Bromochloromethane	ND		ug/kg	3.1	--	1
Tetrahydrofuran	ND		ug/kg	6.2	--	1
2,2-Dichloropropane	ND		ug/kg	3.1	--	1
1,2-Dibromoethane	ND		ug/kg	1.6	--	1
1,3-Dichloropropane	ND		ug/kg	3.1	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.78	--	1
Bromobenzene	ND		ug/kg	3.1	--	1
n-Butylbenzene	ND		ug/kg	1.6	--	1
sec-Butylbenzene	ND		ug/kg	1.6	--	1
tert-Butylbenzene	ND		ug/kg	3.1	--	1
o-Chlorotoluene	ND		ug/kg	3.1	--	1
p-Chlorotoluene	ND		ug/kg	3.1	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.6	--	1
Hexachlorobutadiene	ND		ug/kg	6.2	--	1
Isopropylbenzene	ND		ug/kg	1.6	--	1
p-Isopropyltoluene	ND		ug/kg	1.6	--	1
Naphthalene	ND		ug/kg	6.2	--	1
n-Propylbenzene	ND		ug/kg	1.6	--	1

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-03 Date Collected: 01/07/26 14:00

Client ID: TP-5, S-2 Date Received: 01/16/26

Sample Location: 489 WINTHROP ST, MEDFORD Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	3.1	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.1	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.1	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.1	--	1
Diethyl ether	ND		ug/kg	3.1	--	1
Diisopropyl Ether	ND		ug/kg	3.1	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	3.1	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	3.1	--	1
1,4-Dioxane	ND		ug/kg	120	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	104		70-130

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 01/20/26 09:28
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab for sample(s): 01,03 Batch: WG2167066-5					
Methylene chloride	ND		ug/kg	5.0	--
1,1-Dichloroethane	ND		ug/kg	1.0	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	1.0	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.0	--
Tetrachloroethene	ND		ug/kg	0.50	--
Chlorobenzene	ND		ug/kg	0.50	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	0.50	--
Bromodichloromethane	ND		ug/kg	0.50	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--
1,1-Dichloropropene	ND		ug/kg	0.50	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--
Benzene	ND		ug/kg	0.50	--
Toluene	ND		ug/kg	1.0	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 01/20/26 09:28
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab for sample(s): 01,03 Batch: WG2167066-5					
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	1.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--
Trichloroethene	ND		ug/kg	0.50	--
1,2-Dichlorobenzene	ND		ug/kg	2.0	--
1,3-Dichlorobenzene	ND		ug/kg	2.0	--
1,4-Dichlorobenzene	ND		ug/kg	2.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	1.0	--
Xylenes, Total	ND		ug/kg	1.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	2.0	--
1,2,3-Trichloropropane	ND		ug/kg	2.0	--
Styrene	ND		ug/kg	1.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	25	--
Carbon disulfide	ND		ug/kg	10	--
Methyl ethyl ketone	ND		ug/kg	10	--
Methyl isobutyl ketone	ND		ug/kg	10	--

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 01/20/26 09:28
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab for sample(s): 01,03 Batch: WG2167066-5					
2-Hexanone	ND		ug/kg	10	--
Bromochloromethane	ND		ug/kg	2.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	2.0	--
1,2-Dibromoethane	ND		ug/kg	1.0	--
1,3-Dichloropropane	ND		ug/kg	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--
Bromobenzene	ND		ug/kg	2.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	2.0	--
o-Chlorotoluene	ND		ug/kg	2.0	--
p-Chlorotoluene	ND		ug/kg	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 01/20/26 09:28
Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab for sample(s): 01,03 Batch: WG2167066-5					
Diethyl ether	ND		ug/kg	2.0	--
Diisopropyl Ether	ND		ug/kg	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.0	--
1,4-Dioxane	ND		ug/kg	80	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	102		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab Associated sample(s): 01,03 Batch: WG2167066-3 WG2167066-4								
Methylene chloride	100		97		70-130	3		20
1,1-Dichloroethane	107		101		70-130	6		20
Chloroform	103		100		70-130	3		20
Carbon tetrachloride	101		96		70-130	5		20
1,2-Dichloropropane	105		103		70-130	2		20
Dibromochloromethane	95		96		70-130	1		20
1,1,2-Trichloroethane	96		98		70-130	2		20
Tetrachloroethene	100		95		70-130	5		20
Chlorobenzene	102		98		70-130	4		20
Trichlorofluoromethane	105		99		70-130	6		20
1,2-Dichloroethane	106		108		70-130	2		20
1,1,1-Trichloroethane	98		92		70-130	6		20
Bromodichloromethane	101		101		70-130	0		20
trans-1,3-Dichloropropene	98		97		70-130	1		20
cis-1,3-Dichloropropene	105		104		70-130	1		20
1,1-Dichloropropene	104		98		70-130	6		20
Bromoform	86		90		70-130	5		20
1,1,2,2-Tetrachloroethane	86		92		70-130	7		20
Benzene	103		99		70-130	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab Associated sample(s): 01,03 Batch: WG2167066-3 WG2167066-4								
Toluene	99		95		70-130	4		20
Ethylbenzene	101		97		70-130	4		20
Chloromethane	93		86		70-130	8		20
Bromomethane	123		115		70-130	7		20
Vinyl chloride	102		95		70-130	7		20
Chloroethane	103		96		70-130	7		20
1,1-Dichloroethene	102		96		70-130	6		20
trans-1,2-Dichloroethene	102		98		70-130	4		20
Trichloroethene	100		97		70-130	3		20
1,2-Dichlorobenzene	101		99		70-130	2		20
1,3-Dichlorobenzene	103		100		70-130	3		20
1,4-Dichlorobenzene	103		100		70-130	3		20
Methyl tert butyl ether	106		108		70-130	2		20
p/m-Xylene	100		96		70-130	4		20
o-Xylene	102		99		70-130	3		20
cis-1,2-Dichloroethene	105		101		70-130	4		20
Dibromomethane	104		104		70-130	0		20
1,2,3-Trichloropropane	86		92		70-130	7		20
Styrene	104		101		70-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab Associated sample(s): 01,03 Batch: WG2167066-3 WG2167066-4								
Dichlorodifluoromethane	94		89		70-130	5		20
Acetone	75		82		70-130	9		20
Carbon disulfide	100		94		70-130	6		20
Methyl ethyl ketone	74		83		70-130	11		20
Methyl isobutyl ketone	75		84		70-130	11		20
2-Hexanone	**68**	Q	78		70-130	14		20
Bromochloromethane	109		108		70-130	1		20
Tetrahydrofuran	71		103		70-130	**37**	Q	20
2,2-Dichloropropane	100		95		70-130	5		20
1,2-Dibromoethane	95		98		70-130	3		20
1,3-Dichloropropane	99		101		70-130	2		20
1,1,1,2-Tetrachloroethane	98		97		70-130	1		20
Bromobenzene	102		97		70-130	5		20
n-Butylbenzene	105		98		70-130	7		20
sec-Butylbenzene	100		94		70-130	6		20
tert-Butylbenzene	98		95		70-130	3		20
o-Chlorotoluene	116		112		70-130	4		20
p-Chlorotoluene	102		98		70-130	4		20
1,2-Dibromo-3-chloropropane	70		79		70-130	12		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab Associated sample(s): 01,03 Batch: WG2167066-3 WG2167066-4								
Hexachlorobutadiene	96		90		70-130	6		20
Isopropylbenzene	100		97		70-130	3		20
p-Isopropyltoluene	102		96		70-130	6		20
Naphthalene	90		96		70-130	6		20
n-Propylbenzene	102		96		70-130	6		20
1,2,3-Trichlorobenzene	100		101		70-130	1		20
1,2,4-Trichlorobenzene	104		103		70-130	1		20
1,3,5-Trimethylbenzene	102		97		70-130	5		20
1,2,4-Trimethylbenzene	103		99		70-130	4		20
Diethyl ether	103		104		70-130	1		20
Diisopropyl Ether	109		106		70-130	3		20
Ethyl-Tert-Butyl-Ether	109		109		70-130	0		20
Tertiary-Amyl Methyl Ether	106		107		70-130	1		20
1,4-Dioxane	77		87		70-130	12		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by EPA 5035/8260 Low - Westborough Lab Associated sample(s): 01,03 Batch: WG2167066-3 WG2167066-4								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	103		106		70-130
Toluene-d8	97		96		70-130
4-Bromofluorobenzene	101		101		70-130
Dibromofluoromethane	104		104		70-130

SEMIVOLATILES

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-02
Client ID: COMP S-1
Sample Location: 489 WINTHROP ST, MEDFORD

Date Collected: 01/14/26 13:00
Date Received: 01/16/26
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 141,8270E
Analytical Date: 01/24/26 18:00
Analyst: JG
Percent Solids: 81%

Extraction Method: EPA 3546
Extraction Date: 01/20/26 19:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	160	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	200	--	1
Hexachlorobenzene	ND		ug/kg	86	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	86	--	1
2-Chloronaphthalene	ND		ug/kg	200	--	1
1,2-Dichlorobenzene	ND		ug/kg	200	--	1
1,3-Dichlorobenzene	ND		ug/kg	200	--	1
1,4-Dichlorobenzene	ND		ug/kg	86	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	200	--	1
2,4-Dinitrotoluene	ND		ug/kg	86	--	1
2,6-Dinitrotoluene	ND		ug/kg	200	--	1
Azobenzene	ND		ug/kg	200	--	1
Fluoranthene	440		ug/kg	120	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	200	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	86	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	220	--	1
Hexachlorobutadiene	ND		ug/kg	200	--	1
Hexachloroethane	ND		ug/kg	86	--	1
Isophorone	ND		ug/kg	180	--	1
Naphthalene	ND		ug/kg	200	--	1
Nitrobenzene	ND		ug/kg	180	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	200	--	1
Butyl benzyl phthalate	ND		ug/kg	200	--	1
Di-n-butylphthalate	ND		ug/kg	200	--	1
Di-n-octylphthalate	ND		ug/kg	200	--	1
Diethyl phthalate	ND		ug/kg	200	--	1
Dimethyl phthalate	ND		ug/kg	86	--	1
Benzo(a)anthracene	230		ug/kg	120	--	1

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-02 Date Collected: 01/14/26 13:00

Client ID: COMP S-1 Date Received: 01/16/26

Sample Location: 489 WINTHROP ST, MEDFORD Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	210		ug/kg	160	--	1
Benzo(b)fluoranthene	300		ug/kg	120	--	1
Benzo(k)fluoranthene	ND		ug/kg	120	--	1
Chrysene	250		ug/kg	120	--	1
Acenaphthylene	ND		ug/kg	160	--	1
Anthracene	ND		ug/kg	120	--	1
Benzo(ghi)perylene	ND		ug/kg	160	--	1
Fluorene	ND		ug/kg	200	--	1
Phenanthrene	280		ug/kg	120	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	86	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	160	--	1
Pyrene	340		ug/kg	120	--	1
Aniline	ND		ug/kg	240	--	1
4-Chloroaniline	ND		ug/kg	200	--	1
Dibenzofuran	ND		ug/kg	200	--	1
2-Methylnaphthalene	ND		ug/kg	86	--	1
Acetophenone	ND		ug/kg	200	--	1
2,4,6-Trichlorophenol	ND		ug/kg	86	--	1
2-Chlorophenol	ND		ug/kg	86	--	1
2,4-Dichlorophenol	ND		ug/kg	86	--	1
2,4-Dimethylphenol	ND		ug/kg	86	--	1
2-Nitrophenol	ND		ug/kg	440	--	1
4-Nitrophenol	ND		ug/kg	290	--	1
2,4-Dinitrophenol	ND		ug/kg	980	--	1
Pentachlorophenol	ND		ug/kg	410	--	1
Phenol	ND		ug/kg	200	--	1
2-Methylphenol	ND		ug/kg	200	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	290	--	1
2,4,5-Trichlorophenol	ND		ug/kg	200	--	1
Biphenyl	ND		ug/kg	41	--	1

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-02 Date Collected: 01/14/26 13:00

Client ID: COMP S-1 Date Received: 01/16/26

Sample Location: 489 WINTHROP ST, MEDFORD Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	91		30-130
Phenol-d6	93		30-130
Nitrobenzene-d5	79		30-130
2-Fluorobiphenyl	86		30-130
2,4,6-Tribromophenol	75		30-130
4-Terphenyl-d14	72		30-130

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225
Lab Number: L2603186
Report Date: 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-04
Client ID: COMP 2
Sample Location: 489 WINTHROP ST, MEDFORD

Date Collected: 01/14/26 14:00
Date Received: 01/16/26
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 141,8270E
Analytical Date: 01/24/26 18:26
Analyst: JG
Percent Solids: 76%

Extraction Method: EPA 3546
Extraction Date: 01/20/26 19:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	170	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	220	--	1
Hexachlorobenzene	ND		ug/kg	91	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	91	--	1
2-Chloronaphthalene	ND		ug/kg	220	--	1
1,2-Dichlorobenzene	ND		ug/kg	220	--	1
1,3-Dichlorobenzene	ND		ug/kg	220	--	1
1,4-Dichlorobenzene	ND		ug/kg	91	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	220	--	1
2,4-Dinitrotoluene	ND		ug/kg	91	--	1
2,6-Dinitrotoluene	ND		ug/kg	220	--	1
Azobenzene	ND		ug/kg	220	--	1
Fluoranthene	200		ug/kg	130	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	220	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	91	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	230	--	1
Hexachlorobutadiene	ND		ug/kg	220	--	1
Hexachloroethane	ND		ug/kg	91	--	1
Isophorone	ND		ug/kg	190	--	1
Naphthalene	ND		ug/kg	220	--	1
Nitrobenzene	ND		ug/kg	190	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	220	--	1
Butyl benzyl phthalate	ND		ug/kg	220	--	1
Di-n-butylphthalate	ND		ug/kg	220	--	1
Di-n-octylphthalate	ND		ug/kg	220	--	1
Diethyl phthalate	ND		ug/kg	220	--	1
Dimethyl phthalate	ND		ug/kg	91	--	1
Benzo(a)anthracene	130		ug/kg	130	--	1

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-04 Date Collected: 01/14/26 14:00

Client ID: COMP 2 Date Received: 01/16/26

Sample Location: 489 WINTHROP ST, MEDFORD Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	ND		ug/kg	170	--	1
Benzo(b)fluoranthene	170		ug/kg	130	--	1
Benzo(k)fluoranthene	ND		ug/kg	130	--	1
Chrysene	140		ug/kg	130	--	1
Acenaphthylene	ND		ug/kg	170	--	1
Anthracene	ND		ug/kg	130	--	1
Benzo(ghi)perylene	ND		ug/kg	170	--	1
Fluorene	ND		ug/kg	220	--	1
Phenanthrene	ND		ug/kg	130	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	91	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	170	--	1
Pyrene	180		ug/kg	130	--	1
Aniline	ND		ug/kg	260	--	1
4-Chloroaniline	ND		ug/kg	220	--	1
Dibenzofuran	ND		ug/kg	220	--	1
2-Methylnaphthalene	ND		ug/kg	91	--	1
Acetophenone	ND		ug/kg	220	--	1
2,4,6-Trichlorophenol	ND		ug/kg	91	--	1
2-Chlorophenol	ND		ug/kg	91	--	1
2,4-Dichlorophenol	ND		ug/kg	91	--	1
2,4-Dimethylphenol	ND		ug/kg	91	--	1
2-Nitrophenol	ND		ug/kg	470	--	1
4-Nitrophenol	ND		ug/kg	300	--	1
2,4-Dinitrophenol	ND		ug/kg	1000	--	1
Pentachlorophenol	ND		ug/kg	430	--	1
Phenol	ND		ug/kg	220	--	1
2-Methylphenol	ND		ug/kg	220	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	310	--	1
2,4,5-Trichlorophenol	ND		ug/kg	220	--	1
Biphenyl	ND		ug/kg	43	--	1

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-04 Date Collected: 01/14/26 14:00

Client ID: COMP 2 Date Received: 01/16/26

Sample Location: 489 WINTHROP ST, MEDFORD Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	79		30-130
Phenol-d6	83		30-130
Nitrobenzene-d5	67		30-130
2-Fluorobiphenyl	76		30-130
2,4,6-Tribromophenol	68		30-130
4-Terphenyl-d14	68		30-130

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225
Lab Number: L2603186
Report Date: 01/30/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8270E
Analytical Date: 01/21/26 09:34
Analyst: SMZ

Extraction Method: EPA 3546
Extraction Date: 01/20/26 19:20

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 02,04 Batch: WG2167165-1					
Acenaphthene	ND		ug/kg	130	--
1,2,4-Trichlorobenzene	ND		ug/kg	160	--
Hexachlorobenzene	ND		ug/kg	70	--
Bis(2-chloroethyl)ether	ND		ug/kg	70	--
2-Chloronaphthalene	ND		ug/kg	160	--
1,2-Dichlorobenzene	ND		ug/kg	160	--
1,3-Dichlorobenzene	ND		ug/kg	160	--
1,4-Dichlorobenzene	ND		ug/kg	70	--
3,3'-Dichlorobenzidine	ND		ug/kg	160	--
2,4-Dinitrotoluene	ND		ug/kg	70	--
2,6-Dinitrotoluene	ND		ug/kg	160	--
Azobenzene	ND		ug/kg	160	--
Fluoranthene	ND		ug/kg	99	--
4-Bromophenyl phenyl ether	ND		ug/kg	160	--
Bis(2-chloroisopropyl)ether	ND		ug/kg	70	--
Bis(2-chloroethoxy)methane	ND		ug/kg	180	--
Hexachlorobutadiene	ND		ug/kg	160	--
Hexachloroethane	ND		ug/kg	70	--
Isophorone	ND		ug/kg	150	--
Naphthalene	ND		ug/kg	160	--
Nitrobenzene	ND		ug/kg	150	--
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	--
Butyl benzyl phthalate	ND		ug/kg	160	--
Di-n-butylphthalate	ND		ug/kg	160	--

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225
Lab Number: L2603186
Report Date: 01/30/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8270E
Analytical Date: 01/21/26 09:34
Analyst: SMZ

Extraction Method: EPA 3546
Extraction Date: 01/20/26 19:20

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 02,04 Batch: WG2167165-1					
Di-n-octylphthalate	ND		ug/kg	160	--
Diethyl phthalate	ND		ug/kg	160	--
Dimethyl phthalate	ND		ug/kg	70	--
Benzo(a)anthracene	ND		ug/kg	99	--
Benzo(a)pyrene	ND		ug/kg	130	--
Benzo(b)fluoranthene	ND		ug/kg	99	--
Benzo(k)fluoranthene	ND		ug/kg	99	--
Chrysene	ND		ug/kg	99	--
Acenaphthylene	ND		ug/kg	130	--
Anthracene	ND		ug/kg	99	--
Benzo(ghi)perylene	ND		ug/kg	130	--
Fluorene	ND		ug/kg	160	--
Phenanthrene	ND		ug/kg	99	--
Dibenzo(a,h)anthracene	ND		ug/kg	70	--
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	--
Pyrene	ND		ug/kg	99	--
Aniline	ND		ug/kg	200	--
4-Chloroaniline	ND		ug/kg	160	--
Dibenzofuran	ND		ug/kg	160	--
2-Methylnaphthalene	ND		ug/kg	70	--
Acetophenone	ND		ug/kg	160	--
2,4,6-Trichlorophenol	ND		ug/kg	70	--
2-Chlorophenol	ND		ug/kg	70	--
2,4-Dichlorophenol	ND		ug/kg	70	--

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225
Lab Number: L2603186
Report Date: 01/30/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8270E
Analytical Date: 01/21/26 09:34
Analyst: SMZ

Extraction Method: EPA 3546
Extraction Date: 01/20/26 19:20

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 02,04 Batch: WG2167165-1					
2,4-Dimethylphenol	ND		ug/kg	70	--
2-Nitrophenol	ND		ug/kg	360	--
4-Nitrophenol	ND		ug/kg	230	--
2,4-Dinitrophenol	ND		ug/kg	800	--
Pentachlorophenol	ND		ug/kg	330	--
Phenol	ND		ug/kg	160	--
2-Methylphenol	ND		ug/kg	160	--
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	--
2,4,5-Trichlorophenol	ND		ug/kg	160	--
Biphenyl	ND		ug/kg	33	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		30-130
Phenol-d6	74		30-130
Nitrobenzene-d5	81		30-130
2-Fluorobiphenyl	70		30-130
2,4,6-Tribromophenol	81		30-130
4-Terphenyl-d14	69		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 02,04 Batch: WG2167165-2 WG2167165-3								
Acenaphthene	73		77		40-140	5		30
1,2,4-Trichlorobenzene	73		86		40-140	16		30
Hexachlorobenzene	75		80		40-140	6		30
Bis(2-chloroethyl)ether	67		78		40-140	15		30
2-Chloronaphthalene	80		88		40-140	10		30
1,2-Dichlorobenzene	67		80		40-140	18		30
1,3-Dichlorobenzene	63		74		40-140	16		30
1,4-Dichlorobenzene	65		77		40-140	17		30
3,3'-Dichlorobenzidine	53		50		40-140	6		30
2,4-Dinitrotoluene	91		97		40-140	6		30
2,6-Dinitrotoluene	98		107		40-140	9		30
Azobenzene	79		84		40-140	6		30
Fluoranthene	78		83		40-140	6		30
4-Bromophenyl phenyl ether	74		78		40-140	5		30
Bis(2-chloroisopropyl)ether	89		105		40-140	16		30
Bis(2-chloroethoxy)methane	76		87		40-140	13		30
Hexachlorobutadiene	66		75		40-140	13		30
Hexachloroethane	67		80		40-140	18		30
Isophorone	81		93		40-140	14		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 02,04 Batch: WG2167165-2 WG2167165-3								
Naphthalene	70		79		40-140	12		30
Nitrobenzene	80		94		40-140	16		30
Bis(2-ethylhexyl)phthalate	95		102		40-140	7		30
Butyl benzyl phthalate	88		93		40-140	6		30
Di-n-butylphthalate	85		90		40-140	6		30
Di-n-octylphthalate	84		89		40-140	6		30
Diethyl phthalate	78		83		40-140	6		30
Dimethyl phthalate	85		93		40-140	9		30
Benzo(a)anthracene	82		87		40-140	6		30
Benzo(a)pyrene	81		86		40-140	6		30
Benzo(b)fluoranthene	79		84		40-140	6		30
Benzo(k)fluoranthene	80		85		40-140	6		30
Chrysene	79		84		40-140	6		30
Acenaphthylene	85		92		40-140	8		30
Anthracene	75		79		40-140	5		30
Benzo(ghi)perylene	75		80		40-140	6		30
Fluorene	77		82		40-140	6		30
Phenanthrene	73		77		40-140	5		30
Dibenzo(a,h)anthracene	78		84		40-140	7		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 02,04 Batch: WG2167165-2 WG2167165-3								
Indeno(1,2,3-cd)pyrene	80		86		40-140	7		30
Pyrene	78		82		40-140	5		30
Aniline	44		**39**	Q	40-140	12		30
4-Chloroaniline	57		74		40-140	26		30
Dibenzofuran	73		79		40-140	8		30
2-Methylnaphthalene	76		84		40-140	10		30
Acetophenone	78		92		40-140	16		30
2,4,6-Trichlorophenol	96		104		30-130	8		30
2-Chlorophenol	74		88		30-130	17		30
2,4-Dichlorophenol	89		101		30-130	13		30
2,4-Dimethylphenol	84		95		30-130	12		30
2-Nitrophenol	93		108		30-130	15		30
4-Nitrophenol	112		117		30-130	4		30
2,4-Dinitrophenol	107		111		30-130	4		30
Pentachlorophenol	88		92		30-130	4		30
Phenol	74		85		30-130	14		30
2-Methylphenol	81		94		30-130	15		30
3-Methylphenol/4-Methylphenol	83		94		30-130	12		30
2,4,5-Trichlorophenol	96		104		30-130	8		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 02,04 Batch: WG2167165-2 WG2167165-3								
Biphenyl	84		92		40-140	9		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	72		83		30-130
Phenol-d6	79		92		30-130
Nitrobenzene-d5	84		97		30-130
2-Fluorobiphenyl	79		84		30-130
2,4,6-Tribromophenol	95		97		30-130
4-Terphenyl-d14	75		77		30-130

PETROLEUM HYDROCARBONS

Project Name: MEDFORD HIGH SCHOOL
Lab Number: L2603186
Project Number: 0225
Report Date: 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-02
Client ID: COMP S-1
Sample Location: 489 WINTHROP ST, MEDFORD

Date Collected: 01/14/26 13:00
Date Received: 01/16/26
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8015D(M)
Analytical Date: 01/21/26 15:53
Analyst: ALL
Percent Solids: 81%

Extraction Method: EPA 3546
Extraction Date: 01/20/26 18:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	58600		ug/kg	41000	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	94		40-140

Project Name: MEDFORD HIGH SCHOOL
Lab Number: L2603186
Project Number: 0225
Report Date: 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-04
Client ID: COMP 2
Sample Location: 489 WINTHROP ST, MEDFORD
Date Collected: 01/14/26 14:00
Date Received: 01/16/26
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8015D(M)
Analytical Date: 01/21/26 17:02
Analyst: ALL
Percent Solids: 76%
Extraction Method: EPA 3546
Extraction Date: 01/20/26 18:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	67300		ug/kg	42700	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	99		40-140

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225
Lab Number: L2603186
Report Date: 01/30/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 01/21/26 20:48
Analyst: MTC

Extraction Method: EPA 3546
Extraction Date: 01/19/26 22:42

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbon Quantitation - Westborough Lab for sample(s): 02,04 Batch: WG2166742-1					
TPH (C10-C36)	ND		ug/kg	31700	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	103		40-140

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbon Quantitation - Westborough Lab	Associated sample(s): 02,04		Batch: WG2166742-2					
TPH (C10-C36)	99		-		40-140	-		

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
o-Terphenyl	99				40-140

PCBS

Project Name: MEDFORD HIGH SCHOOL
Lab Number: L2603186
Project Number: 0225
Report Date: 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-02
Client ID: COMP S-1
Sample Location: 489 WINTHROP ST, MEDFORD
Date Collected: 01/14/26 13:00
Date Received: 01/16/26
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 97,8082A
Analytical Date: 01/21/26 08:47
Analyst: EMR
Percent Solids: 81%

Extraction Method: EPA 3546
Extraction Date: 01/20/26 23:19
Cleanup Method: EPA 3665A
Cleanup Date: 01/21/26
Cleanup Method: EPA 3660B
Cleanup Date: 01/21/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	60.4	--	1	A
Aroclor 1221	ND		ug/kg	60.4	--	1	A
Aroclor 1232	ND		ug/kg	60.4	--	1	A
Aroclor 1242	ND		ug/kg	60.4	--	1	A
Aroclor 1248	ND		ug/kg	60.4	--	1	A
Aroclor 1254	ND		ug/kg	60.4	--	1	A
Aroclor 1260	ND		ug/kg	60.4	--	1	A
Aroclor 1262	ND		ug/kg	60.4	--	1	A
Aroclor 1268	ND		ug/kg	60.4	--	1	A
PCBs, Total	ND		ug/kg	60.4	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	92		30-150	A
Decachlorobiphenyl	82		30-150	A
2,4,5,6-Tetrachloro-m-xylene	94		30-150	B
Decachlorobiphenyl	83		30-150	B

Project Name: MEDFORD HIGH SCHOOL
Lab Number: L2603186
Project Number: 0225
Report Date: 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-04
Client ID: COMP 2
Sample Location: 489 WINTHROP ST, MEDFORD
Date Collected: 01/14/26 14:00
Date Received: 01/16/26
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 97,8082A
Analytical Date: 01/21/26 08:56
Analyst: EMR
Percent Solids: 76%

Extraction Method: EPA 3546
Extraction Date: 01/20/26 23:19
Cleanup Method: EPA 3665A
Cleanup Date: 01/21/26
Cleanup Method: EPA 3660B
Cleanup Date: 01/21/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	64.0	--	1	A
Aroclor 1221	ND		ug/kg	64.0	--	1	A
Aroclor 1232	ND		ug/kg	64.0	--	1	A
Aroclor 1242	ND		ug/kg	64.0	--	1	A
Aroclor 1248	ND		ug/kg	64.0	--	1	A
Aroclor 1254	ND		ug/kg	64.0	--	1	B
Aroclor 1260	ND		ug/kg	64.0	--	1	A
Aroclor 1262	ND		ug/kg	64.0	--	1	A
Aroclor 1268	ND		ug/kg	64.0	--	1	A
PCBs, Total	ND		ug/kg	64.0	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	A
Decachlorobiphenyl	78		30-150	A
2,4,5,6-Tetrachloro-m-xylene	89		30-150	B
Decachlorobiphenyl	79		30-150	B

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225
Lab Number: L2603186
Report Date: 01/30/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8082A
Analytical Date: 01/21/26 08:06
Analyst: AD

Extraction Method: EPA 3546
Extraction Date: 01/20/26 23:19
Cleanup Method: EPA 3665A
Cleanup Date: 01/21/26
Cleanup Method: EPA 3660B
Cleanup Date: 01/21/26

Parameter	Result	Qualifier	Units	RL	MDL	Column
MCP Polychlorinated Biphenyls - Westborough Lab for sample(s): 02,04 Batch: WG2167218-1						
Aroclor 1016	ND		ug/kg	47.7	--	A
Aroclor 1221	ND		ug/kg	47.7	--	A
Aroclor 1232	ND		ug/kg	47.7	--	A
Aroclor 1242	ND		ug/kg	47.7	--	A
Aroclor 1248	ND		ug/kg	47.7	--	A
Aroclor 1254	ND		ug/kg	47.7	--	A
Aroclor 1260	ND		ug/kg	47.7	--	A
Aroclor 1262	ND		ug/kg	47.7	--	A
Aroclor 1268	ND		ug/kg	47.7	--	A
PCBs, Total	ND		ug/kg	47.7	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		30-150	A
Decachlorobiphenyl	72		30-150	A
2,4,5,6-Tetrachloro-m-xylene	87		30-150	B
Decachlorobiphenyl	73		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
MCP Polychlorinated Biphenyls - Westborough Lab Associated sample(s): 02,04 Batch: WG2167218-2 WG2167218-3									
Aroclor 1016	84		92		40-140	9		30	A
Aroclor 1260	85		85		40-140	0		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	84		89		30-150	A
Decachlorobiphenyl	71		76		30-150	A
2,4,5,6-Tetrachloro-m-xylene	83		89		30-150	B
Decachlorobiphenyl	74		76		30-150	B

PESTICIDES

Project Name: MEDFORD HIGH SCHOOL
Lab Number: L2603186
Project Number: 0225
Report Date: 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-02
Client ID: COMP S-1
Sample Location: 489 WINTHROP ST, MEDFORD
Date Collected: 01/14/26 13:00
Date Received: 01/16/26
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 97,8081B
Analytical Date: 01/22/26 09:29
Analyst: PEG
Percent Solids: 81%

Extraction Method: EPA 3546
Extraction Date: 01/21/26 00:56
Cleanup Method: EPA 3620B
Cleanup Date: 01/21/26
Cleanup Method: EPA 3660B
Cleanup Date: 01/21/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Organochlorine Pesticides - Westborough Lab							
Delta-BHC	ND		ug/kg	1.92	--	1	A
Lindane	ND		ug/kg	0.640	--	1	A
Alpha-BHC	ND		ug/kg	0.800	--	1	A
Beta-BHC	ND		ug/kg	1.92	--	1	A
Heptachlor	ND		ug/kg	0.960	--	1	A
Aldrin	ND		ug/kg	1.92	--	1	A
Heptachlor epoxide	ND		ug/kg	3.60	--	1	A
Endrin	ND		ug/kg	0.800	--	1	A
Endrin ketone	ND		ug/kg	1.92	--	1	A
Dieldrin	ND		ug/kg	1.20	--	1	A
4,4'-DDE	6.36		ug/kg	1.92	--	1	B
4,4'-DDD	ND		ug/kg	1.92	--	1	B
4,4'-DDT	4.58		ug/kg	3.60	--	1	B
Endosulfan I	ND		ug/kg	1.92	--	1	A
Endosulfan II	ND		ug/kg	1.92	--	1	A
Endosulfan sulfate	ND		ug/kg	0.800	--	1	A
Methoxychlor	ND		ug/kg	3.60	--	1	A
Chlordane	ND		ug/kg	16.0	--	1	A
Hexachlorobenzene	ND		ug/kg	1.92	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	79		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	77		30-150	B

Project Name: MEDFORD HIGH SCHOOL
Lab Number: L2603186
Project Number: 0225
Report Date: 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-04
Client ID: COMP 2
Sample Location: 489 WINTHROP ST, MEDFORD
Date Collected: 01/14/26 14:00
Date Received: 01/16/26
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 97,8081B
Analytical Date: 01/22/26 09:41
Analyst: PEG
Percent Solids: 76%

Extraction Method: EPA 3546
Extraction Date: 01/21/26 00:56
Cleanup Method: EPA 3620B
Cleanup Date: 01/21/26
Cleanup Method: EPA 3660B
Cleanup Date: 01/21/26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Organochlorine Pesticides - Westborough Lab							
Delta-BHC	ND		ug/kg	2.01	--	1	A
Lindane	ND		ug/kg	0.671	--	1	A
Alpha-BHC	ND		ug/kg	0.839	--	1	A
Beta-BHC	ND		ug/kg	2.01	--	1	A
Heptachlor	ND		ug/kg	1.01	--	1	A
Aldrin	ND		ug/kg	2.01	--	1	A
Heptachlor epoxide	ND		ug/kg	3.78	--	1	A
Endrin	ND		ug/kg	0.839	--	1	A
Endrin ketone	ND		ug/kg	2.01	--	1	A
Dieldrin	ND		ug/kg	1.26	--	1	A
4,4'-DDE	ND		ug/kg	2.01	--	1	B
4,4'-DDD	ND		ug/kg	2.01	--	1	A
4,4'-DDT	ND	IP	ug/kg	3.78	--	1	A
Endosulfan I	ND		ug/kg	2.01	--	1	A
Endosulfan II	ND		ug/kg	2.01	--	1	A
Endosulfan sulfate	ND		ug/kg	0.839	--	1	A
Methoxychlor	ND		ug/kg	3.78	--	1	A
Chlordane	ND		ug/kg	16.8	--	1	A
Hexachlorobenzene	ND		ug/kg	2.01	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	78		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	72		30-150	B

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225
Lab Number: L2603186
Report Date: 01/30/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8081B
Analytical Date: 01/22/26 07:32
Analyst: PEG

Extraction Method: EPA 3546
Extraction Date: 01/21/26 00:56
Cleanup Method: EPA 3620B
Cleanup Date: 01/21/26
Cleanup Method: EPA 3660B
Cleanup Date: 01/21/26

Parameter	Result	Qualifier	Units	RL	MDL	Column
MCP Organochlorine Pesticides - Westborough Lab for sample(s): 02,04 Batch: WG2167245-1						
Delta-BHC	ND		ug/kg	1.58	--	A
Lindane	ND		ug/kg	0.528	--	A
Alpha-BHC	ND		ug/kg	0.660	--	A
Beta-BHC	ND		ug/kg	1.58	--	A
Heptachlor	ND		ug/kg	0.792	--	A
Aldrin	ND		ug/kg	1.58	--	A
Heptachlor epoxide	ND		ug/kg	2.97	--	A
Endrin	ND		ug/kg	0.660	--	A
Endrin ketone	ND		ug/kg	1.58	--	A
Dieldrin	ND		ug/kg	0.990	--	A
4,4'-DDE	ND		ug/kg	1.58	--	A
4,4'-DDD	ND		ug/kg	1.58	--	A
4,4'-DDT	ND		ug/kg	2.97	--	A
Endosulfan I	ND		ug/kg	1.58	--	A
Endosulfan II	ND		ug/kg	1.58	--	A
Endosulfan sulfate	ND		ug/kg	0.660	--	A
Methoxychlor	ND		ug/kg	2.97	--	A
Chlordane	ND		ug/kg	13.2	--	A
Hexachlorobenzene	ND		ug/kg	1.58	--	A

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225
Lab Number: L2603186
Report Date: 01/30/26

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8081B
Analytical Date: 01/22/26 07:32
Analyst: PEG

Extraction Method: EPA 3546
Extraction Date: 01/21/26 00:56
Cleanup Method: EPA 3620B
Cleanup Date: 01/21/26
Cleanup Method: EPA 3660B
Cleanup Date: 01/21/26

Parameter	Result	Qualifier	Units	RL	MDL	Column
MCP Organochlorine Pesticides - Westborough Lab for sample(s): 02,04 Batch: WG2167245-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	86		30-150	A
2,4,5,6-Tetrachloro-m-xylene	62		30-150	B
Decachlorobiphenyl	75		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
MCP Organochlorine Pesticides - Westborough Lab Associated sample(s): 02,04 Batch: WG2167245-2 WG2167245-3									
Delta-BHC	90		87		40-140	3		30	A
Lindane	83		79		40-140	5		30	A
Alpha-BHC	83		78		40-140	6		30	A
Beta-BHC	86		85		40-140	1		30	A
Heptachlor	78		74		40-140	5		30	A
Aldrin	80		77		40-140	4		30	A
Heptachlor epoxide	74		70		40-140	6		30	A
Endrin	80		78		40-140	3		30	A
Endrin ketone	94		93		40-140	1		30	A
Dieldrin	81		78		40-140	4		30	A
4,4'-DDE	78		75		40-140	4		30	A
4,4'-DDD	82		79		40-140	4		30	A
4,4'-DDT	80		79		40-140	1		30	A
Endosulfan I	76		73		40-140	4		30	A
Endosulfan II	85		82		40-140	4		30	A
Endosulfan sulfate	89		87		40-140	2		30	A
Methoxychlor	84		83		40-140	1		30	A
Hexachlorobenzene	68		65		40-140	5		30	A

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Organochlorine Pesticides - Westborough Lab Associated sample(s): 02,04 Batch: WG2167245-2 WG2167245-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		64		30-150	A
Decachlorobiphenyl	98		95		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		65		30-150	B
Decachlorobiphenyl	84		83		30-150	B

METALS

Project Name: MEDFORD HIGH SCHOOL
Lab Number: L2603186
Project Number: 0225
Report Date: 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-02
Client ID: COMP S-1
Sample Location: 489 WINTHROP ST, MEDFORD
Date Collected: 01/14/26 13:00
Date Received: 01/16/26
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/kg	4.68	--	2	01/20/26 20:56	01/21/26 12:31	EPA 3050B	97,6010D	ERC
Arsenic, Total	6.23		mg/kg	0.935	--	2	01/20/26 20:56	01/21/26 12:31	EPA 3050B	97,6010D	ERC
Barium, Total	25.6		mg/kg	0.935	--	2	01/20/26 20:56	01/21/26 12:31	EPA 3050B	97,6010D	ERC
Beryllium, Total	ND		mg/kg	0.468	--	2	01/20/26 20:56	01/21/26 12:31	EPA 3050B	97,6010D	ERC
Cadmium, Total	ND		mg/kg	0.935	--	2	01/20/26 20:56	01/21/26 12:31	EPA 3050B	97,6010D	ERC
Chromium, Total	12.9		mg/kg	0.935	--	2	01/20/26 20:56	01/21/26 12:31	EPA 3050B	97,6010D	ERC
Lead, Total	36.9		mg/kg	4.68	--	2	01/20/26 20:56	01/21/26 12:31	EPA 3050B	97,6010D	ERC
Mercury, Total	ND		mg/kg	0.096	--	1	01/21/26 01:11	01/21/26 11:29	EPA 7471B	97,7471B	RDB
Nickel, Total	6.57		mg/kg	2.34	--	2	01/20/26 20:56	01/21/26 12:31	EPA 3050B	97,6010D	ERC
Selenium, Total	ND		mg/kg	4.68	--	2	01/20/26 20:56	01/21/26 12:31	EPA 3050B	97,6010D	ERC
Silver, Total	ND		mg/kg	0.935	--	2	01/20/26 20:56	01/21/26 12:31	EPA 3050B	97,6010D	ERC
Thallium, Total	ND		mg/kg	4.68	--	2	01/20/26 20:56	01/21/26 12:31	EPA 3050B	97,6010D	ERC
Vanadium, Total	17.0		mg/kg	0.935	--	2	01/20/26 20:56	01/21/26 12:31	EPA 3050B	97,6010D	ERC
Zinc, Total	35.7		mg/kg	4.68	--	2	01/20/26 20:56	01/21/26 12:31	EPA 3050B	97,6010D	ERC

Project Name: MEDFORD HIGH SCHOOL
Lab Number: L2603186
Project Number: 0225
Report Date: 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-04
Client ID: COMP 2
Sample Location: 489 WINTHROP ST, MEDFORD
Date Collected: 01/14/26 14:00
Date Received: 01/16/26
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 76%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/kg	5.09	--	2	01/20/26 20:56	01/21/26 12:36	EPA 3050B	97,6010D	ERC
Arsenic, Total	7.05		mg/kg	1.02	--	2	01/20/26 20:56	01/21/26 12:36	EPA 3050B	97,6010D	ERC
Barium, Total	61.2		mg/kg	1.02	--	2	01/20/26 20:56	01/21/26 12:36	EPA 3050B	97,6010D	ERC
Beryllium, Total	ND		mg/kg	0.509	--	2	01/20/26 20:56	01/21/26 12:36	EPA 3050B	97,6010D	ERC
Cadmium, Total	ND		mg/kg	1.02	--	2	01/20/26 20:56	01/21/26 12:36	EPA 3050B	97,6010D	ERC
Chromium, Total	16.1		mg/kg	1.02	--	2	01/20/26 20:56	01/21/26 12:36	EPA 3050B	97,6010D	ERC
Lead, Total	25.4		mg/kg	5.09	--	2	01/20/26 20:56	01/21/26 12:36	EPA 3050B	97,6010D	ERC
Mercury, Total	ND		mg/kg	0.090	--	1	01/21/26 01:11	01/21/26 11:32	EPA 7471B	97,7471B	RDB
Nickel, Total	10.9		mg/kg	2.54	--	2	01/20/26 20:56	01/21/26 12:36	EPA 3050B	97,6010D	ERC
Selenium, Total	ND		mg/kg	5.09	--	2	01/20/26 20:56	01/21/26 12:36	EPA 3050B	97,6010D	ERC
Silver, Total	ND		mg/kg	1.02	--	2	01/20/26 20:56	01/21/26 12:36	EPA 3050B	97,6010D	ERC
Thallium, Total	ND		mg/kg	5.09	--	2	01/20/26 20:56	01/21/26 12:36	EPA 3050B	97,6010D	ERC
Vanadium, Total	26.0		mg/kg	1.02	--	2	01/20/26 20:56	01/21/26 12:36	EPA 3050B	97,6010D	ERC
Zinc, Total	62.3		mg/kg	5.09	--	2	01/20/26 20:56	01/21/26 12:36	EPA 3050B	97,6010D	ERC

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 02,04 Batch: WG2167151-1										
Antimony, Total	ND		mg/kg	2.00	--	1	01/20/26 20:56	01/21/26 12:16	97,6010D	ERC
Arsenic, Total	ND		mg/kg	0.400	--	1	01/20/26 20:56	01/21/26 12:16	97,6010D	ERC
Barium, Total	ND		mg/kg	0.400	--	1	01/20/26 20:56	01/21/26 12:16	97,6010D	ERC
Beryllium, Total	ND		mg/kg	0.200	--	1	01/20/26 20:56	01/21/26 12:16	97,6010D	ERC
Cadmium, Total	ND		mg/kg	0.400	--	1	01/20/26 20:56	01/21/26 12:16	97,6010D	ERC
Chromium, Total	ND		mg/kg	0.400	--	1	01/20/26 20:56	01/21/26 12:16	97,6010D	ERC
Lead, Total	ND		mg/kg	2.00	--	1	01/20/26 20:56	01/21/26 12:16	97,6010D	ERC
Nickel, Total	ND		mg/kg	1.00	--	1	01/20/26 20:56	01/21/26 12:16	97,6010D	ERC
Selenium, Total	ND		mg/kg	2.00	--	1	01/20/26 20:56	01/21/26 12:16	97,6010D	ERC
Silver, Total	ND		mg/kg	0.400	--	1	01/20/26 20:56	01/21/26 12:16	97,6010D	ERC
Thallium, Total	ND		mg/kg	2.00	--	1	01/20/26 20:56	01/21/26 12:16	97,6010D	ERC
Vanadium, Total	ND		mg/kg	0.400	--	1	01/20/26 20:56	01/21/26 12:16	97,6010D	ERC
Zinc, Total	ND		mg/kg	2.00	--	1	01/20/26 20:56	01/21/26 12:16	97,6010D	ERC

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 02,04 Batch: WG2167152-1										
Mercury, Total	ND		mg/kg	0.083	--	1	01/21/26 01:11	01/21/26 11:19	97,7471B	RDB

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Mansfield Lab Associated sample(s): 02,04 Batch: WG2167151-2 WG2167151-3 SRM Lot Number: D125-540								
Antimony, Total	101		112		0-199	10		30
Arsenic, Total	104		114		81-120	9		30
Barium, Total	110		110		82-118	0		30
Beryllium, Total	104		**135**	Q	82-118	26		30
Cadmium, Total	103		**135**	Q	82-118	27		30
Chromium, Total	105		**126**	Q	81-119	18		30
Lead, Total	105		110		82-118	5		30
Nickel, Total	108		**130**	Q	82-118	18		30
Selenium, Total	104		114		78-121	9		30
Silver, Total	99		110		79-121	11		30
Thallium, Total	103		**133**	Q	80-120	25		30
Vanadium, Total	102		116		78-122	13		30
Zinc, Total	107		120		79-121	11		30
MCP Total Metals - Mansfield Lab Associated sample(s): 02,04 Batch: WG2167152-2 WG2167152-3 SRM Lot Number: D125-540								
Mercury, Total	94		97		68-133	3		30

INORGANICS
&
MISCELLANEOUS

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225
Lab Number: L2603186
Report Date: 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-01
Client ID: TP-1, S-1
Sample Location: 489 WINTHROP ST, MEDFORD
Sample Depth:
Matrix: Soil

Date Collected: 01/07/26 13:00
Date Received: 01/16/26
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	68.0		%	0.100	NA	1	-	01/20/26 13:46	121,2540G	ROI

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225
Lab Number: L2603186
Report Date: 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-02
Client ID: COMP S-1
Sample Location: 489 WINTHROP ST, MEDFORD
Sample Depth:
Matrix: Soil

Date Collected: 01/14/26 13:00
Date Received: 01/16/26
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	17		umhos/cm	10	--	1	-	01/20/26 04:50	1,9050A	CAR
Solids, Total	81.2		%	0.100	NA	1	-	01/20/26 13:46	121,2540G	ROI
pH (H)	7.16		SU	-	NA	1	-	01/20/26 02:52	1,9045D	CAR
Flash Point	>150		deg F	70	NA	1	-	01/28/26 09:45	1,1010A	MRM
Cyanide, Reactive	ND		mg/kg	10	--	1	01/23/26 18:45	01/23/26 21:30	125,7.3	TLH
Sulfide, Reactive	ND		mg/kg	10	--	1	01/23/26 18:45	01/23/26 21:01	125,7.3	TLH

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225
Lab Number: L2603186
Report Date: 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-03
Client ID: TP-5, S-2
Sample Location: 489 WINTHROP ST, MEDFORD
Sample Depth:
Matrix: Soil

Date Collected: 01/07/26 14:00
Date Received: 01/16/26
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	75.0		%	0.100	NA	1	-	01/20/26 13:46	121,2540G	ROI

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225
Lab Number: L2603186
Report Date: 01/30/26

SAMPLE RESULTS

Lab ID: L2603186-04
Client ID: COMP 2
Sample Location: 489 WINTHROP ST, MEDFORD
Sample Depth:
Matrix: Soil

Date Collected: 01/14/26 14:00
Date Received: 01/16/26
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance @ 25 C	130		umhos/cm	10	--	1	-	01/20/26 04:50	1,9050A	CAR
Solids, Total	76.3		%	0.100	NA	1	-	01/20/26 13:46	121,2540G	ROI
pH (H)	7.71		SU	-	NA	1	-	01/20/26 02:52	1,9045D	CAR
Flash Point	>150		deg F	70	NA	1	-	01/28/26 09:45	1,1010A	MRM
Cyanide, Reactive	ND		mg/kg	10	--	1	01/23/26 18:45	01/23/26 21:30	125,7.3	TLH
Sulfide, Reactive	ND		mg/kg	10	--	1	01/23/26 18:45	01/23/26 21:01	125,7.3	TLH

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG2168572-1										
Sulfide, Reactive	ND		mg/kg	10	--	1	01/23/26 18:45	01/23/26 21:01	125,7.3	TLH
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG2168581-1										
Cyanide, Reactive	ND		mg/kg	10	--	1	01/23/26 18:45	01/23/26 21:30	125,7.3	TLH

Lab Control Sample Analysis
Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG2166789-1								
pH	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG2166791-1								
Specific Conductance	99		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG2168572-2								
Sulfide, Reactive	108		-		60-125	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG2168581-2								
Cyanide, Reactive	78		-		30-125	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG2169708-1								
Flash Point	101		-		96-104	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: MEDFORD HIGH SCHOOL

Project Number: 0225

Lab Number: L2603186

Report Date: 01/30/26

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG2166791-2 QC Sample: L2603186-04 Client ID: COMP 2						
Specific Conductance @ 25 C	130	110	umhos/cm	17		20

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2603186-01A	Vial MeOH preserved	NA	NA			Y	Absent		MCP-8260HLW-21(14)
L2603186-01B	Vial water preserved	NA	NA			Y	Absent	07-JAN-26 15:00	MCP-8260HLW-21(14)
L2603186-01C	Vial water preserved	NA	NA			Y	Absent	07-JAN-26 15:00	MCP-8260HLW-21(14)
L2603186-01D	Plastic 2oz unpreserved for TS	NA	NA			Y	Absent		TS(7)
L2603186-02A	Plastic 2oz unpreserved for TS	NA	NA			Y	Absent		TS(7)
L2603186-02B	Metals Only-Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-ZN-6010T-10(180),MCP-SB-6010T-10(180),MCP-AG-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L2603186-02C	Glass 500ml/16oz unpreserved	NA	NA			Y	Absent		REACTS(14),MCP-8082-10(365),MCP-8081-10(14),FLASH(),PH-9045(1),MCP-8270-21(14),REACTCN(14),TPH-DRO-D(14),COND-9050(28)
L2603186-03A	Vial MeOH preserved	NA	NA			Y	Absent		MCP-8260HLW-21(14)
L2603186-03B	Vial water preserved	NA	NA			Y	Absent	07-JAN-26 15:00	MCP-8260HLW-21(14)
L2603186-03C	Vial water preserved	NA	NA			Y	Absent	07-JAN-26 15:00	MCP-8260HLW-21(14)
L2603186-03D	Plastic 2oz unpreserved for TS	NA	NA			Y	Absent		TS(7)
L2603186-04A	Plastic 2oz unpreserved for TS	NA	NA			Y	Absent		TS(7)
L2603186-04B	Metals Only-Glass 60mL/2oz unpreserved	NA	NA			Y	Absent		ARCHIVE()
L2603186-04C	Glass 500ml/16oz unpreserved	NA	NA			Y	Absent		REACTS(14),MCP-8082-10(365),MCP-8081-10(14),FLASH(),PH-9045(1),MCP-8270-21(14),TPH-DRO-D(14),REACTCN(14),COND-9050(28)

*Values in parentheses indicate holding time in days

Project Name: MEDFORD HIGH SCHOOL
Project Number: 0225

Lab Number: L2603186
Report Date: 01/30/26

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2603186-04X	Glass 60ml unpreserved split	NA	NA			Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-7471T-10(28),MCP-TL-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-AG-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)

*Values in parentheses indicate holding time in days

Project Name:	MEDFORD HIGH SCHOOL	**Lab Number:**	L2603186
Project Number:	0225	**Report Date:**	01/30/26

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	MEDFORD HIGH SCHOOL	**Lab Number:**	L2603186
Project Number:	0225	**Report Date:**	01/30/26

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report

Project Name:	MEDFORD HIGH SCHOOL	**Lab Number:**	L2603186
Project Number:	0225	**Report Date:**	01/30/26

Data Qualifiers

ND	- Not detected at the reporting limit (RL) for the sample.
NJ	- Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
P	- The RPD between the results for the two columns exceeds the method-specified criteria.
Q	- The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
R	- Analytical results are from sample re-analysis.
RE	- Analytical results are from sample re-extraction.
S	- Analytical results are from modified screening analysis.
V	- The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
Z	- The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: MEDFORD HIGH SCHOOL **Lab Number:** L2603186

Project Number: 0225 **Report Date:** 01/30/26

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSCCAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010; WSC-CAM-IIIA and IIID, January 2024; WSC-CAM-IIIB and VA, February 2024; WSC-CAM-VB and VC, April 2024; and WSC-CAM-VIA, VIB, IXA, and IXB, October 2024.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

125 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates IIIA, April 1998.

141 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA and IIB, November 2021.

LIMITATION OF LIABILITIES

Pace Analytical Services performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Pace Analytical Services shall be to re-perform the work at it's own expense. In no event shall Pace Analytical Services be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Pace Analytical Services.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

ENV-FORM-WES2-0065 v02 Certificate/Approval Program Summary

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

PAS-WES2 Westborough Facility – 8 Walkup Dr. Westborough, MA 01581
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
SM 2540D: TSS.
Biological Tissue Matrix: EPA 3050B

PAS-MAN1 Mansfield Facility – 120 Forbes Blvd. Mansfield, MA 02048
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
MADEP-APH.

PAS-ELON East Longmeadow Facility – 39 Spruce Street East Longmeadow, MA 01028
EPA 524.2: 1,3,5-Trichlorobenzene, m/p-Xylene, o-xylene.
EPA 625.1: 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, N-Nitrosodiphenylamine.
EPA 8081B NPW and SCM: Alachlor, Endrin Ketone, Hexachlorobenzene.
EPA 8260D NPW: Tetrahydrofuran, 1,3,5-Trichlorobenzene; **SCM:** TAME, TBEE, Diethyl ether, DIPE, Tetrahydrofuran. 1,3,5-Trichlorobenzene, Freon-113.
EPA 8270E: NPW: Carbazole, 1-Methylnaphthalene, Pentachloronitrobenzene; **SCM:** Carbazole, 1-Methylnaphthalene.
EPA TO-13: Air: Benzo(e)pyrene, 1-Methylnaphthalene, 2-Methylnaphthalene, Perylene.
EPA TO-4A Pesticide Air: delta-BHC, Endosulfan I, Endosulfan II, Endosulfan Sulfate, Endrin, Endrin Aldehyde, Endrin Ketone, Hexachlorobenzene, Methoxychlor.
SM4500: NPW: Amenable Cyanide; **SCM:** Total Phosphorus, TKN, NH3, NECi: NO2, NO3, ASTMD516.

The following test method is not included in our New Jersey Secondary NELAP Scope of Accreditation:

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
Determination of Selected Perfluorinated Alkyl Substances by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry Isotope Dilution (via Alpha SOP 23528)

The following analytes are included in our Massachusetts DEP Scope of Accreditation:

PAS-WES2 Westborough Facility – 8 Walkup Dr. Westborough, MA 01581

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-G, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT.**

ENV-FORM-WES2-0065 v02 Certificate/Approval Program Summary

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Ca, Cr, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1: Hg. **EPA 245.7:** Hg.
SM2340B

PAS-ELON East Longmeadow Facility – 39 Spruce Street East Longmeadow, MA 01028

Drinking Water

EPA 300.0: NO3, NO2, Fl, Cl, SO4. **NECI Reductase**: NO3, NO2.
SM4500F-C, SM4500Cl-B, ASTM D516, SM4500CN-C,E, EPA 180.1, SM2320B, SM 2540C, SM4500H-B, SM4500SO4-E.
EPA 537.1; EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: SM9223-P/A: TC/EC; SM9223B-Colilert-enumeration: TC/EC; HPC-Simplate.

Non-Potable Water

SM4500H-B, SM2510B, SM2540C, SM2320B, SM4500Cl-B, ASTMD516, SM4500NH3-B, C, EPA 350.1, NECi: NO3, **SM4500NH3-B, C: TKN, SM4500P-E: Ortho Phosphate, SM4500P-B, E: Total Phosphorus, EPA 410.4, SM5210B, SM5310C, SM4500CN-C, E, SM2540D, SM4500Cl-G, SM4500SO4-E, EPA 1664, EPA 420.1, EPA 300.0:** Cl, SO4, NO3.
EPA 624.1: Volatile Halocarbons, Volatile Aromatics.
EPA 608.3: Chlordane, Toxaphene, Aldrin, Alpha-BHC, Beta-BHC, Gamma-BHC, Delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan Sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs.
EPA 625.1: SVOC-Acid Extractables and Base/Neutrals
Microbiology: SM9223B-Colilert: E. coli (Ambient and Wastewater), **SM9223B-Colilert-18:** Fecal Coliform (Wastewater).

Certification IDs:

PAS-WES2 Westborough Facility – 8 Walkup Dr. Westborough, MA 01581
CT PH-0826, IL 200077, IN C-MA-03, KY kY98045, ME MA00086, MD 348, MA M-MA086, NH 2064, NJ MA935, NY 11148, NC (DW) 25700, NC (NPW/SCM) 666, OR MA-1316, PA 68-03671, RI LAO00065, TX T104704476, VT VT-0935, VA 460195.

PAS-MANS Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048
ANAB/DoD L2474, CA 3117, CO MA00030, CT PH-0825, IL 200081, IN C-MA-04, KY KY98046, LA 85084, ME MA00030, MD 350, MA M-MA00030, MI 9110, MN 025-999-495, NH 2062, NJ MA015, NY 11627, NC (NPW/SCM) 685, OR MA-0262, PA 68-02089, RI LAO00299, TX T-104704419, UT MA00030, VT VT-0015, VA 460194, WA C954.

PAS-MAN1 Mansfield Air Lab Facility – 120 Forbes Blvd. Mansfield, MA 02048
ANAB/DoD L2474, LA 245052, ME MA01156, MN 025-999-498, NH 2249, NJ MA025, NY 12191, OR 4203, TX T104704583, VA 460311, WA C1104.

PAS-ELON East Longmeadow Facility – 39 Spruce St. East Longmeadow, MA 01028
CT PH-0821, ME MA00100, MI 9100, NC (DENR) 652, NC (DW) 25703, MA M-MA100, NH (Secondary) 2516, NH (Primary) 2557, NJ MA007, NY 10899, PA 68-05812, RI LAO00373, VA 460217, VT-255716, WV DEP 419, WV-DW 9979C, LA 05130, LA-DW LA042, MD-DW 373, OH 87781.

For a complete listing of analytes and methods, please contact your Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 1-19-26

ALPHA Job #: L2603186

ALPHA ANALYTICAL
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Project Information
Project Name: Medford High School
Project Location: 489 Winthrop St Medford
Project #: 0225
Project Manager: A Stiller
ALPHA Quote #:

Report Information - Data Deliverables
☐ ADEx ☐ EMAIL

Billing Information
☐ Same as Client info PO #:

Client Information
Client: ADS
Address: 205 Woodland St Sherborn MA 01770
Phone: 781-727-6646
Email: astiller@adsllc.com

Turn-Around Time
☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Regulatory Requirements & Project Information Requirements
☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

ANALYSIS
VOC: ☒ 8260 ☐ 624 ☐ 524.2
SVOC: ☒ ABN ☐ PAH
METALS: ☐ MCP 13 ☒ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☒ PCB ☒ PEST
TPH: ☒ Quant Only ☐ Fingerprint
pH, Reactivity, Phosphate, Conductivity

SAMPLE INFO
Filtration ☐ Field ☐ Lab to do
Preservation ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC	SVOC	METALS	METALS	EPH	VPH	PCB	TPH	pH, Reactivity, Phosphate, Conductivity	Sample Comments	TOTAL # BOTTLES
03186 01	TP-1, S-1	1/[illegible]/26	1 PM	S	ADS	X									Frozen 1/7 3PM	
02	COMP S-1	1/14/26	"	↓	↓		X	X				X	X	X X		
03	TP-5, S-2	1/7/26	2 PM			X									Frozen 1/7 3PM	
04	COMP 2	↓ 1/14/26	"	↓	↓		X	X				X	X	X X		

Container Type
Preservative

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_3$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	1/16/26 3:46	[signature]	1/16/26 15:46

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

Method Blank Summary
Form 4
Volatiles

Client	: ADS Environmental	**Lab Number**	: L2603186
Project Name	: MEDFORD HIGH SCHOOL	**Project Number**	: 0225
Lab Sample ID	: WG2167066-5	**Lab File ID**	: V29260120A05
Instrument ID	: VOA129		
Matrix	: SOIL	**Analysis Date**	: 01/20/26 09:28

Client Sample No.	Lab Sample ID	Analysis Date
WG2167066-3LCS	WG2167066-3	01/20/26 08:05
WG2167066-4LCSD	WG2167066-4	01/20/26 08:26
TP-1, S-1	L2603186-01	01/20/26 13:57
TP-5, S-2	L2603186-03	01/20/26 14:18

Calibration Verification Summary
Form 7
Volatiles

Client	: ADS Environmental		Lab Number	: L2603186	
Project Name	: MEDFORD HIGH SCHOOL		Project Number	: 0225	
Instrument ID	: VOA129		Calibration Date	: 01/20/26 08:05	
Lab File ID	: V29260120A01		Init. Calib. Date(s)	: 01/08/26	01/08/26
Sample No	: WG2167066-2		Init. Calib. Times	: 16:33	20:43
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	124	0
Dichlorodifluoromethane	0.277	0.26	-	6.1	20	116	0
Chloromethane	0.433	0.401	-	7.4	20	116	0
Vinyl chloride	0.305	0.31	-	-1.6	20	125	0
Bromomethane	0.133	0.163	-	-22.6*	20	162	0
Chloroethane	0.178	0.183	-	-2.8	20	127	0
Trichlorofluoromethane	0.335	0.353	-	-5.4	20	128	0
Ethyl ether	0.127	0.131	-	-3.1	20	132	0
1,1-Dichloroethene	0.21	0.215	-	-2.4	20	128	0
Carbon disulfide	0.718	0.719	-	-0.1	20	123	0
Freon-113	0.211	0.224	-	-6.2	20	128	0
Acrolein	0.023	0.021	-	8.7	20	97	0
Methylene chloride	0.243	0.243	-	0	20	133	0
Acetone	40	30.177	-	24.6*	20	94	0
trans-1,2-Dichloroethene	0.238	0.242	-	-1.7	20	130	0
Methyl acetate	0.229	0.177	-	22.7*	20	97	0
Methyl tert-butyl ether	0.623	0.659	-	-5.8	20	127	0
tert-Butyl alcohol	0.039	0.026	-	33.3*	20	77	0
Diisopropyl ether	0.923	1.008	-	-9.2	20	127	0
1,1-Dichloroethane	0.447	0.477	-	-6.7	20	130	0
Halothane	0.188	0.185	-	1.6	20	121	0
Acrylonitrile	0.114	0.085	-	25.4*	20	100	0
Ethyl tert-butyl ether	0.768	0.837	-	-9	20	126	0
Vinyl acetate	0.699	0.681	-	2.6	20	113	0
cis-1,2-Dichloroethene	0.26	0.273	-	-5	20	130	0
2,2-Dichloropropane	0.36	0.36	-	0	20	125	.01
Bromochloromethane	0.119	0.13	-	-9.2	20	128	0
Cyclohexane	0.498	0.515	-	-3.4	20	124	0
Chloroform	0.419	0.431	-	-2.9	20	128	0
Ethyl acetate	0.293	0.248	-	15.4	20	92	-.02
Carbon tetrachloride	0.34	0.343	-	-0.9	20	121	-.01
Tetrahydrofuran	0.1	0.072	-	28*	20	88	0
Dibromofluoromethane	0.25	0.259	-	-3.6	20	128	0
1,1,1-Trichloroethane	0.39	0.384	-	1.5	20	129	0
2-Butanone	0.143	0.105	-	26.6*	20	89	0
1,1-Dichloropropene	0.319	0.332	-	-4.1	20	126	0
Benzene	0.914	0.944	-	-3.3	20	127	0
tert-Amyl methyl ether	0.594	0.628	-	-5.7	20	122	0
1,2-Dichloroethane-d4	0.274	0.282	-	-2.9	20	128	0
1,2-Dichloroethane	0.306	0.326	-	-6.5	20	126	0
Methyl cyclohexane	0.432	0.439	-	-1.6	20	125	0
Trichloroethene	0.263	0.264	-	-0.4	20	127	0
Dibromomethane	0.136	0.141	-	-3.7	20	123	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: ADS Environmental	Lab Number	: L2603186
Project Name	: MEDFORD HIGH SCHOOL	Project Number	: 0225
Instrument ID	: VOA129	Calibration Date	: 01/20/26 08:05
Lab File ID	: V29260120A01	Init. Calib. Date(s)	: 01/08/26 01/08/26
Sample No	: WG2167066-2	Init. Calib. Times	: 16:33 20:43
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	0.254	0.268	-	-5.5	20	126	0
Bromodichloromethane	0.314	0.317	-	-1	20	121	0
1,4-Dioxane	0.00247	0.00191*	-	22.7*	20	93	-.01
cis-1,3-Dichloropropene	0.359	0.376	-	-4.7	20	119	0
Chlorobenzene-d5	1	1	-	0	20	130	0
Toluene-d8	1.326	1.29	-	2.7	20	129	0
Toluene	0.802	0.796	-	0.7	20	126	0
4-Methyl-2-pentanone	0.148	0.111	-	25*	20	88	0
Tetrachloroethene	0.358	0.357	-	0.3	20	126	0
trans-1,3-Dichloropropene	0.432	0.424	-	1.9	20	118	0
Ethyl methacrylate	0.4	0.36	-	10	20	106	0
1,1,2-Trichloroethane	0.226	0.217	-	4	20	119	0
Chlorodibromomethane	0.331	0.315	-	4.8	20	114	0
1,3-Dichloropropane	0.442	0.438	-	0.9	20	121	0
1,2-Dibromoethane	0.274	0.262	-	4.4	20	117	0
2-Hexanone	0.315	0.213	-	32.4*	20	84	0
Chlorobenzene	0.887	0.906	-	-2.1	20	126	0
Ethylbenzene	1.508	1.522	-	-0.9	20	124	0
1,1,1,2-Tetrachloroethane	0.328	0.323	-	1.5	20	118	0
p/m Xylene	0.602	0.601	-	0.2	20	124	0
o Xylene	0.569	0.579	-	-1.8	20	123	0
Styrene	0.943	0.976	-	-3.5	20	122	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	131	0
Bromoform	0.415	0.355	-	14.5	20	100	0
Isopropylbenzene	3.002	3.006	-	-0.1	20	123	0
4-Bromofluorobenzene	0.932	0.938	-	-0.6	20	132	0
Bromobenzene	0.737	0.75	-	-1.8	20	124	0
n-Propylbenzene	3.497	3.552	-	-1.6	20	124	0
1,4-Dichlorobutane	1.144	1.055	-	7.8	20	110	0
1,1,2,2-Tetrachloroethane	0.715	0.618	-	13.6	20	103	0
4-Ethyltoluene	2.959	3.028	-	-2.3	20	125	0
2-Chlorotoluene	2.034	2.37	-	-16.5	20	140	0
1,3,5-Trimethylbenzene	2.54	2.585	-	-1.8	20	124	0
1,2,3-Trichloropropane	0.562	0.482	-	14.2	20	99	0
trans-1,4-Dichloro-2-buten	0.263	0.203	-	22.8*	20	95	0
4-Chlorotoluene	2.128	2.165	-	-1.7	20	123	0
tert-Butylbenzene	2.248	2.215	-	1.5	20	120	0
1,2,4-Trimethylbenzene	2.461	2.529	-	-2.8	20	124	0
sec-Butylbenzene	3.307	3.32	-	-0.4	20	123	0
p-Isopropyltoluene	2.894	2.951	-	-2	20	123	0
1,3-Dichlorobenzene	1.429	1.478	-	-3.4	20	123	0
1,4-Dichlorobenzene	1.435	1.476	-	-2.9	20	124	0
p-Diethylbenzene	1.743	1.799	-	-3.2	20	125	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: ADS Environmental		**Lab Number**	: L2603186	
Project Name	: MEDFORD HIGH SCHOOL		**Project Number**	: 0225	
Instrument ID	: VOA129		**Calibration Date**	: 01/20/26 08:05	
Lab File ID	: V29260120A01		**Init. Calib. Date(s)**	: 01/08/26	01/08/26
Sample No	: WG2167066-2		**Init. Calib. Times**	: 16:33	20:43
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
n-Butylbenzene	2.558	2.677	-	-4.7	20	126	0
1,2-Dichlorobenzene	1.345	1.363	-	-1.3	20	121	0
1,2,4,5-Tetramethylbenzene	2.657	2.759	-	-3.8	20	124	0
1,2-Dibromo-3-chloropropan	0.139	0.097	-	30.2*	20	82	0
1,3,5-Trichlorobenzene	1.083	1.117	-	-3.1	20	124	0
Hexachlorobutadiene	0.543	0.519	-	4.4	20	117	0
1,2,4-Trichlorobenzene	0.968	1.01	-	-4.3	20	124	0
Naphthalene	2.485	2.232	-	10.2	20	107	0
1,2,3-Trichlorobenzene	0.909	0.911	-	-0.2	20	119	0

* Value outside of QC limits.

Performance Evaluation Mixture Summary
Form 15
Pesticides

Client	: ADS Environmental	**Lab Number**	: L2603186
Project Name	: MEDFORD HIGH SCHOOL	**Project Number**	: 0225
Instrument ID	: PEST10	**Analysis Date**	: 01/22/26 05:40
PEM Standard	: R2060998-1		
Column 1	: RTX-5	**Column 2**	: RTX-CLPPesticides2

Parameter	Signal 1	Signal 2
4,4'-DDE	886195.5568	798441.19717
Endrin	235432296.9982	271913001.52294
4,4'-DDD	1670507.78381	938169.52074
4,4'-DDT	405391169.57285	494889333.818
Endrin Aldehyde	507071.41761	474472.08201
Endrin Ketone	3332872.76864	3199385.98064

Parameter	%Breakdown 1	%Breakdown 2
Endrin	1.60	1.33
DDT	0.627	0.350

Sample Delivery Group Summary

Pace Job Number : L2603186

Account Name : ADS Environmental
Project Number : 0225
Project Name : MEDFORD HIGH SCHOOL

Received : 16-JAN-2026
Reviewer : Riley Frankian

Delivery Information

Samples Delivered By : Client

Chain of Custody : Present

Cooler Information

Cooler	Seal/Seal#	Preservation	Temperature(°C)	Additional Information
A	Absent/	Ice	2.5	

Condition Information

1) All samples on COC received?	**YES**
2) Extra samples received?	**NO**
3) Are there any sample container discrepancies?	**NO**
4) Are there any discrepancies between COC & sample labels?	**NO**
5) Are samples in appropriate containers for requested analysis?	**YES**
6) Are samples properly preserved for requested analysis?	**YES**
7) Are samples within holding time for requested analysis?	**YES**
8) All sampling equipment returned?	**NA**

Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client?	**NO**

ACENTECH
ACOUSTICS TECHNOLOGY VIBRATION

February 26, 2026

Helen Fantini, AIA, MCPPO
Senior Associate / Project Manager
SMMA
1000 Massachusetts Avenue
Cambridge, MA 02138

Via Email: hfantini@smma.com

Subject: Site Survey Results
Medford High School
Medford, MA
Project Number J639474

Dear Helen,

The following report provides the results of our environmental site noise survey of the Medford High School site in Medford, MA. This report is based on data collected from our site survey performed in February 2026, and our ongoing communications with the design team.

DESIGN CRITERIA

COMMONWEALTH OF MASSACHUSETTS

The Massachusetts Department of Environmental Protection (MassDEP) policy establishes project noise limits at the property lines based on existing site background sound levels, defined in terms of the 90th percentile A-weighted sound level (LA_{90}). A sound source or facility which causes the background sound level to increase by more than 10 dB is in violation of the MassDEP noise policy. In addition, the MassDEP policy prohibits the creation of a "pure-tone condition", wherein the sound pressure level in an octave band exceeds the sound pressure level in both adjacent bands by 3 dB or more. MassDEP does not provide exemptions for generator testing.

CITY OF MEDFORD, MA

Section 38-34 of the City of Medford municipal code provides guidelines for the operation of machinery and sound devices, but does not establish quantifiable requirements for noise from building mechanical equipment. As such, we will be providing project noise goals based on the MassDEP criteria explained above.

SITE NOISE MEASUREMENTS

To quantify the maximum allowable community noise levels, we installed three Type I sound level meters at representative locations around the project site, shown in Figure 1 at the end of this report. These meters measured noise levels for a total of 7 days, during both weekday and weekend days, to quantify the quietest hour during this measurement period for both day and nighttime hours. Table 1 below shows the lowest measured hourly level for all three locations.

Table 1 - Lowest Measured Noise Levels (LA90)

Monitor	Lowest Measured Hourly Level	
	Daytime[1]	Nighttime[2]
SM-1	33 dBA	31 dBA
SM-2	38 dBA	28 dBA
SM-3	38 dBA	38 dBA
[1]Defined as the hours from 7:00 AM to 10:00 PM [2]Defined as the hours from 10:00 PM to 7:00 AM		

During site survey measurements, it is typical to see a reduction in noise level between the daytime condition and the nighttime condition. This reflects the lower activity environment during the nighttime, where roads are less busy and heating/cooling loads are reduced with no occupants in a building. This is reflected for SM-1 and SM-2, which is to be expected. SM-3 did not experience a measurable decrease in ambient noise level similar to that of the other two monitors, likely due to rooftop equipment from the existing Medford High School building set to operate constantly during both daytime and nighttime hours.

NOISE GOALS

Based on the noise monitoring results, the MassDEP policy sets the maximum allowable background noise levels at the nearest property line produced by project equipment at the levels listed in Table 2 below.

Table 2 - Maximum Allowable Community Noise Levels

Monitor	Maximum Allowable Community Noise Level (MassDEP Criteria)	
	Daytime	Nighttime
SM-1	43 dBA	41 dBA
SM-2	48 dBA	38 dBA
SM-3	48 dBA	48 dBA

When a complaint is registered to MassDEP regarding disruptive noise levels, the complaint is evaluated by measuring community noise levels with all equipment from the site operating, then again with all equipment from the site turned off. If the noise level during the measurements with site equipment active exceeds the ambient condition by more than 10 dB, the site is considered to be in violation of MassDEP. Since the existing Medford High School equipment may have effected the site survey levels identified in Table 1, our site survey measurements captured an ambient environment that may not truly be a reflection of the ambient condition in the testing sequence described above. As such, designing to the maximum allowable criteria identified in Table 2 may result in an increase to the ambient noise level that exceeds +10 dB, should a complaint be registered for the high school.

To that end, the client may consider designing to a more conservative criteria than the maximum allowable MassDEP level, to reduce the risk of complaints from nearby residents. We recommend designing to a criteria no greater than +5 dB above the ambient level measured during our site survey, which would provide a factor of safety between the design levels and the allowable levels for the project. To result in a minimal impact to the community, the client may consider pursuing community noise levels from project mechanical equipment that do not exceed the measured ambient levels from our site survey. Table 3 below shows the three criteria; maximum allowable, maximum recommended, and minimal impact.

Table 3 - Alternate Community Noise Criteria

Monitor	Maximum Allowable Community Noise Level		Maximum Recommended Community Noise Level		Minimal Impact Community Noise Level	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
SM-1	43 dBA	41 dBA	38 dBA	36 dBA	33 dBA	31 dBA
SM-2	48 dBA	38 dBA	43 dBA	33 dBA	38 dBA	28 dBA
SM-3	48 dBA	48 dBA	43 dBA	43 dBA	38 dBA	38 dBA

COMMUNITY MODELING

Once the design progresses and mechanical rooftop plans with applicable equipment noise data are available, we will develop a computer model using CadnaA (DataKustik GmbH) acoustic modeling software, to predict the expected impact of project rooftop equipment on the surrounding community and to develop recommendations to satisfy the noise goals listed in Table 2 above.

* * * * * *

Please contact me directly if you have any questions or comments regarding this report, at ecasavant@acentech.com or 617-499-8034.

Sincerely,



Ethan Casavant
Consultant

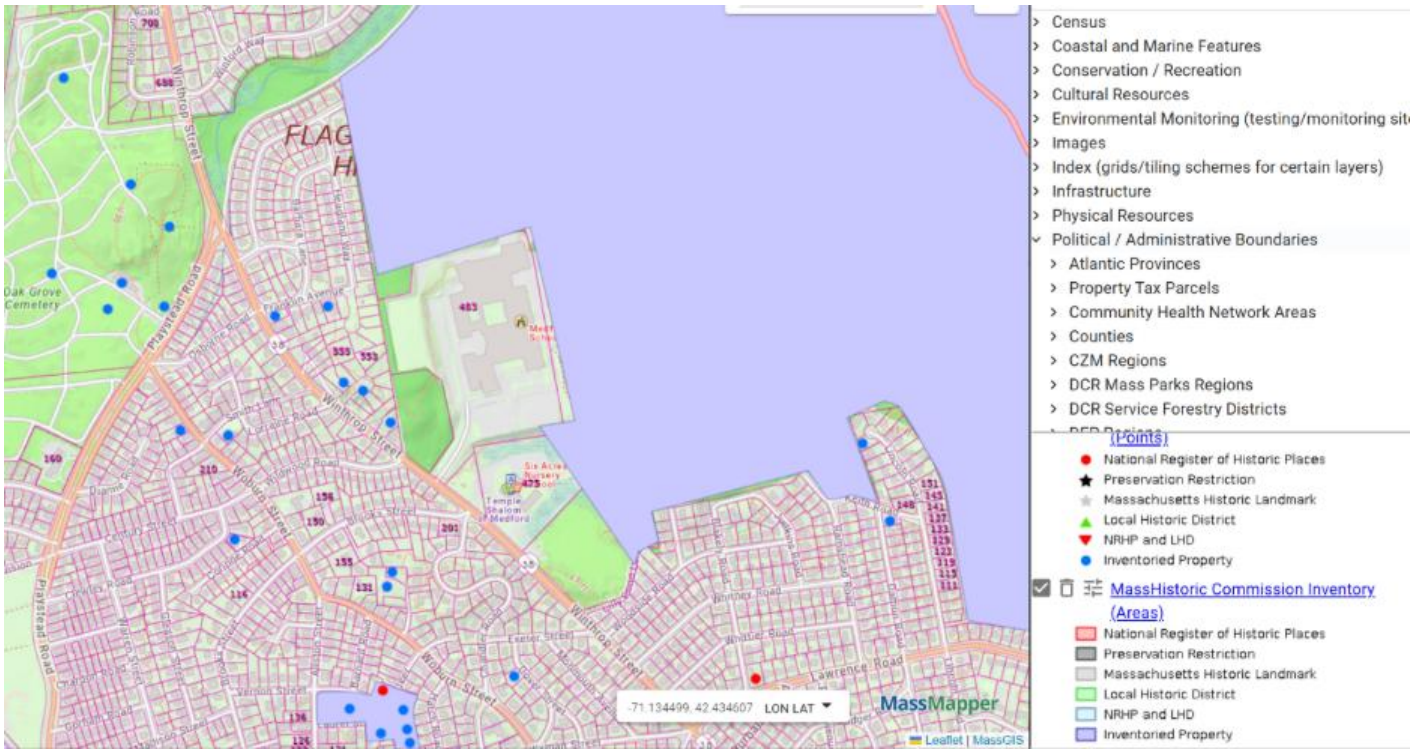
CC: Nicole Cuff (Acentech)



Figure 1 - Site Survey Monitor Locations

Existing Historically Significant Features

A review of the Massachusetts Historical Commission (MHC) online Massachusetts Cultural Resource Information System (MACRIS) performed in December 2025 indicated that there are no structures on the site that are listed on the State Register of Historic Places. However, the MACRIS GIS database shows an inaccurate property line between the inventoried Middlesex Fells Area (MHC identification number MDF.T) and the high school parcel. An updated boundary survey was shared with MACRIS on June 16, 2026, to allow them to update their database to accurately represent the property line and resolve any ambiguities. MHC responded to this updated information on June 17, 2026 indicating that their database would be updated with the corrected project boundary information later in the month of June. A PNF was sent to the MHC on June 19th, 2026.



MACRIS Inventoried Areas Map

Existing Conditions Site Plan

In response to the MSBA's PDP review, an Existing Conditions Site Plan is as Appendix K in section 3.3.6. Additionally, we have attached a series of site analysis exhibits which complement the existing conditions plan at the end of this section. This information was reviewed with the Site, Safety & Security Advisory Team in the PDP phase.

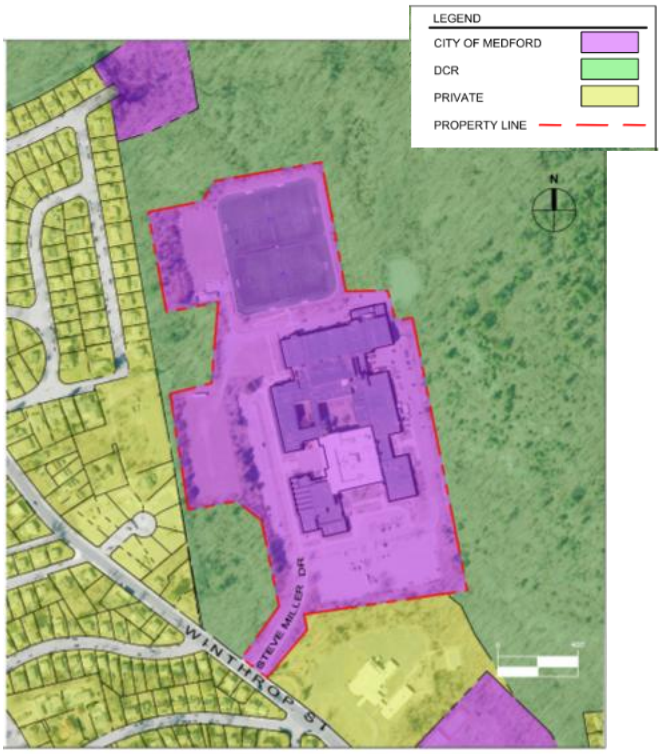
Legal Title to Property & Deed Restriction

The existing Medford High School is located at 489 Winthrop Street in Medford, MA.

The property is owned by the City of Medford and is available for development. As defined on the "Zoning Map, City of Medford, Massachusetts," dated April 13, 1965, the lot is zoned as Single Family 1, SF-1. According to the Medford Zoning Bylaw Chapter 94, Table A, dated March 15, 2022, use of land or structures for educational purposes on land owned by the City of Medford is permitted in the Single Family 1 zoning district.

In late April, the design team was made aware of a deed restriction by DCR representatives. Before the existing high school was built in 1970, the City and MDC (the predecessor to DCR) exchanged land to expand the available site area for the high school. As part of that land transfer, a 999-year deed restriction was put in place that prevents a building/structure from being built on the lands that were conveyed for a portion of Edgerly Field and the practice football field. These parcels are highlighted in yellow in the figure below.

The City is consulting with land counsel, KP Law, to understand the limitations the deed restrictions place on activities on these portions of the site. A letter from KP Law is included at the end of this section. Before the end of SD, the implications of these restrictions will be understood and incorporated into the project plan.



Parcel map by Owner



Yellow Shaded Areas indicate extents of the Deed Restriction on the site

KP LAW
THE LEADER IN PUBLIC SECTOR LAW

101 Arch Street, 12th Floor
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BY ELECTRONIC MAIL (blungokoehn@medford-ma.gov)

Hon. Breanna Lungo-Koehn
Mayor of Medford
Medford City Hall
85 George P. Hasset Drive, Room 2020
Medford, MA 02155

Re: Medford High School Project - Deed Restrictions

Dear Mayor Lungo-Koehn:

You have informed me that the City is undertaking a project to make significant improvements to the Medford High School located at 483 Winthrop Street (the "School Property"), including constructing new portions of the High School buildings (the "Project"), using monies funded in part by the Massachusetts School Building Authority ("MSBA"). The MSBA is aware that the School Property is adjacent to other City property (the "City Land"), which was acquired by the City 1967 from Commonwealth of Massachusetts by deed recorded with the Middlesex South District Registry of Deeds in Book 11325, Page 741 (the "Deed"). The Deed imposes certain restrictions on the use of the City Land. The MSBA has requested an opinion on whether the Project will negatively impact the restrictions set forth in the Deed and you have asked whether the City may make "programmatic" changes to the recreational facilities located within the City Land.

The Restrictions

The Deed states that the City Land is conveyed subject to two restrictions (the "Restrictions"), "which shall remain in effect for a period of nine hundred ninety-nine (999) years from the date hereof." One of the Restrictions states that "said premises shall be used only for recreation and athletic purposes except that portion set aside for an access road," and that title to the Property would revert to the Commonwealth if the Restrictions were violated. The other Restriction states that "no building or structure, or parts thereof, shall be erected, placed, or maintained on said land", but excepts from this Restriction "that portion [of the City Land] [then] set aside for an access road."

The Project

It is my understanding that the City initially considered constructing school buildings or portions of such buildings within the City Land. However, it is my understanding that the School Building Committee (the "Committee") recently decided to alter the Project plans such that the City will not construct any buildings within the City Land. The Committee is considering making improvements to the City Land and the recreation facilities thereon, but the specifics of such

alterations have not been determined. One of the proposed changes includes making alterations to the existing playing fields located on the City Land to install a track and/or changing the use of the fields for one sport to another, and the City is considering using the City Land temporarily for construction staging purposes.

Opinion

Given that the Deed prohibits the City from placing any buildings or structures within the City Land, it is my opinion that the Project, which no longer involves such construction, does not violate the Restrictions encumbering the City Land. In my further opinion, the City has the authority to make programmatic changes to the recreational offerings on the City Land so long as the City does not construct or install buildings or other structures thereon. The Deed gives the City broad discretion to determine what recreational activities take place in the City Land and to make such alterations and improvements (not involving buildings and structures) that the City determines are suitable to enhance the use of the City Land. In my opinion, the City may make alterations or changes to the recreation uses and facilities without obtaining DCR's consent so long as the City complies with the Restrictions.

It is my understanding that the City may use the City Land during construction for the placement of modular classrooms (if needed), construction trailers, and laydown areas. I understand that there is little space on the School Property that can be used such purposes, and that the Project must necessarily make use of the City Land for such purposes. While the intent of the Restrictions may be to prohibit the placement of permanent buildings and structures, not temporary ones, I recommend that the City inform DCR of this proposed temporary use to ensure that there is no interruption to the construction of the Project.

If the City intends to make other alterations and improvements to the City Land as part of the Project, please let me know the specifics of such alterations so that we can determine whether there is a negative impact on the Restrictions.

Please let me know if you have any further questions regarding this matter.

Very truly yours,

Shirin Everett

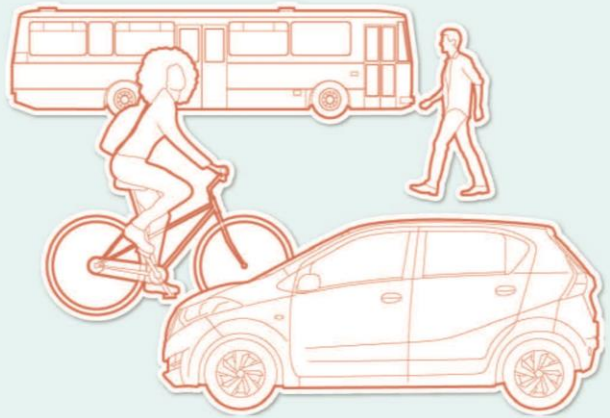
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Topics and Priorities

You shared feedback and ideas in three key categories:

MOBILITY + ACCESS



A Connected Medford Destination

- Arrival and egress
- Circulation
- ADA Compliance
- Emergency access and service

PROGRAM + OPERATIONS



Active Every Day, Year Round

- Site amenities
- School and community resources
- Site security and management

PHYSICAL SITE



Between the Fells and the City

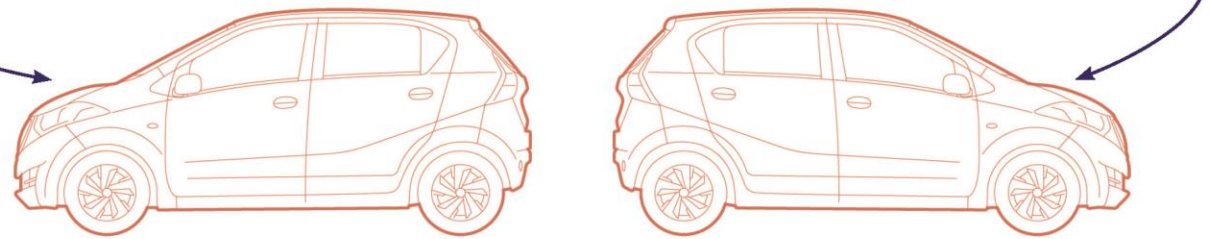
- Topography and vegetation
- Construction logistics
- Site materiality, character and permanence

A Connected Medford Destination

The community arrives on wheels, on foot, and by transit!

37% of trips to the school overall are made in family vehicles.

Fewer car trips are made in the afternoon than in the morning.



by **Car**
(parking on site and drop off)



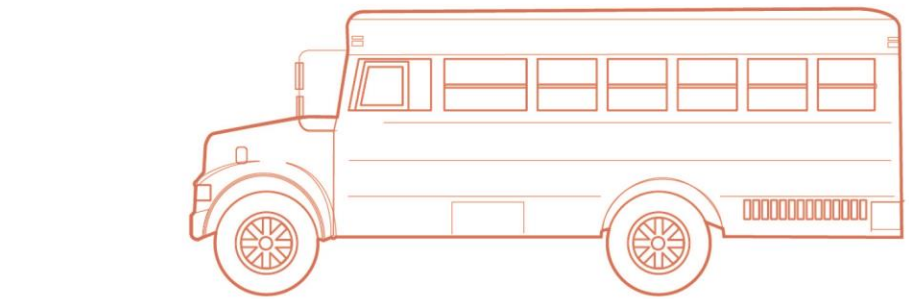
by **Bike**

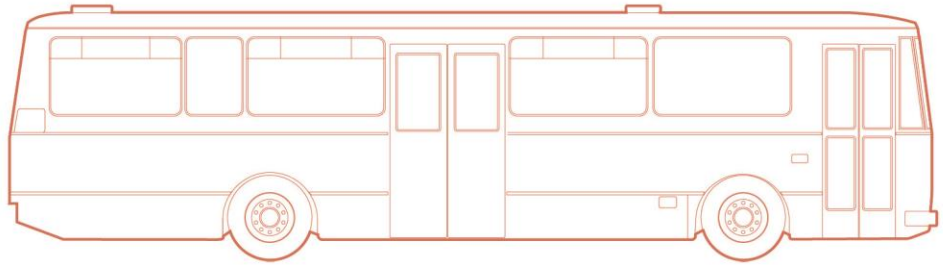


on **Foot**

62% of students within 1 mile walk or bike, making up 22% of overall students.

51% of students who live 2+ miles away from school ride either school or MBTA bus.





by **MBTA Bus** and **School Bus**

A Connected Medford Destination

Routes to school are through neighborhoods and the Fells.



A Connected Medford Destination

Parking is pervasive and vehicles are prioritized in site circulation.



Approximately

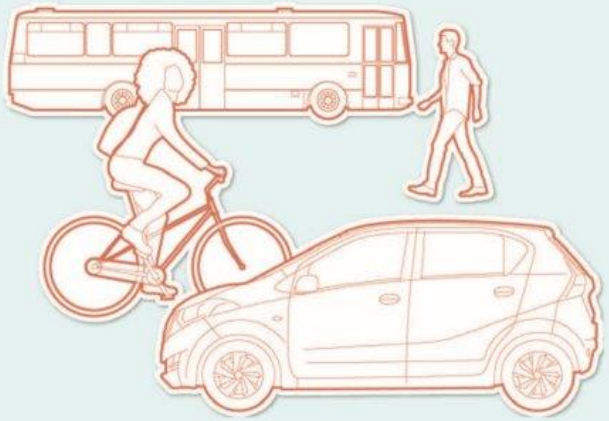
476

parking spaces on the site

Note! Traffic Consultant is working on capacity analyses!

Legend

- Vehicle Routes
- Bus Routes
- Bus Stops
- Pedestrian Routes
- Trails
- Fence
- Trailheads
- Bike Parking
- Vehicle Parking



A Connected Medford Destination

What other challenges or opportunities related to circulation would you like to discuss tonight?

In December you shared these priorities…

- Create a campus that feels welcoming, legible, and **easy to navigate**, with clear wayfinding and logical zoning of uses.
- Ensure **safe pedestrian routes** with generous, well-lit walkways, accessible entrances, and protected crossings, especially near drop-off zones.
- Design for **clear emergency egress** and gathering areas, with obvious evacuation routes and access for fire, police, and EMS.
- Provide **safe, efficient circulation** for buses, parent dropoff, student drivers, service vehicles, and pedestrians, with **clearly separated paths**.
- Provide a **hierarchy of trails and outdoor spaces**—from fully accessible multiuse loops close to the building to more rustic study paths at the Fells edge—so recreation is welcomed but directed away from erosion-prone or ecologically-critical areas.

Active Every Day, Year Round

The campus serves a broad diversity of users from a deeper demographic than just high school.



Students

2024-2025 Quick Facts

1,195 total students:

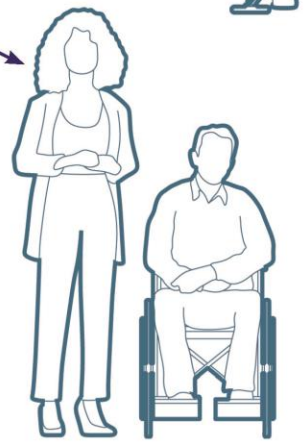
- 52% are low income
- 56% have high needs
- 34% have non-English first language
- 20% have disabilities

2024-2025 Quick Facts

- 130 teachers
- 9.2 students per 1 teacher



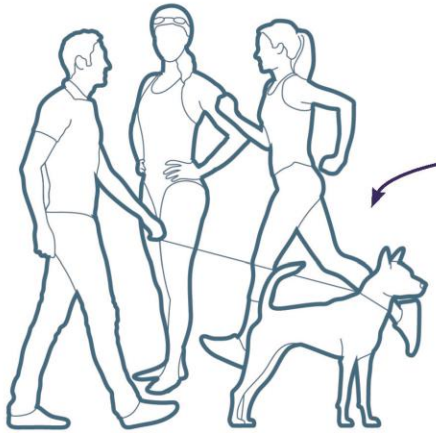
Staff



Faculty



Parents



Community

The Medford Parks and Open Space plan reported that 1/4 of the public interviewed visited campus 10+ times a year.

The Medford Early Education Program serves ages 3 - 5, with up to 15 children per class.



Preschoolers

Active Every Day, Year Round

This site is dominated by service and circulation, with athletic, entry, and program spaces secondary.



Legend

- Fields
- Road, Service Area, and Parking
- Building
- Play Areas
- Outdoor Yard Space
- Entry

- Bistro 489
- Childcare
- Robotics Lab
- Kitchens
- Automotive Workshops
- Pool
- Science Lab
- Marching Band Practice Area
- Soccer Field / Turf
- Bike Path
- Trailhead



Opportunities exist to better integrate outdoor spaces, provide outdoor amenities (like seating, shade, bike racks, and planting), and improve wayfinding across the campus.



Many walkways, plazas, and landscaped areas are in poor condition, showing signs of stormwater runoff erosion and wear that compromises ADA access.



Active Every Day, Year Round

What other challenges or opportunities related to program would you like to discuss tonight?

In December you shared these priorities…

- Treat the campus and adjacent Fells interface as an **outdoor laboratory for CTE and science programs**, embedding longterm monitoring plots, weather and hydrology stations, and forest inventory study areas into the site plan.
- Develop **dedicated outdoor classrooms**, teaching forests, and restoration zones.

- This is a high school first, but also a community resource. Design outdoor spaces that can **host community events**, field days, and joint school–Friends of the Fells programs, positioning the high school as a **regional hub for learning** about sustainable forest management, restoration, and responsible outdoor recreation.

- **Prioritize climate resilience** (stormwater infiltration and heat mitigation) into athletic fields and parking.
- **Cluster active recreation fields and high-intensity play** areas away from the most sensitive ecological zones, using paths, plantings, and gentle grading to buffer noise, lights, and foot traffic.



Active Every Day, Year Round

What other challenges or opportunities related to program and operations would you like to discuss tonight?



Between the Fells and the City

A mostly paved and impermeable site with pockets of bedrock.



Approximately

54%

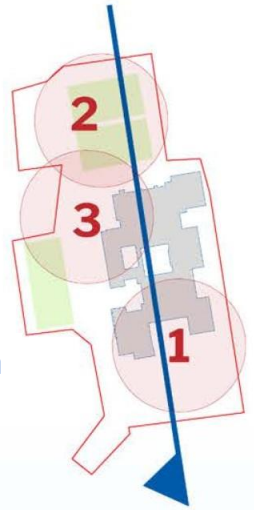
of the site is impermeable

Legend

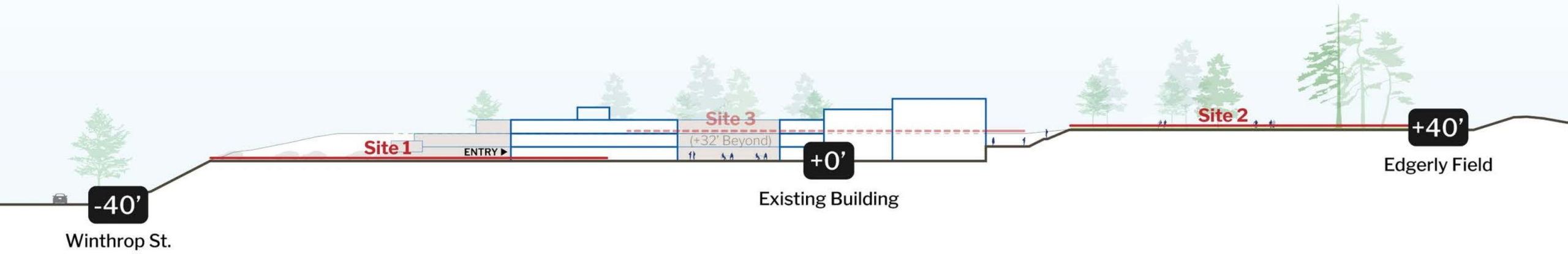
- Waterbody
- Palustrine Forested Wetland
- Evergreen Forest
- Deciduous Forest
- 1ft Contours
- Property Boundaries
- Vernal Pools

Between the Fells and the City

80’ Grade Difference Organized in a Series of Plateaus



Site Diagram





Between the Fells and the City

What other challenges or opportunities related to the physical site would you like to discuss tonight?

In December you shared these priorities...

- **Design with the site**: Locate buildings, fields, and parking based on topography, drainage, and environmental constraints, while allowing room for future additions.
- Designate a **continuous band of protected and enhanced open space** along the Fells edge that prioritizes native plant communities, wildlife connectivity, and ecological function over ornamental landscaping.
- Use site grading, planting, and stormwater systems to **restore more natural hydrology** along the Fells interface, reducing runoff, erosion, and pollution entering nearby forest and wetland systems.
- Establish **shared stewardship goals** with Friends of the Fells and the City so site maintenance standards (mowing regimes, pesticide policies, lighting, and snow management) support habitat quality and darksky principles near the Fells. Embed **student-led stewardship** into ongoing site operations, so the landscape is comanaged as part of the educational program.

Climate Resiliency Approach

Part 1 - Risk Assessment

The City of Medford considered any and all potential properties in the city of a size that could accommodate this project. Ultimately, the project property was the only suitable site to consider. The parcel, which encompasses the existing high school and Edgerly Field, was chosen based on key factors such as property ownership, space availability, and natural resource constraints. As a result, the following risk assessment and environmental hazard evaluation will focus exclusively on this site, as it was the only location considered during the Preferred Schematic Report (PSR) Feasibility Study phase. However, given their geographic proximity, the initially considered locations across Medford would face similar climate resiliency challenges to the ones described herein, and some in lower lying parts of the city would also have to consider riverine flooding, sea level rise and storm surge.

During the PSR phase, six distinct project alternatives were explored: a Renovation/ Additon that kept most of the existing structure except for the auditorium wing (B1.2), three Renovation & Addition alternatives (C2.2A C2.2A-High School Only, and C3.4A), and one New Construction Phased-in-Place alternative (D1.1). Alternatives B1.2 and D1.1 are downhill from the Middlesex Fells where stormwater has run onto the site, increasing the risk of flooding in large storm events. C2.2A, C2.2A-Highschool only, and C3.4A are built behind the existing high school and below the Edgerly field complex, which has extensive onsite storm drain infrastructure and is less likely to cause flooding downstream.

To comprehensively assess climate-related risks and environmental vulnerabilities, this evaluation incorporates multiple climate change vulnerability assessment tools. These include the ResilientMass Climate and Hazards tool, the ResilientMass Action Team (RMAT) tool, the U.S. Climate Resilience Toolkit Climate Mapping for Resilience and Adaptation (CMRA) v1.3.2 tool, and the Medford Climate Change Vulnerability Assessment [July 2025]. The insights gained from these tools have informed the assessment of each project alternative and their respective environmental and resilience considerations.

The project site is located within the Mystic River watershed and falls within Zone X of the FEMA FIRMette flood map, indicating minimal flood hazard. According to the RMAT Climate Resilience Design Standards Tool Report, attached in the Appendix, the site is at low risk of riverine flooding and sea level rise or storm surge. The project site is not located within the predicted mean high-water shoreline by 2030, nor are there historical records of coastal flooding at the site. The project site is also not included in the Massachusetts Coast Flood Risk Model (MC-FRM).

The project site does, however, face high exposure to urban flooding due to extreme precipitation, with maximum annual daily rainfall projected to exceed 10-inches within the anticipated useful life of the building. Increased rainfall intensity can overwhelm drainage systems, leading to localized flooding, erosion, and potential infrastructure damage. To mitigate these risks, the project will incorporate enhanced stormwater management strategies which may include bioswales, permeable pavement, retention basins, underground stormwater detention systems, and other BMPs. Furthermore, the finished floor elevation of the new school building and renovated facilities will be elevated above the existing ground floor level.

The threat of high winds from hurricanes, nor'easters, and severe storms poses another significant concern for the project site. Historical data indicates that the region has experienced damaging storms, and climate change models predict and increase in their frequency and intensity throughout the anticipated useful life of the building. High winds can cause structural damage to buildings, break windows, and lead to fallen trees and power lines, blocking roads and disrupting transportation and causing power outages. To mitigate these risks, the project will consider windbreaks such as vegetative barriers throughout the site, explore use of wind resistant materials such as brick, granite and terracotta and impact-resistant triple-glazed tempered windows, and lateral bracing and sheer walls to meet the seismic code requirements.

Power outages present a major concern due to their cascading effects on school operations, heating and cooling systems, and emergency response capabilities. Storm-related outages frequently result from fallen trees and downed power lines, while extreme heat events may strain electrical grids, leading to potential brownouts.

To mitigate these risks, the project is considering multi-tiered resiliency solutions incorporating permanently installed diesel generators, provisions for temporary roll-up generators, on-site renewable energy, and battery energy storage systems.

The project site has high exposure to extreme heat due to climate projections indicating an increase of more than 30 days annually within temperatures exceeding 90°F within the anticipated useful life of the building. Contributing factors include the removal of existing trees, impervious surfaces for parking lots and driveways, and the site's location beyond 500 feet from any major water body. To mitigate these risks, the project will incorporate high-performance glazing and will limit it to 25% of the facade to reduce solar heat gain, the use of exterior shading devices at south, east and west facing windows to further limit solar heat gain at glazing will be considered. The building will have robust insulation at the exterior shell to limit cooling loss, will use a high-reflectivity roof membrane, strive to reduce heat island approach be incorporating light-colored pavement materials.

Cold temperatures and winter storms also pose risks to the proposed project site. Heavy snowfall, ice accumulation, and freeze-thaw cycles contribute to road deterioration and hazardous travel conditions. Icy conditions increase the risk of accidents for students and staff commuting to and from school, while frequent temperature fluctuations accelerate pavement degradation and erosion. To mitigate these risks, the project will incorporate designated snow storage areas, road maintenance plans, all-electric energy-efficient heating systems, on-site battery storage and generator to manage power outages, a durable PVC roof system, upgraded roof steel at areas where snow drift will accumulate, and heat tracing at any piping or conduit that is outside of the building envelope insulation.

Rain and snow management will require ongoing adaptation as climate patterns shift. Increased precipitation variability, including more frequent high-intensity storms and prolonged freeze-thaw cycles, will continue to impact infrastructure and transportation. According to the Climate Mapping for Resilience and Adaptation (CMRA) web tool, the average annual total precipitation for Middlesex County is projected to range between 48 and 51 inches over the anticipated useful life of the building, depending on global emission rates.

To mitigate these risks, the project will incorporate effective drainage solutions including gutter systems, permeable surfaces, adaptive landscaping, overflow drainage system at the roof, and a rainscreen wall assembly.

Part 2 - Design Approach

The Medford High School, or the "Project", located in Medford, Massachusetts will be designed to be environmentally conscious and healthy for the occupants.

The Project's Proposed Design includes an all-electric heating and cooling (HVAC) heat pump system, a highly efficient building enclosure and electrical systems, as well as an on-site Solar Photovoltaic (PV) system and a battery storage system.

- The Project will target a facility Energy Use Intensity (EUI) of 35 kBtu/sf/year or better.
- The on-site 6.2-6.5 MW Solar PV system will offset the totality of the facility's GHG Emissions associated with its energy use on an annual basis.
- Compliance with the Massachusetts Specialized Stretch Energy Code.
- Compliance with the Massachusetts Specialized (Opt-in) Stretch Energy Code's CC101.3 - 2. and Section CC104 All-Electric Pathway, and the Opt-in requirement for the Standard Stretch Code as follows:
- Section C401.2.1: Relative Performance Compliance (project has >0.5 CFM/SF)
- Section C401.4.3: Full space and water heating electrification.

Through an integrated design process, the design team has optimized passive strategies and active design energy efficiency measures in the proposed design to reduce the energy demand.

Passive Strategies

- Highly insulated, robust and airtight building enclosure
  - High-thermal performance walls (R-40).
  - High-thermal performance roof (R-60).
  - Triple-glazing fenestration systems
  - Window-to-Wall Ratio of 25% goal
  - Air-infiltration reduction (enclosure air tightness) - goal of 0.15 cfm/SF @75 Pascals (PA)
- Optimized daylighting and access to views
- Light-colored interior finishes (to reflect daylight)
- Optimization of massing, siting and orientation, within the constraints of the existing site and the educational program requirements.

Energy Efficiency Measures

- All-electric and highly efficient heating, cooling and ventilation (HVAC) Heat Pump systems.
- All-electric and efficient domestic hot water (DHW) systems, including water efficient plumbing fixtures, contributing to water and energy efficiency outcomes. [*note: with the exception of the pool area, where the pool water heating system fuel source is TBD*]
- High efficiency lighting systems and controls including sub-metering capacity.
- Energy Star rated all-electric appliances and equipment.
- Electrical plug load controls programming/controllability capacity.

Fuel Sources

The Project is planned to be an electrically sourced facility, fossil fuel-free for HVAC system operation. The design team will further evaluate three all-electric HVAC system options in the schematic design phase towards the goal of achieving net zero energy use (excluding the pool area). The pool area will consider all-electric pool water heating, pending the completion of the schematic design life cycle cost analysis and a determination of electric pool equipment market availability.

A small natural gas supply is currently planned for the building to support only instructional use for limited CTE programs (Plumbing and Biotechnology) as well as the academic science labs.

Renewable Energy

The Project design will maximize on-site renewable energy.

- A Solar Photovoltaic (PV) System 6.2-6.5 MW
- A 4.8 MWh Battery Energy Storage System

The robust and highly insulated and airtight building enclosure will support retaining heat during the winter and cooling during the summer and lowering the demand from the battery storage. The large battery energy storage system, PV system, emergency diesel generators, and provisions for temporary generator docking will be leveraged to achieve resiliency goals. During a power outage, physical separation from the utility grid will be required to switch the school into islanding mode, relying on the school's electrical components as a microgrid.
To achieve and maintain the desired level of resiliency, smart load shedding and reduced operation strategies will be studied. Specific examples under consideration include modifying HVAC sequencing to reduce demand, shifting kitchen and hot water loads to temporary power, and selectively shutting down areas of the building, such as the auditorium. The exact sequencing is ongoing and will continue to be reviewed and integrated into the Construction Documents.

Building Orientation & Location

The building design will benefit from a strong sun exposure for the rooftop PV panels. Solar PV parking canopies will be designed to optimize sun exposure.

Building Design, Fenestration and Volumetry

The building super structure will consist of steel columns, framing and lateral bracing, metal decks with lightweight concrete at the upper floors, and a metal deck roof.

All proposed exterior materials are durable and easy to maintain. Windows are triple-glazed aluminum windows with an operable panel for ventilation. Curtainwalls are also triple glazed with an aluminum frame.

Window-to-Wall Ratio

The window-to-wall ratio target for the project is 25%. A sun path analysis will be performed early in Schematic Design to more precisely locate the need for both horizontal and vertical sunshade devices for glare control at interior spaces. The glazing itself is assumed to be triple-glazed with a very low u-value at or below 0.13 center of glass and the windows and curtainwall products will be between 0.23 for their whole system u-values, providing excellent insulation at all fenestration locations.

Additional Sustainable Design Criteria

The Project includes the following Sustainable Design Criteria:

- Embodied carbon reduction strategies such as low carbon concrete and materials such as structural wood components. A preliminary embodied carbon analysis was conducted during PSR, associated with Mass Timber structure options.
- Red List Compliance for Healthy Materials, as applicable (based on the Living Building Challenge Red List requirements) and implementation.
- Electric Vehicle Stations (EV) in compliance with the Town of Medford By-Law:
    - 10% EV installed.
    - 10% EV readiness.