DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

GEOTECHNICAL ENGINEERING REPORT
WARDE HIGH SCHOOL SYNTHETIC TURF ATHLETIC FIELDS
FAIRFIELD, CONNECTICUT

Prepared for:

Land-Tech Consultants, Inc.
518 Riverside Avenue
Westport, Connecticut 06880

Prepared by:

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File No. 0053-003.00
April 2026

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

April 30, 2026
File No. 0425-001.00

Curt Lowenstein, P.E.
Land-Tech Consultants, Inc.
518 Riverside Avenue
Westport, Connecticut 06880

Via e-mail: CLowenstein@landtechconsult.com

Re: Geotechnical Engineering Report
Warde High School Synthetic Turf Athletic Fields
Fairfield, Connecticut

Dear Mr. Lowenstein:

Down To Earth Consulting, LLC (DTE) is pleased to submit this geotechnical engineering report for the proposed synthetic turf athletic fields that will be constructed at Warde High School in Fairfield, Connecticut. We appreciate this opportunity to work with you. Please call if you have any questions.

Sincerely,

Down To Earth Consulting, LLC

Daniel F. LaMesa, P.E.
Principal

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1.0 INTRODUCTION

This report provides geotechnical design and construction recommendations for the proposed synthetic turf athletic fields that will be constructed at Warde High School in Fairfield, Connecticut. Refer to Figures 1 and 2 (in Appendix 1) for the approximate site and proposed field locations, respectively.

Two fields will be constructed in the southwest corner of the campus and generally consist of synthetic turf placed over matting and a layer of drainage material. Associated retaining walls, sidewalks, drainage structures, utilities, and landscape areas will also be constructed. Existing site grades range from about Elevation 184 to 174 in the area of the proposed improvements. It is anticipated that proposed cuts and fills will generally be less than 2 feet with localized cut and fill areas up to 3 and 5 feet, respectively, to achieve the proposed field grades (approximate Elevation 184 to 180).

Our geotechnical engineering services included: reviewing project plans, observing test borings, performing gradation testing, characterizing subsurface conditions within the project limits, performing geotechnical engineering analyses, and providing geotechnical design and construction recommendations for the proposed fields and other improvements. Our services were performed in accordance with our January 6, 2026 proposal.

Elevations (El.) stated in this report are in feet and based on the NAVD88 Datum. Our recommendations are based on allowable stress design methods.

2.0 TEST BORINGS

We observed and logged nine test borings (B-1 through B-9) drilled by our subcontractor Site, LLC on April 3, 2026. Boring locations are depicted on Figure 2 (Appendix 1) and the logs are included in Appendix 2. The borings were drilled to explore the soil and groundwater conditions in the project area. Hollow-stem auger drilling methods were used to advance borings to depths of approximately 4.5 to 9 feet below existing grades. Borings were terminated in natural soil or on possible Bedrock.

Representative soil samples were obtained for soil classification by split barrel sampling procedures in general accordance with ASTM D-1586. The split-spoon sampling procedure utilizes a standard 2-inch O.D. split-barrel sampler that is driven into the bottom of the boring with a 140-pound hammer falling a distance of 30 inches. The number of blows required to advance the sampler the middle 12-inches of a normal 24-inch penetration is recorded as the Standard Penetration Resistance Value (N). The blows (i.e., “N-Value”) are indicated on the boring logs at their depth of occurrence and provide an indication of the relative consistency of the material.

Groundwater levels were measured using a weighted tape in open drill holes.

3.0 LABORATORY TESTING

Gradation testing was performed in general accordance with ASTM D46913 on three samples obtained from the test borings. Testing was performed to confirm field classifications and drainage properties of the soil. Refer to Appendix 3 for the laboratory test results.

4.0 SUBSURFACE CONDITIONS

4.1 SUBSURFACE PROFILE

The generalized subsurface profile, as inferred from the subsurface data, is as follows:

- Topsoil – about 9 to 13 inches, over
- Uncontrolled Fill – about 1 to 3 feet, over
- Natural Till – about 0 to 7+ feet, over
- Weathered Rock

Possible Bedrock (or boulders) was inferred based on auger refusal at about 4.5 to 5 feet below grade at Boring B-6 and B-8. Bedrock was not encountered within the limits of the other borings. Refer to the test boring logs in Appendix 2 for more details.

4.2 GROUNDWATER

Groundwater was encountered during drilling at about 4 to 8.5 feet (approximate El. 176.5 to 174) below grade at Borings B-1, B-2, B-4, B-5, B-6, and B-7. Groundwater levels measured in the boreholes may not have had sufficient time to stabilize and should be considered approximate. Groundwater levels will vary depending on factors such as temperature, season, precipitation, construction activity, and other conditions, which may be different from those at the time of these measurements.

5.0 GEOTECHNICAL RECOMMENDATIONS

We offer the following geotechnical design recommendations based on the subsurface conditions encountered at the site, available project information, and proposed construction.

5.1 TURF FIELDS

5.1.1 Subgrade

We recommend placing turf fields over a minimum 12-inch-thick base course layer of compacted Crushed Stone placed over the surface of natural Till, Compacted Granular Fill, and/or existing Fill that has been improved with surface densification under the observation of a qualified Geotechnical Engineer. This procedure consists of removing all surficial organic (e.g., Topsoil) and debris materials and compacting the surface with a minimum of four passes with a 10-ton vibratory drum roller having a minimum dynamic force of 6,500 lbs. per foot of drum width. Areas exhibiting instability should receive additional compaction and/or be over-excavated and replaced with Compacted Granular Fill, as recommended by the Geotechnical Engineer. Modifications to this procedure may be required if the subgrade is saturated or the groundwater table is too high.

A layer of filter fabric should be placed between the base course layer and subgrade soils.

5.1.2 Drainage

We recommend installing a series of prefabricated panel drains below the proposed Crushed Stone base course layer. The drains should be installed (e.g., depth, spacing, etc.) in accordance

the manufacturer's instructions and discharged to intermediate and perimeter subsurface drains around each proposed field. The perimeter drains should consist of 12-inch minimum diameter perforated PVC pipe, surrounded by 6-inches of Crushed Stone, and wrapped in non-woven filter fabric. Drain inverts should be embedded at a minimum depth of 24-inches below grade and pitched at 0.125 inches per foot of drain to daylight or site drainage system.

5.2 RETAINING WALLS

5.2.1 Foundation Type and Bearing Strata

We recommend supporting the proposed walls on normal, shallow spread footings for cast-in-place walls or 6-inch Crushed Stone Pads for modular block walls. The footings and stone pads should bear on natural Till Deposits or on Structural Fill (hereinafter specified as Compacted Granular Fill, CGF) over natural Till Deposits. Topsoil, existing Fill, and buried structures (e.g., utilities, etc.) are not suitable for support of foundations. Actual bottom of unsuitable bearing material elevations will vary across the site and should be verified during construction excavation by a DTE representative.

When CGF is used beneath the foundations (e.g., in backfill areas), we recommend that it be placed one foot beyond the edge of the foundations and at a one horizontal to one vertical slope away and down from the bottom outside edge of the foundations. Crushed Stone can be used in place of CGF as it is much easier to compact.

Cast-in-place wall footings should be constructed at a minimum frost depth of 42-inches below proposed site grades. Modular block wall units should be embedded at least 18 inches below grade and in accordance with NCMA recommendations. The minimum foundation width should be 1.5 feet.

5.2.2 Allowable Bearing Pressures and Settlement Estimates

We recommend a maximum allowable design bearing pressure of four kips per square foot (ksf) for foundations bearing on the recommended bearing materials. Based on the recommended bearing strata and anticipated loads, we anticipate that foundations will undergo less than one inch of total settlement and less than a half inch of differential settlement. Settlements will occur as the loads are applied and are expected to be complete at the end of construction.

5.2.3 Backfill and Drainage

We recommend backfilling earth retaining structures with compacted Sand and Gravel and installing footing drains. The limits of backfill behind walls should extend upwards from the wall heels at a slope of 1H:1V (Horizontal to Vertical) to the intersection of ground surface. Where retained soils are not covered by pavement and are exposed to weather, the top 12 inches of backfill should consist of low permeable soil (e.g. Topsoil). This will help to minimize water infiltration behind the wall. Surface grades should be sloped away from structures to prevent water from accumulating adjacent to the wall.

The drains should consist of 4-inch diameter perforated PVC pipe, surrounded by 6-inches of Crushed Stone, and wrapped in non-woven filter fabric. Footing drain inverts should be set flush

with or up to 6-inches above bottom of footing level. The drains should be gravity drained to the site drainage system or daylight with rodent screens.

Weep holes may be installed in place of footing drains where they can discharge to non-paved areas (e.g., grassed areas). In paved areas such as sidewalks, weep holes should be avoided to reduce the potential for ice formation in pedestrian access ways. Where weep holes are appropriate, we recommend installing Crushed Stone (minimum diameter of 12 inches), wrapped in non-woven filter fabric at each weep hole location, to prevent movement of wall backfill materials into the weep holes.

5.2.4 Lateral Earth Pressures

Walls that are free to rotate at the top and are not braced should be designed to resist an equivalent active static horizontal fluid earth pressure equal to 36 pcf (based on $\varphi' = 34°$, $c = 0$, $K_a = 0.28$, and $\gamma = 128$ pcf). Braced retaining walls should be designed to resist an equivalent at-rest static horizontal fluid earth pressure equal to 57 pcf (based on $\varphi' = 34°$, $c = 0$, $K_o = 0.44$, and $\gamma = 128$ pcf). This assumes no unbalanced hydrostatic pressures, seismic forces, or surcharge loads (e.g., vehicles).

We recommend using a minimum surcharge load of 250 psf behind walls that will be subjected to vehicle loading and 125 psf for walls in landscaped area that will not be subjected to vehicle loading. Due to the limited expected wall movement and depth of footings, we do not recommend the use of passive earth pressures against the base of walls unless DTE is consulted.

5.2.5 Coefficient of Friction

We recommend a maximum coefficient of friction of 0.5 between foundations and the recommending bearing strata.

5.3 SLOPES

Slopes should be constructed at 2.5H:1V or flatter unless DTE is consulted. The faces of fill slopes should be overbuilt and cut back into compacted materials with a smooth excavator bucket. Slopes should be adequately vegetated to prevent surficial erosion. The top (i.e. crest) of slopes should be graded to divert runoff water away from the slopes until vegetation can be established. Site drains should be directly away from slopes. Detention basins or riprap energy dissipaters maybe required to reduce the runoff from the drains and prevent slope erosion.

5.4 SEISMIC DESIGN

The site class is “C” per the CT Building Code. Based on the standard penetration test results, visual soil classification, and design peak ground acceleration at this locale, the site soils are not susceptible to liquefaction.

6.0 MATERIALS RECOMMENDATIONS

6.1 ON-SITE MATERIALS

Site soils can be reused as General Fill outside the field and other structure footprints and deeper than 14-inches below pavement if the material does not contain organics or significant amounts (less than 2%) of debris materials. Reuse of onsite materials within the field area will require mixing granular soils, processing, culling, screening, and/or crushing boulders and cobbles to meet gradation requirements for CGF.

The elevated fines (i.e., soil particles passing the No. 200 sieve) content of some site soils could make them difficult to place and compact. Success in using these materials will depend on their moisture content and prevailing weather conditions when they are excavated, placed, and compacted. Fill should be stockpiled and covered with tarps or plastic sheeting for protection from excess moisture. Any fill material that is or becomes wet beyond its optimum moisture level must be dried prior to its reuse.

Topsoil and soil with organics should only be reused in landscaped areas for planting grass and other vegetation.

6.2 COMPACTED GRANULAR FILL

Compacted Granular Fill (CGF) for use below the fields and as structural fill below footings and other structures should consist of inorganic soil free of clay, loam, ice and snow, tree stumps, roots, and other organic matter; graded within the following limits:

Sieve Size	Percent finer by weight
4-inches	100%
No. 10	30 - 100
No. 40	10 - 90
No. 200	0 - 12

6.3 SAND AND GRAVEL

Sand and Gravel for use as retaining wall backfill should consist of hard, durable sand and gravel; free of ice, clay, shale, roots, sod, rubbish, and other organic matter; graded within the following limits:

Sieve Size	Percent finer by weight
2-inches	100%
1/2-inch	50 - 85
No. 4	40 - 75
No. 40	10 - 35
No. 200	0 - 5

6.4 COMMON FILL

Common Fill may be used for general site grading, within slopes and other areas as appropriate, or as directed by the Geotechnical Engineer. Common Fill is not suitable for use below the proposed structures and turf field. Common Fill should conform to the following gradation requirements:

Sieve Size	Percent finer by weight
6-inches	100%
No. 200	0 - 25

6.5 CRUSHED STONE

Crushed Stone for use around drains or below turf and foundations should consist of sound, tough, durable, rock that is graded within the following:

Sieve Size	Percent finer by weight
5/8-inches	100%
1/2-inch	85 - 100
3/8 inch	15 - 45
No. 4	0 - 15
No. 8	0 - 5

6.6 GEOTEXTILE FABRIC

Geotextile fabric placed around crushed stone pipe bedding or used as a separation fabric for crushed stone and soil material should meet the following criteria:

Property	Criteria	Test Method
Grab Strength	min. 80lbs	ASTM D4632
Static (CBR) Puncture	min. 50lbs	ASTM D6241
Trapezoid Tear	min. 25lbs	ASTM D4533
Apparent Opening Size	No. 70-100 U.S. Sieve Size	ASTM D4751

Fabric should be needle-punched non-woven material. Seams should be overlapped a minimum of six inches. During stone placement, the stone drop height should not exceed three feet and equipment traffic should be kept off the fabric until at least 6 to 12 inches of material is placed.

6.7 PLACEMENT AND COMPACTION REQUIREMENTS

We recommend a minimum in-place dry density of 95-percent as per ASTM D1557 for backfill placed below and around structures (e.g. foundations, turf field, pavement, etc.). Backfill should be placed in loose layers not exceeding 10-inches and within 2% of their optimum moisture content. It may be possible to reduce the in-place density requirements for Common Fill in some areas once proctor testing results of available for our review and approval.

Crushed stone is considered to be self-compacting, and would negate the need to run laboratory proctor testing and have field density testing of in-place lifts. The crushed stone should be plate compacted to "chink up" the working surface in lifts. We recommend placing Crushed Stone in maximum 12-inch lifts and compacting the lifts with a minimum of four passes with a vibratory plate compactor weight of a minimum of 1,000 pounds and with a minimum centrifugal force of 10,000 pounds. Recommended loose lift thickness for granular fill and the minimum number of passes of compaction equipment are summarized on the table below. Generalized loose lift thickness for granular fill and the minimum number of passes of compaction equipment are summarized on the table below. Specifications should require the contractor to adjust loose lift thicknesses as required to meet the required compaction requirements.

Compaction Method	Maximum Stone Size	Maximum Loose Lift Thickness		Minimum Number of Passes	
		Below Structures	Less Critical Areas	Below Structures	Less Critical Areas
Hand-operated vibratory plate or light roller in confined areas	4"	6"	8"	6	4
Hand-operated vibratory drum rollers weighing at least 1,000#	6"	8"	10"	6	4
Light vibratory drum roller, minimum dynamic force 3,000# per ft. of drum width	6"	10"	14"	6	4
Medium vibratory drum roller, minimum dynamic force 5,000# per ft. of drum width	8"	12"	18"	6	4
Large vibratory drum roller, minimum dynamic force 8,000# per ft. of drum width	10"	16"	24"	6	4

Extra care should be used when compacting adjacent to walls. Hand-operated rollers or plate compactors weighing not more than 250 pounds should be used within a lateral distance of 5 feet of walls. Where walls are buried on both sides, backfill and compaction should proceed on both sides of the wall so that the difference in top of fill on either side of the wall does not exceed 2 feet.

7.0 CONSTRUCTION RECOMMENDATIONS

7.1 FOOTING AND TURF SUBGRADE PREPARATION

The subgrade excavations should be free of debris materials, organics, water, ice, and loose and frozen soils prior to placing concrete or fill. Should the materials at bearing level become disturbed, the affected materials should be removed and/or repaired prior to placing concrete or

fill. A three-inch-thick layer of crushed stone may be used to protect subgrades that are expected to be open for an extended period of time.

7.2 TEMPORARY EXCAVATIONS

The Fill and natural site soils are classified as OSHA Class "C" soil and can be cut at a maximum one vertical to one and a half horizontal (1V:1.5H) slope up to a maximum excavation depth of 20 feet. These maximum slope and excavation depths assume no surcharge load (i.e., stockpiles, construction equipment, etc.) at the top of the excavations or groundwater seepage.

If excavations cannot be sloped in accordance with OSHA requirements, a temporary excavation support system will be required. The system should be chosen and installed by the contactor and designed by a Professional Engineer registered in the State of Connecticut.

7.3 TEMPORARY GROUNDWATER CONTROL

We expect that temporary groundwater/stormwater control can be accomplished by means of shallow trenches and sumps and grading the excavation to low points.

8.0 REVIEW OF FINAL DESIGN, PLANS, AND SPECIFICATIONS

When project plans and specifications are available they should be provided to DTE for review of conformance with our geotechnical recommendations. If any changes are made to the proposed fields and structures, the recommendations provided in this report will need to be verified by DTE for applicability.

9.0 CONSTRUCTION QUALITY CONTROL

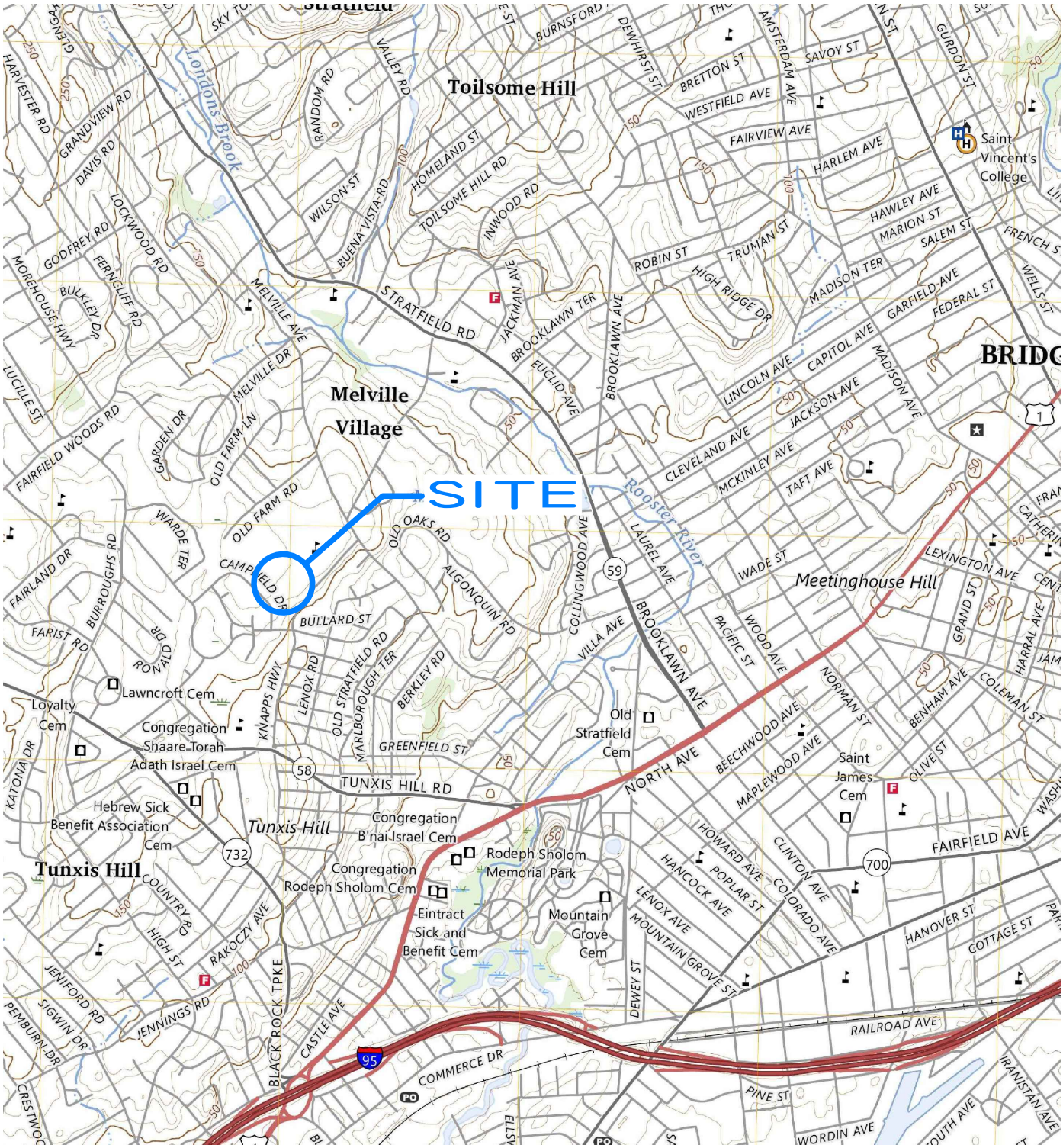
We recommend that DTE make field observations of excavations and foundation preparation to monitor compliance with our recommendations and project specifications. Specifically, we recommend field observation of subgrades, removal of unsuitable materials, and Fill placement and compaction to monitor compliance with project specifications.

10.0 LIMITATIONS

This report is subject to the limitations included in Appendix 3.

APPENDIX 1 -

FIGURES



DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

27 SIEMON COMPANY DRIVE #363W
WATERTOWN, CONNECTICUT 06795



QUADRANGLE LOCATION

AREA PLAN
SYNTHETIC TURF ATHLETIC FIELD
FAIRFIELD WARDE HIGH SCHOOL
FAIRFIELD, CONNECTICUT

REFERENCE:
USGS TOPOGRAPHIC QUADRANGLE: BRIDGEPORT, CT

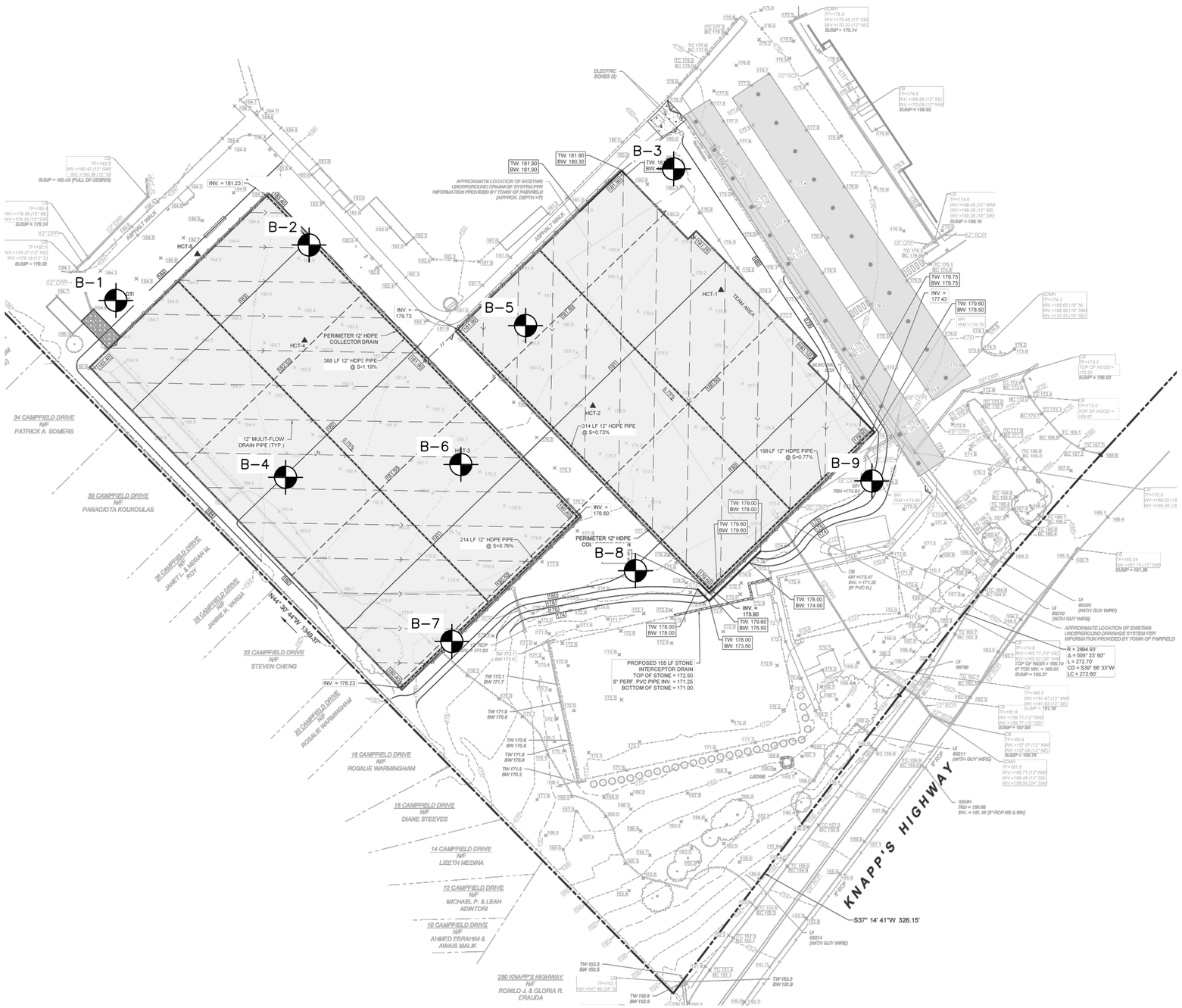
SCALE 1"= 2,000'

2,000' 1,000' 0 2,000'

PROJECT NO.	0425-001.00
DATE:	4/17/2026
FIGURE NO.	1

DRAWN BY: BV

REVIEWED BY: DFL



LEGEND

B-1 — TEST BORING NO. AND LOCATION BY DOWN TO EARTH CONSULTING, LLC

NOTES:

1) BASE MAP DEVELOPED FROM AN ELECTRONIC FILE PREPARED BY LANDTECH CONSULTING, ENTITLED "SITE GRADING & DRAINAGE PLAN", DATED APRIL 21, 2026. ORIGINAL SCALE: 1" = 40'-0".
2) BORINGS WERE COMPLETED BY SITE, LLC. AND OBSERVED BY DOWN TO EARTH CONSULTING, LLC.
3) THE LOCATIONS OF THE EXPLORATIONS WERE DETERMINED BY TAPING AND VISUAL ESTIMATES FROM EXISTING SITE FEATURES. THESE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

DESIGNED BY OTHERS						
DRAWN BY BV						
CHECKED BY BV						
APPROVED BY DFL	NO.	DATE	REVISIONS	DRWN.	CHKD	APPVD

SCALE 1" = 20'
20' 10' 0 20'

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING
27 SIEMON COMPANY DRIVE #363W
WATERTOWN, CONNECTICUT 06795

PROJECT
SYNTHETIC TURF ATHLETIC FIELD
FAIRFIELD WARDE HIGH SCHOOL
FAIRFIELD, CONNECTICUT

DWG. TITLE.
SITE AND BORING LOCATION PLAN

FILE NO. 0425-001.00
SCALE AS NOTED
DATE 4/30/2026
FIGURE NO. 2

APPENDIX 2 -

BORING LOGS

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
PROPOSED SYNTHETIC TURF FIELD
WARDE HIGH SCHOOL
FAIRFIELD, CONNECTICUT

BORING NO. B-1
SHEET 1 of 1
FILE NO. 0425-001.00
CHKD. BY DFL

Boring Co.	Site, LLC	Boring Location	See Boring Location Plan		
Driller	J. DeAngelis	Ground Surface El.	185+/-	Datum	Not Available
Logged By	B.Vargas	Date Start	4/3/2026	Date End	4/3/2026

Hammer Type:	Automatic Hammer
Sampler Size:	1-3/8"-ID Split Spoon Sampler
Type Drill Rig:	CME 55 Track-Mounted Drill Rig
Drilling Method:	2.25-inch Hollow Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
4/3/26	-	8.5	176.5±	End of Drilling

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	21/24	0 to 2	1-2-8-14		Loose, brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Ash	13"+/- Topsoil
2								FILL
3		S-2	24/24	2 to 4	16-15-17-15		Dense, grayish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel	3'±
4								
5								
6		S-3	18/24	5 to 7	8-12-13-20		Medium dense, grayish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel	TILL
7								
8		S-4	4/24	7 to 9	15-18-16-20		Dense, grayish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel	
9								
10							END OF EXPLORATION AT 9 FEET BELOW GROUND SURFACE	
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SPT N-Values	SPT N-Values	Proportions	SYMBOL KEY	
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%	1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%	2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%	3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%	4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
Over 50 - Very Dense	16 to 30 - Very Stiff		5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
	Over 30 - Hard		6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
PROPOSED SYNTHETIC TURF FIELD
WARDE HIGH SCHOOL
FAIRFIELD, CONNECTICUT

BORING NO. B-2
SHEET 1 of 1
FILE NO. 0425-001.00
CHKD. BY DFL

Boring Co.	Site, LLC	Boring Location	See Boring Location Plan		
Driller	J. DeAngelis	Ground Surface El.	183+/-	Datum	Not Available
Logged By	B.Vargas	Date Start	4/3/2026	Date End	4/3/2026

Hammer Type:	Automatic Hammer
Sampler Size:	1-3/8"-ID Split Spoon Sampler
Type Drill Rig:	CME 55 Track-Mounted Drill Rig
Drilling Method:	2.25-inch Hollow Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
4/3/26	-	8.5	174.5±	End of Drilling

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	19/24	0 to 2	1-2-5-11		Loose, grayish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel	13"+/- Topsoil FILL 2'±
2								
3		S-2	20/24	2 to 4	15-22-26-26		Dense, grayish-brown, fine to coarse SAND, some Silt, trace fine to coarse Gravel	TILL
4								
5								
6		S-3	18/24	5 to 7	11-13-20-16		Dense, grayish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel	
7								
8		S-4	4/24	7 to 9	41-28-22-18		Very dense, grayish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel	
9								
10							END OF EXPLORATION AT 9 FEET BELOW GROUND SURFACE	
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SPT N-Values	SPT N-Values	Proportions	SYMBOL KEY	
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%	1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%	2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%	3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%	4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
Over 50 - Very Dense	16 to 30 - Very Stiff		5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
	Over 30 - Hard		6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
PROPOSED SYNTHETIC TURF FIELD
WARDE HIGH SCHOOL
FAIRFIELD, CONNECTICUT

BORING NO. B-3
SHEET 1 of 1
FILE NO. 0425-001.00
CHKD. BY DFL

Boring Co.	Site, LLC	Boring Location	See Boring Location Plan		
Driller	J. DeAngelis	Ground Surface El.	180+/-	Datum	Not Available
Logged By	B.Vargas	Date Start	4/3/2026	Date End	4/3/2026

Hammer Type:	Automatic Hammer
Sampler Size:	1-3/8"-ID Split Spoon Sampler
Type Drill Rig:	CME 55 Track-Mounted Drill Rig
Drilling Method:	2.25-inch Hollow Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
4/3/26	-			Not Encountered

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	19/24	0 to 2	1-3-4-12		Loose, brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, trace (-) Roots	12"+/- Topsoil
2								FILL
3		S-2	14/24	2 to 4	8-7-8-10		Medium dense, dark brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, trace Brick	
4								4'±
5		S-3	8/8	4 to 4.7	17-50/2"		Very dense, gray, WEATHERED ROCK	WEATHERED ROCK
6								
7							END OF EXPLORATION AT 4.7 FEET BELOW GROUND SURFACE	
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SPT N-Values	SPT N-Values	Proportions	SYMBOL KEY	
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%	1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%	2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%	3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%	4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
Over 50 - Very Dense	16 to 30 - Very Stiff		5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
	Over 30 - Hard		6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
PROPOSED SYNTHETIC TURF FIELD
WARDE HIGH SCHOOL
FAIRFIELD, CONNECTICUT

BORING NO. B-4
SHEET 1 of 1
FILE NO. 0425-001.00
CHKD. BY DFL

Boring Co.	Site, LLC	Boring Location	See Boring Location Plan		
Driller	J. DeAngelis	Ground Surface El.	184+/-	Datum	Not Available
Logged By	B.Vargas	Date Start	4/3/2026	Date End	4/3/2026

Hammer Type:	Automatic Hammer
Sampler Size:	1-3/8"-ID Split Spoon Sampler
Type Drill Rig:	CME 55 Track-Mounted Drill Rig
Drilling Method:	2.25-inch Hollow Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
4/3/26	-	8.5	175.5±	End of Drilling

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	17/24	0 to 2	1-2-3-5		Loose, brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Ash	13"+/- Topsoil
2								FILL
3		S-2	18/24	2 to 4	5-10-17-19		Medium dense, grayish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel	3'±
4								
5								
6		S-3	24/24	5 to 7	17-18-13-11		Dense, grayish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel	TILL
7								
8		S-4	4/24	7 to 9	11-11-12-13		Medium dense, grayish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel	
9								
10							END OF EXPLORATION AT 9 FEET BELOW GROUND SURFACE	
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SPT N-Values	SPT N-Values	Proportions	SYMBOL KEY	
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%	1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%	2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%	3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%	4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
Over 50 - Very Dense	16 to 30 - Very Stiff		5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
	Over 30 - Hard		6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
PROPOSED SYNTHETIC TURF FIELD
WARDE HIGH SCHOOL
FAIRFIELD, CONNECTICUT

BORING NO. B-5
SHEET 1 of 1
FILE NO. 0425-001.00
CHKD. BY DFL

Boring Co.	Site, LLC	Boring Location	See Boring Location Plan		
Driller	J. DeAngelis	Ground Surface El.	181+/-	Datum	Not Available
Logged By	B.Vargas	Date Start	4/3/2026	Date End	4/3/2026

Hammer Type:	Automatic Hammer
Sampler Size:	1-3/8"-ID Split Spoon Sampler
Type Drill Rig:	CME 55 Track-Mounted Drill Rig
Drilling Method:	2.25-inch Hollow Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
4/3/26	-	6.5	174.5	End of Drilling

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	16/24	0 to 2	1-3-8-13		Loose, brown, fine to coarse SAND, some Silt, trace fine to coarse Gravel, trace (-) Roots	9"+/- Topsoil FILL 2'±
2								
3		S-2	6/24	2 to 4	24-19-25-20		Dense, grayish-brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt	
4								
5								TILL
6		S-3	18/24	5 to 7	9-18-14-14		Dense, grayish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel	
7								7'±
8		S-4	13/13	7 to 8.1	20-40-50/1"		Very dense, gray, WEATHERED ROCK	WEATHERED ROCK
9								
10							END OF EXPLORATION AT 8.1 FEET BELOW GROUND SURFACE	
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SPT N-Values	SPT N-Values	Proportions	SYMBOL KEY	
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%	1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%	2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%	3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%	4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
Over 50 - Very Dense	16 to 30 - Very Stiff		5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
	Over 30 - Hard		6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
PROPOSED SYNTHETIC TURF FIELD
WARDE HIGH SCHOOL
FAIRFIELD, CONNECTICUT

BORING NO. B-6
SHEET 1 of 1
FILE NO. 0425-001.00
CHKD. BY DFL

Boring Co.	Site, LLC	Boring Location	See Boring Location Plan		
Driller	J. DeAngelis	Ground Surface El.	180+/-	Datum	Not Available
Logged By	B.Vargas	Date Start	4/3/2026	Date End	4/3/2026

Hammer Type:	Automatic Hammer
Sampler Size:	1-3/8"-ID Split Spoon Sampler
Type Drill Rig:	CME 55 Track-Mounted Drill Rig
Drilling Method:	2.25-inch Hollow Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
4/3/26	-	4.5	175.5±	End of Drilling

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	16/24	0 to 2	1-2-5-9		Loose, brown, fine to coarse SAND and SILT, trace fine to coarse Gravel, trace (-) Roots	12"+/- Topsoil FILL
2								2'±
3		S-2	19/24	2 to 4	7-7-10-15		Medium dense, grayish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, with Weathered Rock in tip	TILL
4								4'±
5								WEATHERED ROCK
6							END OF EXPLORATION AT 4.8 FEET BELOW GROUND SURFACE	
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SPT N-Values	SPT N-Values	Proportions	SYMBOL KEY	
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%	1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%	2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%	3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%	4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
Over 50 - Very Dense	16 to 30 - Very Stiff		5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
	Over 30 - Hard		6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations may occur due to other factors.
3) Auger refusal on possible bedrock or boulder at about 4.8 feet below ground surface

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
PROPOSED SYNTHETIC TURF FIELD
WARDE HIGH SCHOOL
FAIRFIELD, CONNECTICUT

BORING NO. B-7
SHEET 1 of 1
FILE NO. 0425-001.00
CHKD. BY DFL

Boring Co.	Site, LLC	Boring Location	See Boring Location Plan		
Driller	J. DeAngelis	Ground Surface El.	178+/-	Datum	Not Available
Logged By	B.Vargas	Date Start	4/3/2026	Date End	4/3/2026

Hammer Type:	Automatic Hammer
Sampler Size:	1-3/8"-ID Split Spoon Sampler
Type Drill Rig:	CME 55 Track-Mounted Drill Rig
Drilling Method:	2.25-inch Hollow Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
4/3/26	-	4	174±	End of Drilling

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	16/24	0 to 2	1-2-5-6		Loose, dark brown, fine to coarse SAND, some Silt, trace fine to coarse Gravel, trace Roots	12"+/- Topsoil FILL
2								2'±
3		S-2	19/24	2 to 4	7-7-15-19		Medium dense, grayish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel	TILL
4								
5								5'±
6		S-3	18/24	5 to 7	10-25-26-27		Very dense, gray, WEATHERED ROCK	WEATHERED ROCK
7								
8		S-4	16/16	7 to 8.3	46-40-50/4"		Very dense, gray, WEATHERED ROCK	
9								
10							END OF EXPLORATION AT 8.3 FEET BELOW GROUND SURFACE	
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SPT N-Values	SPT N-Values	Proportions	SYMBOL KEY	
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%	1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%	2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%	3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%	4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
Over 50 - Very Dense	16 to 30 - Very Stiff		5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
	Over 30 - Hard		6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

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DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
PROPOSED SYNTHETIC TURF FIELD
WARDE HIGH SCHOOL
FAIRFIELD, CONNECTICUT

BORING NO. B-8
SHEET 1 of 1
FILE NO. 0425-001.00
CHKD. BY DFL

Boring Co.	Site, LLC	Boring Location	See Boring Location Plan		
Driller	J. DeAngelis	Ground Surface El.	176+/-	Datum	Not Available
Logged By	B.Vargas	Date Start	4/3/2026	Date End	4/3/2026

Hammer Type:	Automatic Hammer
Sampler Size:	1-3/8"-ID Split Spoon Sampler
Type Drill Rig:	CME 55 Track-Mounted Drill Rig
Drilling Method:	2.25-inch Hollow Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
4/3/26	-			Not Encountered

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	17/24	0 to 2	1-3-4-6		Loose, reddish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, trace (-) Roots	12"+/- Topsoil FILL
2								2'±
3		S-2	18/24	2 to 4	6-7-7-32		Medium dense, grayish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, with weathered Rock in tip	TILL
4								4'±
5								WEATHERED ROCK
6							END OF EXPLORATION AT 4.5 FEET BELOW GROUND SURFACE	
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SPT N-Values	SPT N-Values	Proportions	SYMBOL KEY	
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%	1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%	2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%	3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%	4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
Over 50 - Very Dense	16 to 30 - Very Stiff		5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
	Over 30 - Hard		6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
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3) Auger refusal on possible bedrock or boulder at about 4.5 ft below ground surface

DOWN TO EARTH CONSULTING, LLC
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERING

PROJECT
PROPOSED SYNTHETIC TURF FIELD
WARDE HIGH SCHOOL
FAIRFIELD, CONNECTICUT

BORING NO. B-9
SHEET 1 of 1
FILE NO. 0425-001.00
CHKD. BY DFL

Boring Co.	Site, LLC	Boring Location	See Boring Location Plan		
Driller	J. DeAngelis	Ground Surface El.	174+/-	Datum	Not Available
Logged By	B.Vargas	Date Start	4/3/2026	Date End	4/3/2026

Hammer Type:	Automatic Hammer
Sampler Size:	1-3/8"-ID Split Spoon Sampler
Type Drill Rig:	CME 55 Track-Mounted Drill Rig
Drilling Method:	2.25-inch Hollow Stem Augers

Groundwater Readings (from ground surface)

Date	Time	Depth (ft)	Elev.	Stabilization Time
4/3/26	-			Not Encountered

DEPTH	Casing Blows (ft)	SAMPLE INFORMATION Type & No.	REC/PEN (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	Core Time (min./ft)	SAMPLE DESCRIPTION	STRATA
1		S-1	17/24	0 to 2	1-2-4-11		Loose, dark brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, trace (-) Roots	12"+/- Topsoil
2								FILL
3		S-2	18/24	2 to 4	10-10-11-12		Medium dense, dark brown/gray, fine to coarse SAND, some Silt, little fine to coarse Gravel	3'±
4								
5		S-3	24/24	4 to 6	13-7-16-20		Medium dense, grayish-brown, fine to coarse SAND, some Silt, little fine to coarse Gravel	TILL
6								
7							END OF EXPLORATION AT 6 FEET BELOW GROUND SURFACE	
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SPT N-Values	SPT N-Values	Proportions	SYMBOL KEY	
0 to 4 - Very Loose	0 to 2 - Very Soft	Trace = 0 to 10%	1. S denotes split-barrel sampler.	7. WH denotes weight of hammer
5 to 10 - Loose	3 to 4 - Soft	Little = 10 to 20%	2. ST denotes 3-inch O.D. undisturbed sample.	8. WR denotes weight of rods
11 to 30 - Medium Dense	5 to 8 - Medium Stiff	Some = 20 to 35%	3. UO denotes 3-inch Osterberg undisturbed sample.	9. PP denotes Pocket Penetrometer.
31 to 50 - Dense	9 to 15 - Stiff	And = 35 to 50%	4. PEN denotes penetration length of sampler.	10. FVST denotes field vane shear test.
Over 50 - Very Dense	16 to 30 - Very Stiff		5. REC denotes recovered length of sample.	11. RQD denotes Rock Quality Designation.
	Over 30 - Hard		6. SPT denotes Standard Penetration Test.	12. C denotes core run number.

FIELD NOTES: 1) Stratification lines represent approximate boundaries between soil types, transitions may be gradual.
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APPENDIX 3 -

LABORATORY TEST RESULTS

Thielsch DIVISION OF THE RISE GROUP	195 Frances Avenue Cranston RI, 02910 Phone: (401)-467-6454 Fax: (401)-467-2398 cts.thielsch.com *Let's Build a Solid Foundation*	Client Information: **Down to Earth, LLC** **Naugatuck, CT** **(203) 683-4155** Project Contact: Dan LaMesa Collected By: DTE	Project Information: **Warde High School Athletic Field** **Fairfield, CT** Project Number: 0425-001.00 Summary Page: 1 of 1 Report Date: 4/21/2026

LABORATORY TESTING DATA SHEET, Report No.: 26D157

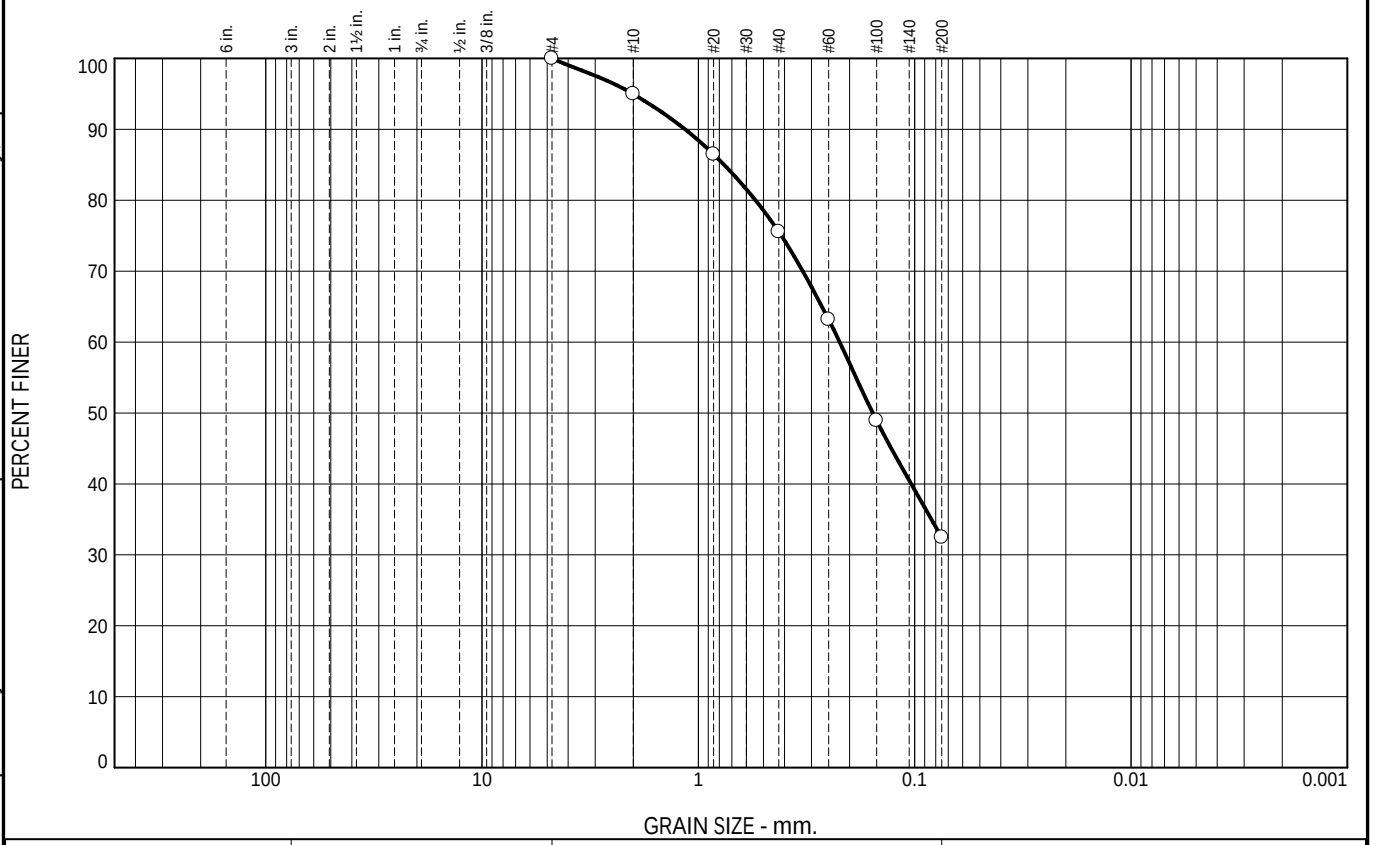
Boring No.	Sample ID	Depth	Laboratory No.	Identification Tests									Compaction / CBR / Permeability Tests								Laboratory Log and Soil Description
				As Rcvd Moisture Content %	LL %	PL %	OD LL	Gravel %	Sand %	Fines %	Org. %	pH	g_d MAX (pcf) W_{opt} (%)	g_d MAX (pcf) W_{opt} (%) (Corr.)	Dry unit wt. (pcf)	Test Moisture Content %	Target Test Setup as % of Proctor	CBR @ 0.1"	CBR @ 0.2"	Permeability cm/sec	
				D2216	D4318			D6913			D2974	D4792	D698/D1557		D1883					D2434/D5084	
B-2	S-2	2-4'	26-S-1215					0.0	67.6	32.4											Brown silty sand
B-6	S-2	0-2'	26-S-1216					5.8	56.0	38.2											Brown silty sand
B-9	S-1	0-2'	26-S-1217					16.4	49.5	34.1											Brown silty sand with gravel

Date Received: **4/14/2026** Reviewed By: Date Reviewed: **4/21/2026**

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Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	5.0	19.4	43.2	32.4	

SIEVE SIZE OR DIAMETER	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	95.0		
#20	86.5		
#40	75.6		
#60	63.2		
#100	48.9		
#200	32.4		

* (no specification provided)

Soil Description

Brown silty sand

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 1.1517 D_{85}= 0.7603 D_{60}= 0.2222
D_{50}= 0.1563 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Sample visually classified as non-plastic. Sample could not be rolled to 1/4".

Source of Sample: Boring Depth: 2-4'
Sample Number: B-2, S-2

Date: 04-17-26

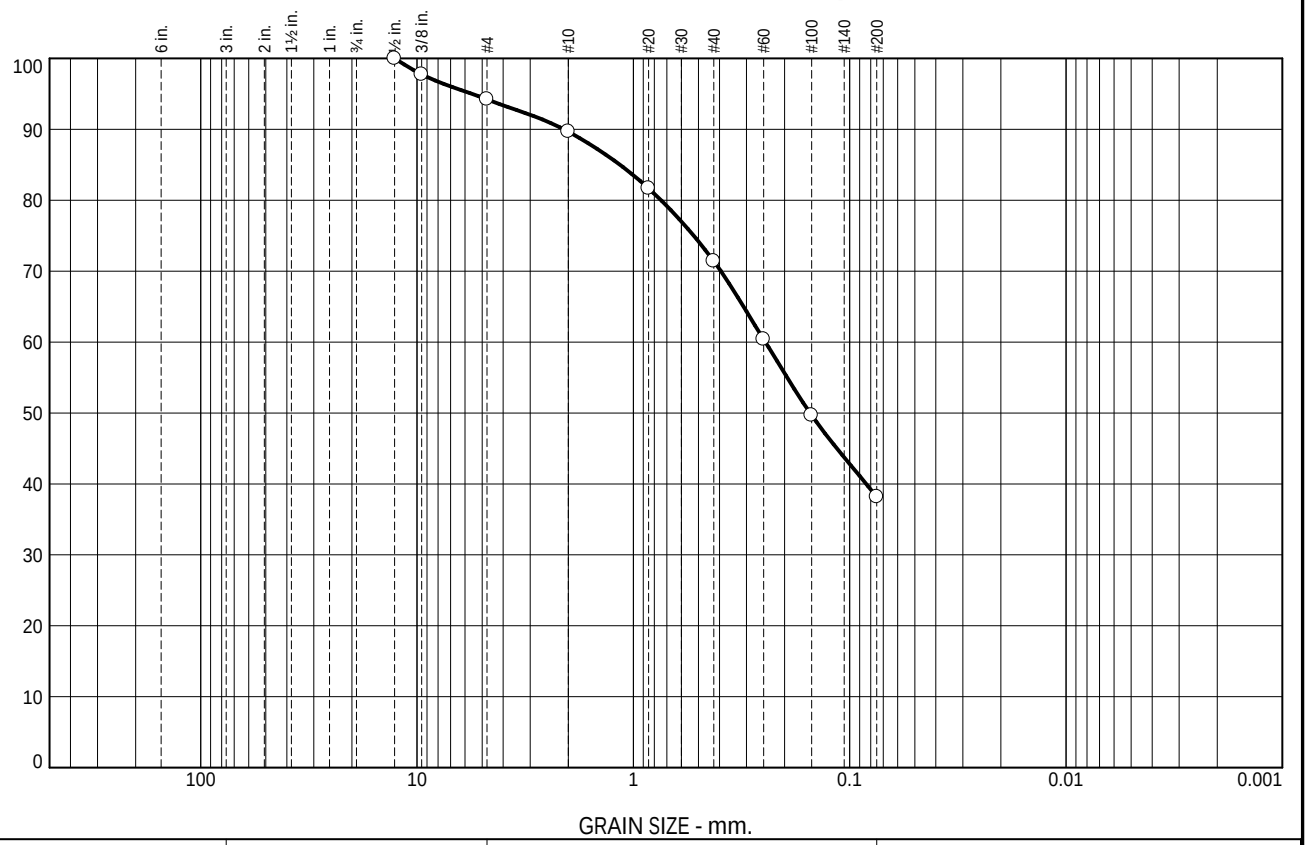
Thielsch Engineering Inc.
Cranston, RI

Client: Down to Earth, LLC
Project: Warde High School Athletic Field
Fairfield, CT
Project No: 0425-001.00 Figure S-1215

Tested By: RKO/SF Checked By: Andrew Vanasse

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Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	5.8	4.5	18.3	33.2	38.2	

SIEVE SIZE OR DIAMETER	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2"	100.0		
3/8"	97.7		
#4	94.2		
#10	89.7		
#20	81.7		
#40	71.4		
#60	60.4		
#100	49.7		
#200	38.2		

* (no specification provided)

Soil Description

Brown silty sand

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 2.0934 D_{85}= 1.1523 D_{60}= 0.2454
D_{50}= 0.1525 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-4(0)

Remarks

Sample visually classified as non-plastic. Sample could not be rolled to 1/4".

Source of Sample: Boring Depth: 0-2'
Sample Number: B-6, S-2

Date: 04-17-26

Thielsch Engineering Inc.
Cranston, RI

Client: Down to Earth, LLC
Project: Warde High School Athletic Field
Fairfield, CT
Project No: 0425-001.00 Figure S-1216

Tested By: RKO/SF Checked By: Andrew Vanasse

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Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	16.4	3.4	15.8	30.3	34.1	

SIEVE SIZE OR DIAMETER	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	86.9		
3/8"	85.8		
#4	83.6		
#10	80.2		
#20	73.2		
#40	64.4		
#60	54.7		
#100	45.5		
#200	34.1		

* (no specification provided)

Soil Description

Brown silty sand with gravel

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 14.5260 D_{85}= 7.0921 D_{60}= 0.3308
D_{50}= 0.1931 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Sample visually classified as non-plastic. Sample could not be rolled to 1/4".

Source of Sample: Boring Depth: 0-2'
Sample Number: B-9, S-1

Date: 04-17-26

Thielsch Engineering Inc.

Cranston, RI

Client: Down to Earth, LLC
Project: Warde High School Athletic Field
Fairfield, CT
Project No: 0425-001.00 Figure S-1217

Tested By: RB/SF Checked By: Andrew Vanasse

APPENDIX 4 -

LIMITATIONS

LIMITATIONS

Explorations

1. The analyses and recommendations submitted in this report are based in part upon the data obtained from subsurface explorations. The nature and extent of variations between these explorations may not become evident until construction. If variations then appear evident, it will be necessary to reevaluate the recommendations of this report.

2. The generalized soil profile described in the text is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized and have been developed by interpretations of widely spaced explorations and samples; actual soil transitions are probably more erratic. For specific information, refer to the boring logs.

3. Water level readings have been made in the drill holes at times and under conditions stated on the boring logs. These data have been reviewed and interpretations have been made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, and other factors occurring since the time measurements were made.

Review

4. In the event that any changes in the nature, design or location of the proposed field and structures are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing by DTE. It is recommended that this firm be provided the opportunity for a general review of final design and specifications in order that earthwork and foundation recommendations may be properly interpreted and implemented in the design and specifications.

Construction

5. It is recommended that this firm be retained to provide soil engineering services during construction of the earthworks and foundation phases of the work. This is to observe compliance with the design concepts, specifications, and recommendations and to allow design changes in the event that subsurface conditions differ from those anticipated prior to start of construction.

Use of Report

6. This report has been prepared for the exclusive use of Land-Tech Consultants, Inc. and their design team for specific application to the project noted in this geotechnical report in accordance with generally accepted soil and foundation engineering practices. No other warranty, express or implied, is made.

7. This soil and foundation engineering report has been prepared for this project by DTE. This report is for design purposes only and is not sufficient to prepare an accurate bid. Contractors wishing a copy of the report may secure it with the understanding that its scope is limited to design considerations only.

8. This report may contain comparative cost estimates for the purpose of evaluating alternative foundation schemes. These estimates may also involve approximate quantity evaluations. It should be noted that quantity estimates may not be accurate enough for construction bids. Since DTE has no control over labor and materials cost and design, the estimates of construction costs have been made on the basis of experience. DTE does not guarantee the accuracy of cost estimates as compared to contractor's bids for construction costs.