Geotechnical Engineering Report

Proposed Student Housing
1415 Washington Avenue
Albany, New York
September 9, 2020
Terracon Project No. JB205071

Prepared for:
Scenic RE, LLC
New York, NY

Prepared by:
Terracon Consultants-NY, Inc
Dba Dente Group
Albany, New York

September 9, 2020

Scenic RE, LLC
157 Columbus Ave. – Suite 515
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Attn: Mr. Evan Podob
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Re: Geotechnical Engineering Report
Proposed Student Housing
1415 Washington Avenue
Albany, New York
Terracon Project No. JB205071

Dear Mr. Podob:

We have completed the Geotechnical Engineering services for the referenced project. This study was performed in general accordance with Dente Group proposal no. PJB205071 Rev. 3 (last revised July 29, 2020) which was authorized on July 30, 2020. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations, floor slabs and pavements for the proposed project.

We appreciate the opportunity to be of service to you. If you have any questions concerning this report or if we may be of further service, please contact us at your convenience.

Sincerely,
Terracon Consultants-NY, Inc.

John S. Hutchison, P.E.
Senior Engineer

Joseph Robichaud, Jr., P.E.
Sr. Associate / Office Manager

REPORT TOPICS

Note: This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the ***GeoReport*** logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

Note: Refer to each individual Attachment for a listing of contents

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INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed student housing development at 1415 Washington Avenue in Albany, New York. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Site preparation and earthwork
- Pavement design and construction
- Foundation design and construction
- Floor slab design and construction
- Seismic site classification per NYSBC
- Frost considerations

The geotechnical engineering scope of services for this project included the advancement of 17 conventional test borings to depths ranging from 8.0 to 77.0 feet below existing site grades. Of these, 11 of the borings were performed within the proposed building footprint (B-series), while the remaining six were performed at infiltration test locations (I-series, these located both in proposed paved areas and the proposed building footprint). The scope of services also included a limited laboratory testing program, and preparation of this summary report.

Maps indicating the site and test boring locations are included as the attached **Site Location** and **Exploration Plans**, respectively.

SITE CONDITIONS

Existing conditions at the site are summarized in the following table:

Item	Description
Parcel Information	The project is located at 1415 Washington Ave. in Albany, NY. Approximate geographic coordinates: 42.6896° N, 73.8184° W. The parcel is 3.24 acres in size.
Existing Improvements	Three-story hotel building with associated paved parking and stormwater management features. Also, an outdoor in-ground swimming pool.
Current Ground Cover	Asphalt pavement and landscaped grounds, wooded at west end.

Item	Description
Existing Topography	The site is situated between Washington Ave. and the Interstate 90 corridor. Grades about the existing building are relatively flat, at an elevation of approx. 248 feet. Elsewhere, grades are generally highest along the Washington Avenue frontage (upwards of roughly elevation 252 feet), and lowest at the west end of the site (as low as elevation 234 feet). A concrete retaining wall is located along the north property line, between the existing building and I-90, with grades behind the wall (building side) at approx. 248 feet and in front of the wall (I-90 side) as low as about 238 feet. A stormwater basin off the west edge of the existing parking area has an invert elevation of about 240 feet.
Geology	Review of geologic mapping indicates that units of lacustrine silt and clay, lacustrine sand, and dune sand are present in the site locale. The geologic mapping also indicates that bedrock underlying the project area consists of Normanskill shale.

Review of available historical aerial imaging and topographic mapping indicates the existing hotel building dates from circa 2001, and that pre-development ground surface elevations at the site were in the range of roughly 240 to 250 feet. No development pre-dating the exiting building is evident on maps dating back to 1893.

PROJECT DESCRIPTION

Our understanding of the project is summarized as follows:

Item	Description
Information Provided	■ Topographic survey and proposed site plan by Hershberg & Hershberg, no. C1 dated 1/24/2020 ■ Schematic floor plans and sections by SA+R dated 7/8/2020 ■ Density Study w/ floor plans and renderings by SA+R dated 1/2020
General Description	Project entails demolition of the existing building, and construction of a new student housing building.
Proposed Structure(s)	Plans call for a new building with a total of six levels, comprised of two main wings with a connecting structure. The long wing will be situated along the south property line, with parking on its lower two levels and residential space on its upper four levels. The north/east wing will feature parking on its lower level and residential space on its upper five levels. A maintenance area will be located between the two building wings on the lowest (partial basement) parking level, with an open plaza between the two wings above.
Building Construction	We understand the lowest one or two levels dedicated for parking will be of concrete podium style construction, and the upper residential levels will be of wood construction. We further understand there is a preference to support the building on conventional shallow spread foundations if feasible.

Item	Description
Maximum Loads	Anticipated foundation loads were not available at the time of this report. For the purposes of our evaluation, and on the basis of the proposed construction, we have assumed that individual column loads will not exceed 600 kips and wall loads will not exceed 18 kips/ft. We have also assumed that floor loads will not exceed 150 pounds per square foot.
Finished Floor Elevation	- Lowest parking and maintenance level (Level B1) at elev. 246'. Exterior grade on north side of building also at this level - Upper parking on long wing, outdoor plaza level, and lowest residential floor on north/east wing (Level 1) at elev. 256'
Grading/Slopes	Proposed grading plans were not provided. It appears that cuts upwards of about 5 feet and new fills upwards of about 10 feet will be required for construction based on the building floor levels.
Below-Grade Structures	Lowest parking level and maintenance area below grade in the south and central portions of the building. Proposed stormwater management details not provided, but subsurface infiltration galleries may be included.
Free-Standing Retaining Walls	We understand the existing retaining wall along the north property margin is anticipated to remain in place and be extended to the west to accommodate new filled grades in that direction.
Pavements	Plans call for new porous asphalt and/or concrete pavement with subsurface infiltration in the exterior parking areas. Conventional asphalt or concrete pavements are planned in the interior (within building footprint) parking areas. We assume the pavements will be subject to use primarily by automobiles with occasional light delivery trucks.

If any of the above information is incorrect, please let us know so we can review the conclusions and recommendations provided in this report for applicability to the actual design and update the report as appropriate.

As the design of the project progresses and site grading plans and building loads are fully developed, we should be retained to assess this site-specific information relative to the recommendations contained herein.

SUBSURFACE CHARACTERIZATION

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration results, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical analysis and evaluation of site preparation and foundation options. Conditions encountered at each exploration point are indicated on the individual subsurface logs. The logs can be found in the **Exploration Results** and the GeoModel in the **Figures** sections of this report.

Subsurface Profile

The following model layers were identified within the subsurface profile. For a more detailed view of the model layers with depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	Fill	Typically sandy soils with lesser amounts of foreign matter (e.g., wood, roots, gravel).
2	Sand	Native fine sand, generally with relatively little silt. Occasional silty layers which become more prevalent with depth.
3	Silt & Clay	Interlayered silt and clay deposits.

Topsoil between roughly 0.6 and 1.2 feet thick was present at the ground surface at four of the test boring locations, while asphalt pavement between approximately 0.2 and 0.4 feet thick was present at the ground surface at the remaining borehole locations. The pavement was underlain by an aggregate base course, typically between about 0.4 and 0.9 feet thick.

Beneath whatever surface materials were present, fill soils were identified at about half the locations investigated (9 of 17), extending to depths of about 3 to 11 feet below existing grade and typically deepest on the north end of the site between the existing building and retaining wall. The existing fills were found to consist generally of silty sands, along with relatively minor amounts of foreign matter such as wood, roots and gravel. The relative density of the fill as indicated by measured SPT N-values was typically loose to medium dense.

Native soils beneath the existing surface and/or fill materials were generally composed of fine sands with relatively minor amounts of silt. Silt layers were occasionally encountered within this deposit and the relative silt content in these granular soils tended to increase overall with depth. Silt and clay deposits were prevalent below the depth of about 65 feet. Where essentially granular, the native soils exhibited a loose to medium dense relative density, and where essentially cohesive, a medium stiff to very stiff consistency.

Consolidation testing conducted upon samples collected at nearby sites together with our local experience suggests the deeper cohesive soils are preconsolidated, i.e., they have experienced loads greater than the existing overburden loads in their geologic past and as a result have consolidated correspondingly. Deep exploration at nearby sites indicates these cohesive deposits extend to depths between about 100 and 115 feet where firm glacial tills composed of silt, clay, sand and gravel are encountered. The till is expected to extend to bedrock at depths in the 130 to 140-foot range.

Bedrock was not reached within the depths explored for this study.

Groundwater Conditions

Groundwater measurements were made as the boreholes were advanced and are reported on the attached subsurface logs. Based on these measurements and the recovery of wet soil samples, it appears that groundwater was about 10 to 25 feet below existing grade at the time of investigation, this equating to a groundwater table elevation in the range of about 225 to 230 feet.

While not disclosed through this study, water may at times become locally perched or trapped at shallower depths, particularly where fill is present. Groundwater conditions, and the extent of any perched water, should be expected to vary with seasonal fluctuations in precipitation and runoff. Additionally, grade adjustments on and around the site may affect the water table, as may drainage improvements on the site and surrounding properties.

INFILTRATION TESTING

Infiltration testing was performed adjacent to test borings I-1 through I-6. The testing was conducted in general accord with the guidelines in Appendix D of the NYS Stormwater Management Design Manual. Results of this testing are presented for your use in the **Exploration Results** attachment and summarized in tabular form below.

Location	Test Depth (ft)	Soil Description	Infiltration Rate (in/hr)
I-1	4.0	Dark brown silty sand (moist)	> 24
I-2	4.0	Dark brown silty sand (moist)	13.0
I-3	4.0	Brown poorly graded sand (moist)	9.0
I-4	4.0	Black silty sand w/ trace organics (moist)	14.0
I-5	4.0	Orangish brown poorly graded sand (moist)	11.0
I-6	4.0	Tannish brown poorly graded sand (moist)	8.5

Note: The infiltration rates indicated above represent the result of the last trial at each test location.

GEOTECHNICAL OVERVIEW

Provided that actual foundation loads do not exceed the limits assumed herein, the project site is considered generally suitable for support of the proposed student housing building using conventional shallow spread foundation and slabs-on-grade, although the presence of existing fill soils will impact on planning for design and construction. Based on the conditions disclosed by our investigation, we offer the following general conclusions.

- New foundations and floor slabs may be supported on undisturbed native soils, or on imported structural fill which is placed over the native soils after all existing fills and remains of former structures are removed, along with any otherwise unsuitable materials

which may be found. Existing fill soils should not be relied upon for new foundation support.

- If existing fills throughout the site are similar in composition to those found in the test borings, consideration may be given to support of new pavements over the existing fills provided the subgrade surfaces are proof-rolled and stabilized as may be required. It should be understood the proof-rolling will lessen, but not eliminate, the possibility that settlement of pavements constructed over the existing fills may occur over time and require periodic maintenance.

- The soils excavated onsite should generally be suitable for reuse as new fill and backfill once cleansed of any oversize particles, unsuitable debris or organics, subject to the approval of the Geotechnical Engineer and based upon the conditions encountered at the time of construction.

- In general, groundwater is expected to be below foundation excavation depths and should not be a significant factor in planning for design and construction of the building. If perched water is encountered during construction, it is expected to be limited in volume and standard sump and pump methods should be sufficient for its removal. Dewatering is a means and methods consideration for the contractor.

It should be understood that if actual foundation loads exceed those assumed herein, shallow spread foundations may not be suitable for support of the structure; in this case the conclusions outlined in this report should be reevaluated and an alternative foundation system may be necessary.

The following sections of this report provide more detailed recommendations to assist in planning for the geotechnical aspects of the project. We should be provided with the opportunity to review plans and specifications prior to their release for bidding to confirm that our recommendations were properly understood and implemented, and to allow us to refine our recommendations, if warranted, based upon the final design. The **General Comments** section provides an understanding of the report limitations.

SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC).

Seismic Site Classification

In our estimation, the seismic Site Class is D. This classification is made based upon the results of standard penetration testing at the site and shear wave velocity testing completed in similar subsurface profiles in the general project area. Additional deeper borings or geophysical testing may be performed to confirm the conditions below the current boring depth, if desired.

Liquefaction Potential

We have evaluated the liquefaction potential of the granular soils encountered beneath the water table at this site. In our estimation, the soils at this site possess a Factor of Safety against liquefaction in excess of 1.1 and, as such, do not present an excessive risk of liquefaction. It should be understood, however, that the design seismic event would cause the site's sand soils to consolidate during the ground shaking and the ground surface at the site to settle. These volumetric strains could cause buildings supported upon the grades to settle about a half inch during the design seismic event.

EARTHWORK

Earthwork is anticipated to include demolition of the existing building, clearing and grubbing, removal of existing pavements, stabilization of subgrade surfaces as necessary, foundation excavation and associated site fill and backfill. The following sections provide recommendations for use in the preparation of specifications for the work. Recommendations include critical quality criteria, as necessary, to render the site in the state considered suitable in our geotechnical engineering evaluation for foundations, floor slabs and pavements.

If the owner elects to leave the existing fills in place beneath new pavements, proof-rolling and stabilization of the subgrades as described below will lessen but cannot eliminate the risk of settlement. If this risk cannot be accepted, the existing fills should be removed and replaced in their entirety as part of the site preparation.

Construction site safety is the sole responsibility of the contractor, who controls the means, methods, and sequencing of construction operations. Under no circumstances shall the information provided herein be interpreted to mean Terracon is assuming responsibility for construction site safety or the contractor's activities; such responsibility is neither implied nor shall it be inferred.

Site Preparation

Site preparation should begin with demolition of the existing building, along with stripping of existing topsoil, surficial organic matter and pavements as applicable from the proposed building and pavement areas. Any existing fills, old building foundations, slabs or below grade structures

should be removed in their entirety from beneath the proposed building area, extending at least five feet beyond its perimeter. Outside the proposed building area, any foundation remains or old structures should be removed to a depth of at least three feet below new pavement surfaces.

Prior to placing fills to raise site grades and/or after cuts are made to the plan subgrade elevations, the subgrades should be proof-rolled/proof-compacted using a steel drum roller with a static weight of at least 10 tons. The roller should operate in its vibratory mode, unless requested otherwise by the Geotechnical Engineer observing the work, and travel at a speed not exceeding three feet per second (two miles per hour). The roller should complete at least 8 passes over all subgrade surfaces in opposing directions. The method of proof-rolling may be modified by the Geotechnical Engineer based upon the conditions revealed at the time of construction.

Soft areas identified by the proof-rolling should be investigated to determine the cause and stabilized accordingly. These investigations may include the excavation of test pits. If existing fills are found and determined by to be unsuitable by the Geotechnical Engineer, they should be removed and replaced as deemed necessary.

Fill Material Types

Structural Fill should be used as fill/backfill within the proposed building and pavement areas. The fill should consist of imported sand and gravel which meets the limits of gradation given below. Any imported materials should be free of recycled concrete, asphalt, bricks, glass, and pyritic shale rock.

IMPORTED STRUCTURAL FILL

Sieve Size	Percent Finer
3”	100
¼”	30 to 75
No. 40	5 to 40
No. 200	0 to 10

As previously noted, the reuse of excavated native soils and/or existing fill materials may be considered if approved by the Geotechnical Engineer and pending the conditions encountered at the time of construction. Any reuse of the existing fill would require that all organics, oversize particles and unsuitable foreign matter found therein be separated and wasted off-site.

Fill Compaction Requirements

Fills beneath the building pad and pavements should be placed in uniform loose layers no more than about one-foot thick where heavy vibratory compaction equipment is used. Smaller lifts should be used where hand operated equipment is required for compaction. Each lift should be compacted to no less than 95 percent of its maximum dry density as determined by the Modified

Proctor Compaction Test, ASTM D1557. In landscape areas, the compaction requirement may be relaxed to 90 percent of maximum dry density.

Grading and Drainage

All grades must provide effective drainage away from the building during and after construction and should be maintained throughout the life of the structure. Water retained next to buildings can result in soil movements greater than those indicated in this report, which may in turn result in unsatisfactory differential floor slab and/or foundation displacements, cracked slabs and walls, or roof leaks.

Temporary Excavation Slopes

Excavations must be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P and its appendices, along with any state and local codes, as applicable. The contractor should be aware that slope height, slope inclination, and excavation depth should in no instance exceed OSHA regulations. Flatter slopes than those stipulated by the regulations or temporary shoring may be required depending upon the soil conditions encountered and other external factors. OSHA regulations are strictly enforced and if they are not followed, the owner, contractor, and/or earthwork and utility subcontractor could be liable and subject to substantial penalties.

Construction Observation and Testing

The earthwork efforts should be monitored under the direction of the Geotechnical Engineer. Monitoring should include documentation of adequate removal of topsoil and unsuitable fills, proof-rolling, and mitigation of any areas identified as needing improvement through proof-rolling. Each lift of new compacted fill should be tested, evaluated, and reworked, as necessary, until approved by the Geotechnical Engineer prior to placement of additional lifts.

Foundation bearing grades and subgrades for floor slabs, pavements and concrete pads should be evaluated under the direction of the Geotechnical Engineer. If unanticipated conditions are encountered, the Geotechnical Engineer should prescribe mitigation options.

It should be understood that subsurface conditions will be more fully known when the site is excavated. The continuation of the Geotechnical Engineer into the construction phase of the project will allow for validation of the subsurface conditions assumed to exist for this study and in the development of the design recommendations in this report, along with assessing any variations, providing interim recommendations as necessary and reviewing associated design changes.

SHALLOW FOUNDATIONS

Design Parameters

Provided that actual design foundation loads do not exceed those estimated herein (maximum 600 kips for columns and 18 kips/ft for walls), the following parameters may be assumed for the design of shallow spread foundations. If actual foundation loads exceed this, the conclusions outlined in this report should be reevaluated and an alternative foundation system may be necessary.

The building should be constructed upon a subgrade which has been grubbed and cleared of any existing fills as described in the **Earthwork** section, with the building and pavement subgrades proof-rolled/proof-compacted as described therein. Any unstable areas should be investigated and the cause corrected. Structural fill should be used to level any depressions in the subgrade or for any grade increases that may be necessary.

Spread foundations which bear upon the proof-compacted native sand or structural fill soils used to increase grades may be proportioned using a maximum net allowable bearing pressure of 3,000 pounds per square foot (psf). Where local over-excavation is required beneath foundations to remove existing fill or otherwise improve bearing conditions, the excavation should extend horizontally beyond each side of the foundation a distance equal to at least one-half the depth of undercut below the final bearing grade elevation. Replacement material should meet the specification and compaction guidelines for structural fill as outlined in this report.

The foundations may alternatively be proportioned using an allowable bearing pressure of 4,000 psf when supported upon aggregate rock pads. The aggregate pads must extend at least two (2) feet beneath the foundations and two (2) feet beyond the foundation edges in each direction. The pads should be prepared by over-excavating the native site soils, followed by placement of a woven separation/stabilization geotextile (meeting NYSDOT standard specifications section 737-01 for separation or stabilization geotextile) over the exposed grades and a 2-foot-thick layer of clean crushed stone meeting ASTM C33 Blend 57 gradation. The aggregate should be thoroughly consolidated in lifts not exceeding 12 inches using a vibratory plate tamper or drum equipment suited to the actual conditions encountered and to the satisfaction of the Geotechnical Engineer. The geotextile must completely envelop the aggregate surfaces - bottom, sides and top.

Continuous foundations should have a minimum width of two feet, and isolated foundations should have a minimum width of three feet. All exterior foundations should be seated at least four feet below final adjacent grades for frost protection. Interior foundations (beneath heated spaces) should bear at a nominal depth of two feet or greater below finished floor to develop adequate bearing capacity.

A standard perimeter foundation drain (as described in the **Retaining Wall** section herein) should be included wherever exterior grades are greater in elevation than floor level or finished grade on the interior side.

Assuming that foundations are designed and constructed as recommended, total settlement is not expected to exceed about 1¼ inch, and differential settlement is not expected to exceed 1 inch. Any such settlement should occur as construction proceeds and within a few days of the application of each load increment.

Foundation Construction Considerations

Where foundations will bear on native soils or structural fill, the foundation bearing grades should be proof-compacted using a mechanical or large reversible plate tamper to densify the soils loosened by the excavation process unless otherwise directed by the Geotechnical Engineer observing the grades. If groundwater seepage occurs, proof-compacting should be eliminated, and a minimum six-inch thick base of clean crushed stone placed over a geotextile should be provided to establish a more uniform and stable base for construction and to assist in dewatering. The stone should be an ASTM C33 Blend 57 aggregate and the geotextile a non-woven synthetic filter fabric meeting NYSDOT standard specifications section 737-01 for drainage geotextile.

All final bearing grades should be relatively firm, stable, and free of loose soil, mud, water and frost. The Geotechnical Engineer should approve the condition of the foundation bearing grades immediately prior to placement of reinforcing steel and concrete.

FLOOR SLABS

Floor Slab Design Parameters

As previously indicated, we recommend that all existing fills be removed from beneath new floor slabs in addition to their removal from beneath new foundations and be replaced with structural fill. The floor slabs should be constructed upon a minimum six-inch thick subbase course which conforms to the requirements for NYSDOT Type 2 Subbase or ASTM C33 Blend 57 aggregate. Consideration should be given to using a thicker subbase course in areas subject to heavier loads and/or use, or those exposed to freezing temperatures.

The use of a vapor retarder along with a base course of ASTM C33 Blend 57 aggregate should be considered beneath concrete slabs on grade covered with wood, tile, carpet, or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding its use and placement.

Saw-cut control joints should be placed in the slab to help control the location and extent of cracking. For additional recommendations refer to the ACI Design Manual.

Floor slab subgrades should be prepared as outlined in the **Earthwork** section herein. Under these conditions, a modulus of subgrade reaction equal to 150 pounds per cubic inch (pci/in) may be assumed at the top of the stone base layer for slab design purposes.

Floor Slab Construction Considerations

Even with the base course recommended above, we caution that the subgrades may not support repeated heavy construction traffic or telehandlers without suffering rutting and weaving that may be especially severe during wet seasons. If the grades are to be repeatedly traversed by these types of equipment, they should be reinforced as necessary to support them. Areas which become disturbed or weakened should be excavated and stabilized accordingly.

The Geotechnical Engineer should approve the condition of floor slab or pad subgrades immediately prior to placement of the subbase course. Attention should be paid to high traffic areas that were rutted and disturbed earlier, and to areas where backfilled trenches are located.

EARTH RETAINING WALL DESIGN

All earth-retaining foundation walls or structures should be designed to resist the lateral pressures generated by earth backfill and any temporary or permanent surcharge loads. Active earth pressures may be assumed for walls that are free to deflect as the backfill is placed and surcharge loads applied. At-rest earth pressures should be assumed for walls that are braced prior to backfilling or applying surcharge loads. The following design parameters are provided to assist in determining the lateral wall loads, whichever apply:

- Soil angle of internal friction - 30 degrees
- Coefficient of At-Rest earth pressure (k_o) - 0.50
- Coefficient of Active earth pressure (k_a) - 0.33
- Coefficient of Passive earth pressure (k_p) - 3.00
- Total unit weight of compacted soil - 125 pcf
- Coefficient of sliding friction - 0.35 (concrete on native soils or structural fill)

The recommended design parameters assume relatively level grades on either side of the wall, that the wall is backfilled with imported granular fill (reuse of excavated onsite soils for this purpose should be avoided), and that the backfill remains permanently well-drained. Water must not be allowed to collect against the wall unless the wall is designed to accommodate the added hydrostatic pressure. Drainage system recommendations are provided below.

Subsurface Drainage for Earth-Retaining Walls

Retaining structures should be provided with a foundation level drain which may consist of a nominal 4-inch diameter perforated PVC or corrugated HDPE pipe embedded at the base of a minimum 12-inch wide column of clean crushed stone (e.g., NYSDOT no. 1 and no. 2 size aggregate or ASTM C33 Blend 57 stone). The stone should be enveloped in an appropriate non-woven filter fabric (meeting NYSDOT standard specifications section 737-01 for drainage geotextile) to inhibit siltation. Backfill soils behind the crushed stone drainage layer should consist of imported granular fill. The drain line should be sloped to provide positive gravity drainage to daylight, stormwater system, or to a sump pit and pump.

Additionally, we note that subsurface infiltration of stormwater may result in localized groundwater mounding and recommend that this be considered in evaluation of the existing retaining wall and the design of any new sections of the wall. Modifications to either the drainage system or the wall itself may be necessary to accommodate elevated groundwater levels depending on the actual configuration and design parameters of the stormwater management system.

PAVEMENTS

Flexible Pavement Design

The pavement sections presented below were developed in general accord with AASHTO procedures using a reduced subgrade strength and local experience to account for frost, and to keep the anticipated pavement heave and cracking within generally tolerable limits. A subgrade resilient modulus (M_r) equal to 5,000 psi has been assumed for design purposes. Our design parameters assume the existing fills will be left in place and stabilized as detailed in the **Earthwork** section of this report. As previously indicated, the Owner must accept some degree of risk for pavement settlement, which may require periodic maintenance, if the existing fills are left in place.

Two conventional pavement sections were developed, a Light Duty section for automobile parking areas and a Heavy Duty section for entrance drives and areas subject to repeated truck traffic. Modifications should be made as appropriate where permeable pavements will be used.

For design purposes, it has been assumed that the pavement design life is 20 years, and that daily equivalent single axle loads (ESALs) are equal to 1 for the Light Duty section and 25 for the Heavy Duty section. If the traffic loads vary from these, we should be provided with the opportunity to refine the pavement section accordingly.

All materials should meet the requirements specified in the latest edition of the New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials.

Flexible Pavement Design				
Layer	Material Description	NYSDOT Item Number	Thickness (inches)	
			Light Duty	Heavy Duty
Top	Asphaltic Concrete	402.127303	1.5	1.5
Binder	Asphaltic Concrete	402.257903	2.0	3.0
Base	Crusher-Run Stone	304.12	8	12
Fabric	Stabilization Fabric	207.24	Single Ply	Single Ply

Any rigid pavements should be provided with a minimum six-inch thick base of crusher-run stone (NYSDOT Section 304-2.02, Type 2 material) placed over a stabilization fabric. The pavements may be designed assuming a modulus of subgrade reaction equal to 150 pounds per cubic inch at the top of the base layer.

Temporary Construction Access Roadways

The recommended pavement sections are not designed to support heavy construction traffic which may require thicker sections. The contractor should construct temporary haul routes and construction roadways onsite as appropriate for the weather conditions and the equipment in use, with consideration to the soil conditions encountered in specific areas.

Pavement Drainage

Accumulation of water on pavement subgrades should be avoided by grading the subgrade to a slope of at least two percent, and/or by providing underdrains. Swales should be provided at the pavement edges for drainage relief. Failure to provide adequate drainage will shorten pavement life.

Pavement Maintenance

All pavements require periodic care, and preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment. Maintenance consists of both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing). Settlement of pavements due to consolidation of the existing fills may also occur and require periodic maintenance.

Frost Considerations

Frost may penetrate beneath sidewalks and pavements and cause them to heave, and resulting displacements may be differential, particularly where sidewalks and pavements meet building doorways and along curbs. To limit the magnitude of heave and creation of such uneven joints to

generally tolerable magnitudes for most winters, a 16-inch thick base of ASTM C33 Blend 57 crushed stone should be placed beneath sensitive sidewalk or pavement areas, along with an underdrain to relieve any collected waters. The crushed stone should be separated from the surrounding granular soils with a non-woven synthetic filter fabric meeting NYSDOT standard specifications section 737-01 for drainage geotextile.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements and design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

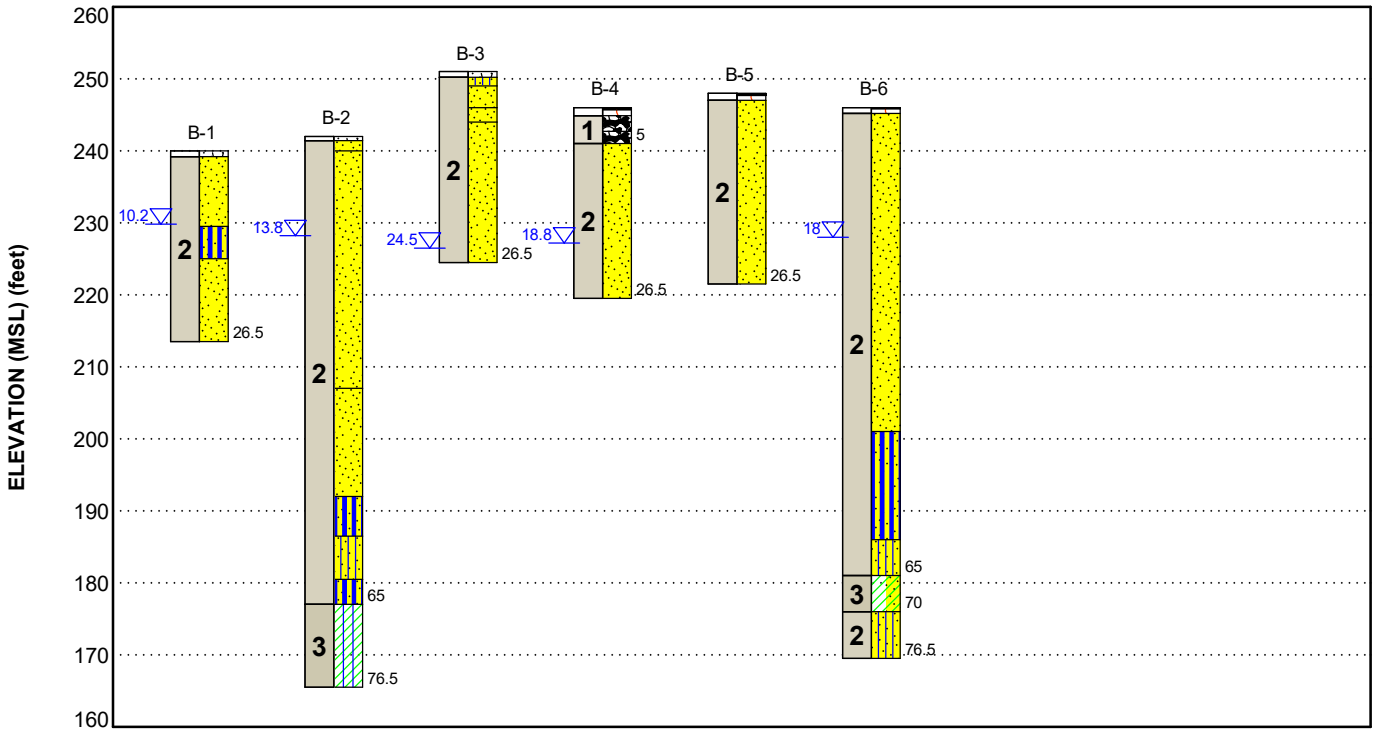
FIGURES

Contents:

GEOMODEL

Proposed Student Housing ■ Albany, NY
Terracon Project No. JB205071

Terracon GeoReport



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	Fill	Typically sandy soils with lesser amounts of foreign matter (e.g., wood, roots, gravel).
2	Sand	Native fine sand, generally with relatively little silt. Occasional silty layers which become more prevalent with depth.
3	Silt & Clay	Interlayered silt and clay deposits.

LEGEND

- Topsoil
- Poorly-graded Sand
- Sandy Silt
- Silty Sand
- Silty Clay
- Asphalt
- Aggregate Base Course
- Fill
- Lean Clay with Sand

▽ First Water Observation

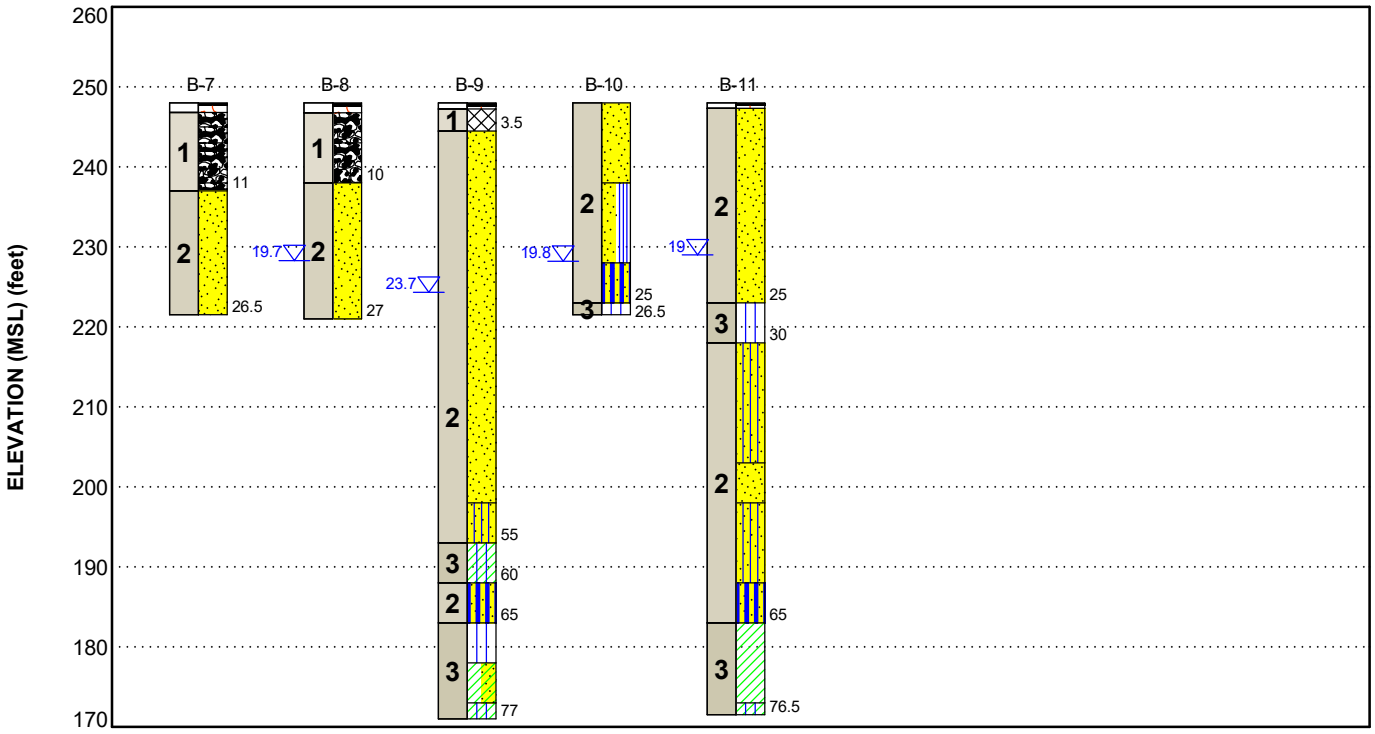
Groundwater levels are temporal. The levels shown are representative of the date and time of our exploration. Significant changes are possible over time. Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

NOTES:
Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

GEOMODEL

Proposed Student Housing ■ Albany, NY
Terracon Project No. JB205071

Terracon GeoReport



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	Fill	Typically sandy soils with lesser amounts of foreign matter (e.g., wood, roots, gravel).
2	Sand	Native fine sand, generally with relatively little silt. Occasional silty layers which become more prevalent with depth.
3	Silt & Clay	Interlayered silt and clay deposits.

LEGEND

- Asphalt
- Aggregate Base Course
- Fill
- Poorly-graded Sand
- Fill
- Silty Sand
- Silty Clay
- Sandy Silt
- Silt
- Lean Clay with Sand
- Poorly-graded Sand with Silt
- Lean Clay

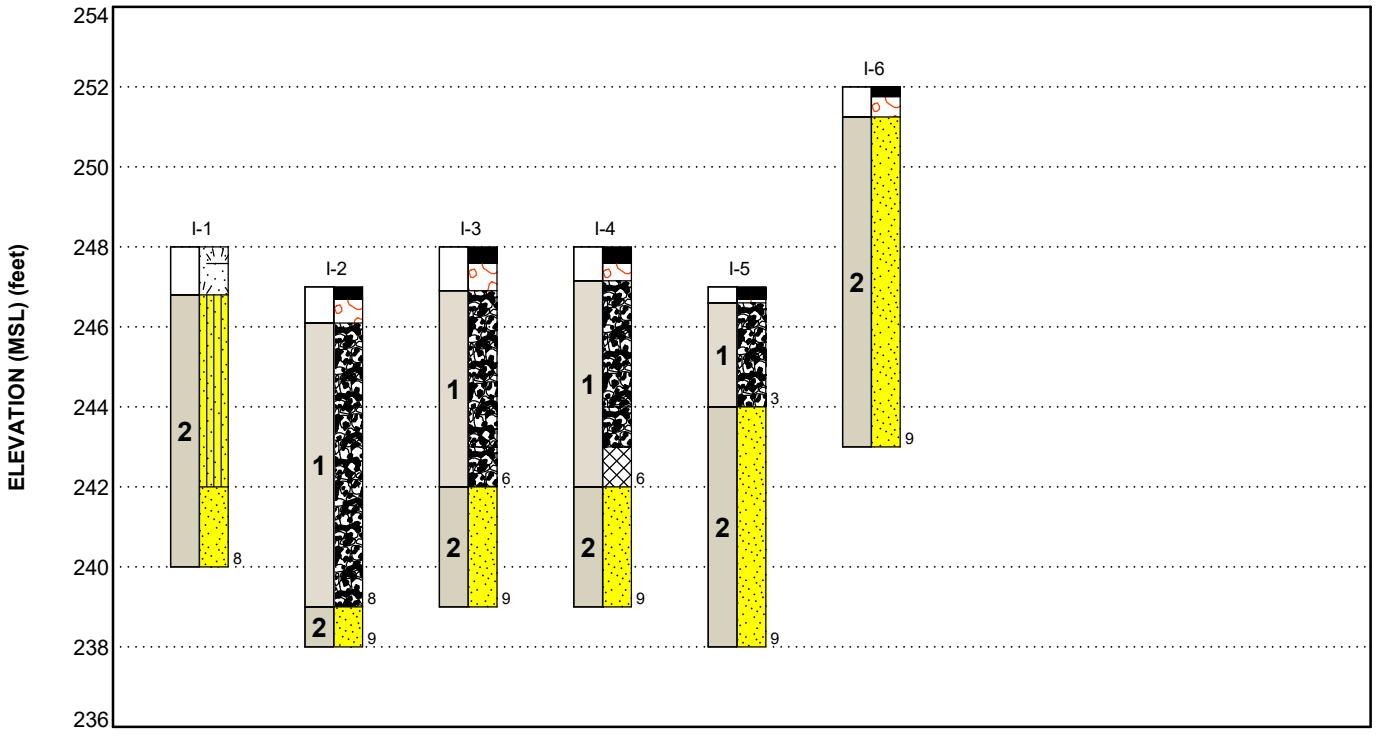
▽ First Water Observation

Groundwater levels are temporal. The levels shown are representative of the date and time of our exploration. Significant changes are possible over time. Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

NOTES:
Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

GEOMODEL

Proposed Student Housing ■ Albany, NY
Terracon Project No. JB205071



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	**Fill**	Typically sandy soils with lesser amounts of foreign matter (e.g., wood, roots, gravel).
2	**Sand**	Native fine sand, generally with relatively little silt. Occasional silty layers which become more prevalent with depth.
3	**Silt & Clay**	Interlayered silt and clay deposits.

LEGEND

- Topsoil
- Asphalt
- Fill
- Silty Sand
- Aggregate Base Course
- Poorly-graded Sand
- Fill

▽ First Water Observation

Groundwater levels are temporal. The levels shown are representative of the date and time of our exploration. Significant changes are possible over time. Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

NOTES:
Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Boring No.	Boring Depth (feet)	Location
B-1 thru B-11	26.5 to 77.0	Proposed building footprint
I-1 thru I-6	8.0 to 9.0	Infiltration test locations

Test Boring Layout and Elevations: The test boring locations were established in the field by Terracon using a hand-held GPS unit, taped measurements and/or visual reference from existing site features. The boreholes were located on the basis of the proposed building and parking layout provided to us, within the limitations of access, existing structures and utilities.

Ground surface elevation at each borehole location was estimated based upon our interpolation between topographic contours shown on the site plans provided to us. If more precise locations and/or elevations are desired, the as-drilled boring locations should be surveyed.

Test Boring Subsurface Exploration Procedures: The test borings were made using a standard rotary drill rig equipped with hollow stem augers. As the augers were advanced, the soils were sampled at intervals of five feet or less in accordance with the Standard Method for Penetration Test and Split-Barrel Sampling of Soils, ASTM D1586. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon was driven into the ground by a 140-pound automatic hammer falling 30-inches. The number of blows required to advance the sampling spoon the middle 12-inches of a normal 24-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the corresponding test depths. Upon completion of drilling the boreholes were backfilled with auger cuttings and/or sand, with the surface restored in kind in pavement areas.

Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. The sampling depths, penetration distances, and other sampling information were recorded on the field boring logs.

The soil samples were placed in appropriate containers and taken to our soils laboratory for classification by a Geotechnical Engineer. Final individual boring logs were prepared, and they represent the Geotechnical Engineer's interpretation of the field logs and include modifications as appropriate based on observations and/or testing of the samples in our laboratory.

Laboratory Testing

Selected recovered samples from the test borings were submitted for laboratory testing as part of the subsurface investigation, to confirm the visual classifications and to provide quantitative index properties for use in the geotechnical evaluation. This testing was performed in general accordance with the following standard methods:

- ASTM D2216 - Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil - and Rock by Mass (9 samples tested)
- ASTM D422 - Standard Test Method for Particle-Size Analysis of Soils (w/o hydrometer) (7 samples tested)
- ASTM D422 - Standard Test Method for Particle-Size Analysis of Soils (w/ hydrometer) (1 sample tested)
- ASTM D4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (1 sample tested)

SITE LOCATION AND EXPLORATION PLANS

Contents:

Note: All attachments are one page unless noted above

SITE LOCATION

Proposed Student Housing ■ Albany, NY
September 2020 ■ Terracon Project No. JB205071

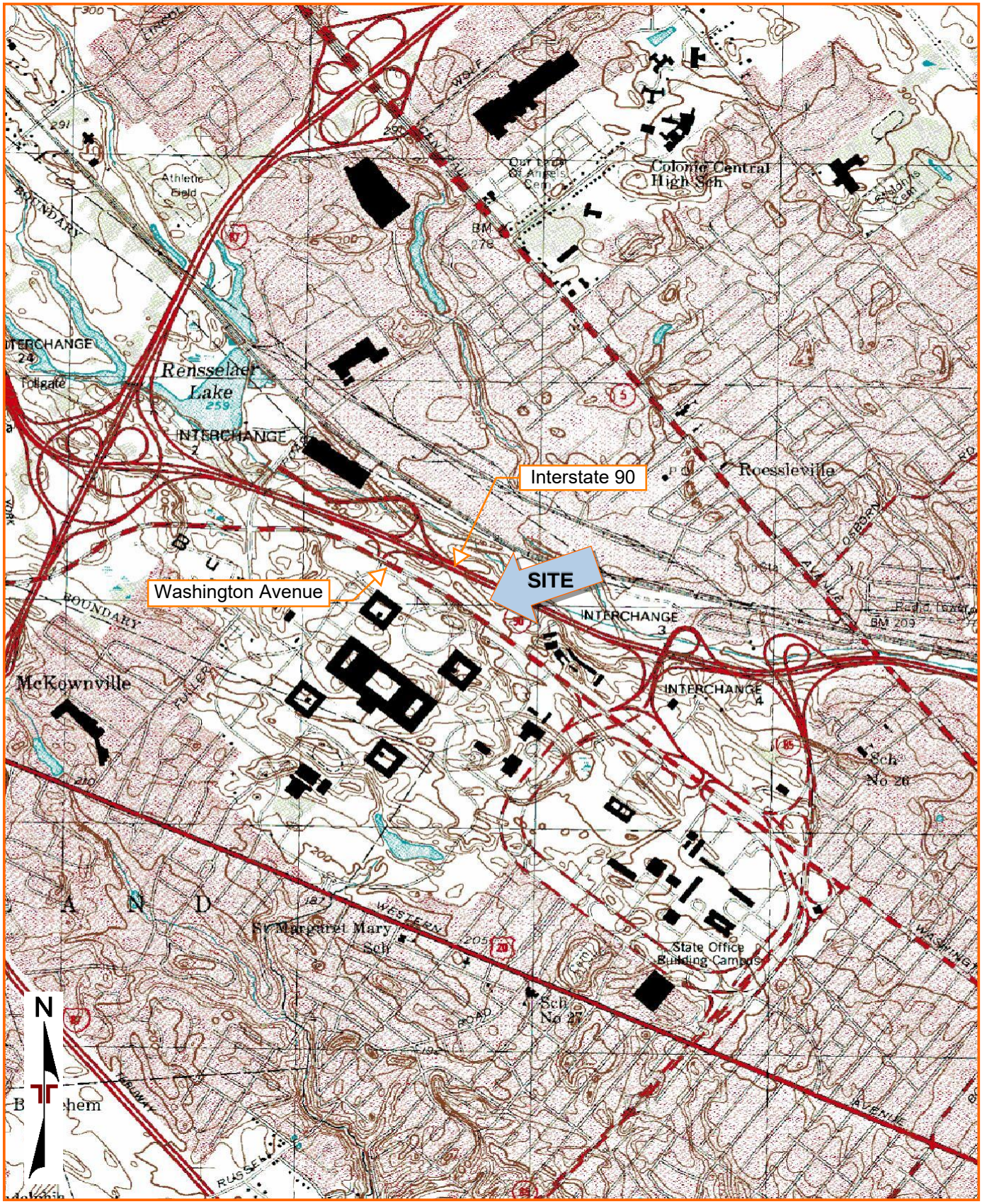


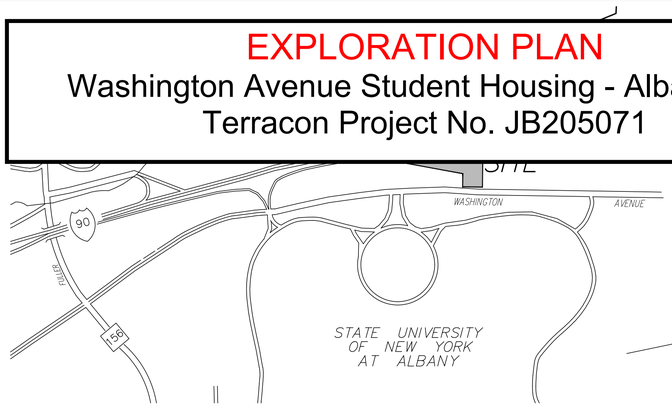
DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
QUADRANGLES INCLUDE: ALBANY, NY (1/1/1994).

EXPLORATION PLAN

Washington Avenue Student Housing - Albany, NY

Terracon Project No. JB205071



SITE LOCATION MAP

ZONING INFORMATION

USE	COMMUNITY URBAN
	20 FEET
	10 FEET
	NONE
	0 FEET
GE	90%

ADOPTED FROM: CITY OF
D USDO ZONING REPORT

ARKING TABLE

REGULAR PARKING	91
HANDICAPPED PARKING	4
TOTAL PARKING SPACES	95

PROPOSED PARKING TABLE

REGULAR PARKING	111
HANDICAPPED PARKING	5
TOTAL PARKING SPACES	116

MAP REFERENCES

1.) "AS BUILT WATER & SEWER Nos. 1395-1475 WASHINGTON AVENUE, ALBANY, NY" PREPARED BY HERSHBERG & HERSHBERG CONSULTING ENGINEERS & LAND SURVEYORS, DATED 11/05/96, LAST REVISED 1/31/97.

2.) "MAP SHOWING PROPERTY LINE AND EASEMENTS OF No. 1395 WASHINGTON AVENUE, EXTENDED STAY AMERICA, INC.", PREPARED BY HERSHBERG & HERSHBERG ON 4/13/96, LAST REVISED 5/7/96.

3.) ALTA SURVEY PREPARED BY HERSHBERG & HERSHBERG AS FILE No. 190321. SEE SURVEY FOR ALL SCHEDULE BE ITEMS REFERENCED ON THIS PLAN.

4.) TOPOGRAPHIC INFORMATION SHOWN OBTAINED BY NEW YORK STATE 2' CONTOURS.

PLAN NORTH

INTERSTATE I - 90
(EAST BOUND)
(PUBLIC R.O.W. VARIES)
ACCESS RESTRICTED

Exist. Retaining Wall

Approx. Infiltration Test Location (Typ.)

Approx. Limits of Proposed Building Footprint

Approx. Test Boring Location (Typ.)

I-1 I-2 I-3 I-4 I-5 I-6

B-1 B-2 B-3 B-4 B-5 B-6 B-7 B-8 B-9 B-10 B-11

LIMITS OF DECK AT LEVEL 1

LIMITS OF BUILDING AT LEVELS 2-51

LIMITS OF BUILDING AT LEVEL 1

ELEVATION 246+-

RIGHT-OF-WAY WITHOUT ACCESS

S62°32'28"E 694.52'

N38°07'03"W 122.29'

REAR No.1421 WASHINGTON AVENUE
TAX MAP No. 53.00-1-31
LANDS N/F OF
886 WESTERN AVENUE ASSOCIATES LP
L.2534 P.867

LANDS NOW OR FORMERLY OF WASHINGTON AVENUE ASSOCIATES 1455

N42°29'50"W 557.48'

LEASE LINE S42°29'50"E 152.04'

LEASE LINE S42°29'50"E 74.22'

LEASE LINE N53°00'30"E 193.87'

S42°30'10"W 30.00'

8A ARCHAEOLOGICAL EASEMENT L.2534 P.870 RESERVES INGRESS & EGRESS RIGHT TO WASHINGTON AVENUE L.2592 P.745

"MARRIOTT COURT YARD"
No.1455 WASHINGTON AVENUE
TAX MAP No. 53.00-1-28
LANDS N/F OF
1455 WASHINGTON AVENUE ASSOCIATES
L.2614 P.974

'DUNKIN DONUTS'

PARCEL B
AREA = 23,512 S.F.

N52°18'20"W

30' EASEMENT FOR INGRESS AND EGRESS
L.2534 P.876 - EASE 1
L.2534 P.880 - EASE 1 & 5
L.2669 P.894 - EASE 1
L.2534 P.876, - EASE 1

S52°18'20"E 45.00'

N37°41'40"E 26.48'

S37°41'40"W 56.48'

S52°18'20"E 500.91'

S37°41'40"W 94.25'

N37°41'40"E 106.35'

30.00'

545.91'

REMAINING LANDS OF
1455 WASHINGTON AVENUE ASSOCIATION

No.1421 WASHINGTON AVENUE
TAX MAP No. 53.00-1-26
LANDS N/F OF
1421 WASHINGTON AVE LLC
INSTRUMENT No.R2017-1980

LEASE LINE N52°18'20"W 211.42'

WASHINGTON AVENUE RIGHT-OF-WAY LINE

WASHINGTON AVENUE RIGHT-OF-WAY LINE

10' FRONT SETBACK LINE N52°16'20"W

160.54'

IRON ROD (TO BE SET)

P.O.B. (2,435.13' TO TUDOR ROAD)

Land Area= 141,177 S.F. 3.24 Acres

Building Footprint Area 22,028± S.F.

COURTYARD

HYDROTECH WATERPROOFING AT DECK

PLAZA

LEVEL 1 = 5' ABOVE GRADE

8,300 S.F.

8,000 S.F.

11 spaces

17 spaces

2 HC spaces

LOBBY

LOADING

AMENITY

SECURITY GATE

MAINTENANCE

ELECTRIC

concrete curb

chain link fence

gate

ground light

roof overhang

electric outlet

in-ground pool

sprinkler valve

bronze plaque

three risers

F.F.=248.39

PRIVATE 8" PVC SEWER LATERAL

TRASH

SEWER LINE EASEMENT L.2683 P.457

MONUMENT FOUND

IRON ROD (TO BE SET)

satellite dish

clean-out

vent

transformer

"EXTENDED AMERICA"

CONTROL BOXES

8" D.I.P.

4" PVC

6" PVC

12" HDPE

15" WATER MAIN EASEMENT
L.2534 P.876 - EASE 4
L.2534 P.880 - EASE 4
L.2534 P.876 - EASE 4

UTILITY EASEMENT TO N.Y. TELEPHONE CO.
L.1564 P.26
L.2048 P.593

NO EASEMENT FOUND FOR THESE UTILITY STRUCTURES

WASHINGTON AVENUE
(PUBLIC R.O.W. VARIES)

FOR MUNICIPAL APPROVAL ONLY-NOT INTENDED FOR CONSTRUCTION

HERSHBERG & HERSHBERG
Consulting Engineers and Land Surveyors
18 Locust Street
Albany, New York 12203

DRAFT

DATE

REMARKS

REVISIONS

PROPOSED SITE PLAN FOR
1415 WASHINGTON AVENUE
CITY OF ALBANY
COUNTY OF ALBANY, STATE OF NEW YORK

FILE: 200015 | SCALE: AS NOTED | BY: WM | CHK: DRH | DATE: 1/24/2020 | 000000-0.0WC

C1

EXPLORATION RESULTS

Contents:

Test Boring Logs (25 pages)
Infiltration Test Results (3 pages)
Laboratory Test Results (10 pages)

Note: All attachments are one page unless noted above

BORING LOG NO. B-1

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6903° Longitude: -73.8197°

Approximate Surface Elev.: 240 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.8	239+/-						
		TOPSOIL							
		POORLY GRADED SAND (SP), fine grained, brownish tan, moist, very loose to loose					12	WH-WH-1-1 N=1	
							22	2-3-3-4 N=6	
				5			14	3-4-5 N=9	
				10	▽		12	1-1-2 N=3	
2		10.5	229.5+/-						
		SANDY SILT (ML), brownish tan with gray mottling, wet, soft							
		15.0	225+/-	15			12	1-1-2 N=3	
		POORLY GRADED SAND (SP), fine grained, brown, wet, very loose to loose							
				20			14	1-2-2 N=4	
				25			18	2-3-4 N=7	
		26.5	213.5+/-						
		Boring Terminated at 26.5 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.
Water added to hold running sands

Hammer Type: Automatic
Boring moved 10'

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *After S-4*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-12-2020 | Boring Completed: 08-12-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-2

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6902° Longitude: -73.8194°

Approximate Surface Elev.: 242 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.6	241.5+/-						
		TOPSOIL							
		POORLY GRADED SAND (SP), trace rootlets, fine grained, brownish tan, moist, very loose					18	1-1-1-1 N=2	
		2.0	240+/-						
		POORLY GRADED SAND (SP), fine grained, brownish tan, moist, very loose to loose					19	1-2-2-2 N=4	
				5			17	2-3-3 N=6	
				10			17	2-3-3 N=6	
2		**Grades to wet**		15	▽		18	1-1-2 N=3	
				20			18	WH-1-1 N=2	
				25			12	3-3-4 N=7	
				30					

Stratification lines are approximate. In-situ, the transition may be gradual.
Water added to hold running sands

Hammer Type: Automatic
Boring moved 12' west. About 1.5' elevation drop

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *After S-5*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-13-2020 | Boring Completed: 08-13-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-2

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6902° Longitude: -73.8194°

Approximate Surface Elev.: 242 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
2			**POORLY GRADED SAND (SP)**, fine grained, brownish tan, moist, very loose to loose *(continued)*				10	2-4-4 N=8	
		35.0	207+/-	35			12	4-5-9 N=14	
			POORLY GRADED SAND (SP), with occasional silt lenses, fine grained, brownish tan, wet, medium dense	40			17	4-5-7 N=12	
				45			18	4-5-7 N=12	
		50.0	192+/-	50			18	3-4-7 N=11	
			SANDY SILT (ML), with clay bands, brown, wet, stiff						
		55.5	186.5+/-	55			18	5-11-15 N=26	
			SILTY SAND (SM), fine grained, gray, wet, medium dense	60					

Stratification lines are approximate. In-situ, the transition may be gradual.
Water added to hold running sands

Hammer Type: Automatic
Boring moved 12' west. About 1.5' elevation drop

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *After S-5*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-13-2020 | Boring Completed: 08-13-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-2

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6902° Longitude: -73.8194°

Approximate Surface Elev.: 242 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		61.0	181+/-				18	2-2-5 N=7	
2			**SILTY SAND (SM)**, fine grained, gray, wet, medium dense *(continued)*						
			SANDY SILT (ML), with clay bands, gray, wet, medium stiff						
		65.0	177+/-	65			17	3-5-13 N=18	
3			**VARVED SILT AND CLAY (CL-ML)**, with fine sand lenses, gray, moist, very stiff	70			18	5-8-10 N=18	
			Same. 3"-4" bands of fine sand	75			18	4-8-11 N=19	
		76.5	165.5+/-						
			Boring Terminated at 76.5 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.
Water added to hold running sands

Hammer Type: Automatic
Boring moved 12' west. About 1.5' elevation drop

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *After S-5*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-13-2020 | Boring Completed: 08-13-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-3

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6899° Longitude: -73.8192°

Approximate Surface Elev.: 251 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.8	250+/-						
		TOPSOIL							
		2.0	249+/-				18	1-1-1-1 N=2	
		POSSIBLE FILL: SILTY SAND (SM), trace rootlets, trace brownish tan fine sand, fine grained, dark brown, moist, very loose							
		5.0	246+/-				14	1-1-WH-WH N=1	
		POSSIBLE FILL: POORLY GRADED SAND (SP), trace rootlets, fine grained, brown, moist, very loose		5			12	1-1-3 N=4	
		7.0	244+/-						
2		**POORLY GRADED SAND (SP)**, fine grained, brownish tan, moist, loose		10			18	3-4-3 N=7	5.0
		Grades with silt (SP-SM)		15			17	1-2-3 N=5	
		Grades to brown		20			18	1-3-3 N=6	
		Same. Wet		25	▽		18	1-1-1 N=2	
		26.5	224.5+/-						
		Boring Terminated at 26.5 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *At completion of drilling*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-12-2020 | Boring Completed: 08-12-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-4

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6897° Longitude: -73.8189°

Approximate Surface Elev.: 246 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.3 **ASPHALT**	245.5+/-						
		1.1 **AGGREGATE BASE COURSE**	245+/-						
1		**FILL - SILTY SAND (SM)**, trace rootlets and black pieces of wood (organics), fine grained, dark brown to black, moist, medium dense					17	9-10-6 N=16	
		3.3	242.5+/-						
		FILL - POORLY GRADED SAND (SP), trace roots and organics, fine grained, brownish tan with dark brown sand, moist, medium dense					22	6-6-4-4 N=10	
		5.0	241+/-	5					
2		**POORLY GRADED SAND (SP)**, trace rootlets, fine grained, brownish tan, moist, loose					17	1-2-2-2 N=4	6.8
		Grades to brown		10			17	3-3-4 N=7	
				15			17	2-2-3 N=5	
		Grades to wet. Grades to very loose		20	▽		12	WH-1-2 N=3	
				25			14	WH-1-WH N=1	
		26.5	219.5+/-						
		Boring Terminated at 26.5 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.
Water added to running sands after S-6

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *After S-6*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-14-2020 | Boring Completed: 08-14-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-5

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6895° Longitude: -73.8186°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.3 **ASPHALT**	247.5+/-						
		1.0 **AGGREGATE BASE COURSE**	247+/-						
2		**POORLY GRADED SAND (SP)**, fine grained, brown, moist, loose					18	3-5-7-8 N=12	
							20	6-4-5-5 N=9	
				5			16	2-3-3 N=6	5.4
				10			18	2-3-4 N=7	
		Grades to very loose							
				15			17	1-1-1 N=2	
		Grades to wet		20			8	1-2-3 N=5	
				25			17	WH-1-1 N=2	
		26.5	221.5+/-						
		Boring Terminated at 26.5 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.
Water added to hold running sands @ S-6

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

No measurable groundwater upon completion of drilling

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-14-2020 | Boring Completed: 08-14-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-6

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6893° Longitude: -73.8184°

Approximate Surface Elev.: 246 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.2	246+/-						
		ASPHALT							
		0.8	245+/-						
		AGGREGATE BASE COURSE							
2		**POORLY GRADED SAND (SP)**, fine grained, brownish tan, moist, very loose to medium dense							
							17	4-5-7-7 N=12	
							22	6-6-4-4 N=10	
				5			13	2-2-2-2 N=4	
				10			12	1-2-2 N=4	
				15			14	1-1-1 N=2	
					▽				
		Grades wet		20			13	WR-WR-WH N=WH	
				25			17	WR-WR-1 N=1	
				30					

Stratification lines are approximate. In-situ, the transition may be gradual.
Water added to hold running sands

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *At completion of drilling*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-20-2020 | Boring Completed: 08-20-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-6

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6893° Longitude: -73.8184°

Approximate Surface Elev.: 246 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
						X	6	3-4-7 N=11	
				35		X	3	2-2-2 N=4	
				40		X	19	5-7-12 N=19	
2		45.0	201+/-	45		X	14	4-6-7 N=13	27.8
				50		X	13	1-2-2 N=4	
				55		X	16	2-1-2 N=3	
		60.0	186+/-	60					

POORLY GRADED SAND (SP), fine grained, brownish tan, moist, very loose to medium dense *(continued)*

Grades to grayish brown

SANDY SILT (ML), gray, wet, soft to stiff

Stratification lines are approximate. In-situ, the transition may be gradual.
Water added to hold running sands

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *At completion of drilling*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-20-2020 | Boring Completed: 08-20-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-6

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6893° Longitude: -73.8184°

Approximate Surface Elev.: 246 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
2		**SILTY SAND (SM)**, gray, wet, medium dense					14	2-4-6 N=10	
		65.0	181+/-	65					
3		**LEAN CLAY (CL)**, with silty sand bands, gray, moist, medium stiff					19	WH-3-2 N=5	
		70.0	176+/-	70					
2		**SILTY SAND (SM)**, with clay seams, gray, moist to wet, medium dense					18	3-10-13 N=23	
		76.5	169.5+/-	75			14	3-3-7 N=10	
		Boring Terminated at 76.5 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.
Water added to hold running sands

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *At completion of drilling*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-20-2020 | Boring Completed: 08-20-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-7

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6898° Longitude: -73.8185°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.3	247.5+/-	**ASPHALT**						
		1.2	247+/-	**AGGREGATE BASE COURSE**						
1				**FILL - SILTY SAND (SM)**, fine grained, brown, moist, medium dense				17	9-8-8 N=16	
		3.0	245+/-							
				FILL - POORLY GRADED SAND (SP), trace gravel, trace organic smell, fine grained, brown, moist, medium dense				22	7-6-6-5 N=12	
		5.0	243+/-		5					
		6.0	242+/-	**FILL - SILTY SAND (SM)**, trace black rootlets (organics), fine grained, dark brown, moist, very loose				19	1-1-1-1 N=2	
				FILL - POORLY GRADED SAND (SP), fine grained, brownish tan, moist, very loose						
		10.0	238+/-		10					
		11.0	237+/-	**FILL - SILTY SAND (SM)**, trace black rootlets (organics), fine grained, dark brown, moist, very loose				17	WH-1-1 N=2	
2				**POORLY GRADED SAND (SP)**, fine grained, brownish tan, moist, loose						
					15			17	2-2-2 N=4	
				Grades to wet	20			16	1-2-2 N=4	29.9
					25			17	1-2-3 N=5	
		26.5	221.5+/-							
				Boring Terminated at 26.5 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

No measurable groundwater upon completion of drilling

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-14-2020 | Boring Completed: 08-14-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-8

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6896° Longitude: -73.818°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DESCRIPTION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.4	247.5+/-	**ASPHALT**						
		1.3	247+/-	**AGGREGATE BASE COURSE**						
1				**FILL - POORLY GRADED SAND WITH SILT (SP-SM)**, trace gravel, brown, moist, medium dense				13	8-10-12 N=22	
								3	12-10-9-8 N=19	
		5.0	243+/-	**FILL - SILTY SAND (SM)**, with black organics (wood and rootlets), dark brown, moist, loose	5			19	2-2-2-2 N=4	
								17	2-2-2-2 N=4	
				Large piece of gravel encountered						
		10.0	238+/-	**POORLY GRADED SAND (SP)**, fine grained, brownish tan to brown, moist to wet, very loose to loose	10			14	2-3-2-2 N=5	
								19	2-2-2-2 N=4	
				Grades to brown	15			16	2-3-4-4 N=7	7.0
2										
				Grades wet	20	▽		13	1-1-2-3 N=3	
					25			7	WH-1-2-2 N=3	
		27.0	221+/-							
				Boring Terminated at 27 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *At completion of drilling*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-21-2020 | Boring Completed: 08-21-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-9

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6894° Longitude: -73.8176°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.4 **ASPHALT**	247.5+/-						
		0.8 **AGGREGATE BASE COURSE**	247.5+/-						
1		**POSSIBLE FILL: SILTY SAND (SM)**, trace gravel, brown with orange mottling, moist, medium dense					22	6-5-7-10 N=12	
		3.5	244.5+/-						
2		**POORLY GRADED SAND (SP)**, fine grained, brownish tan, moist, very loose to loose					22	12-8-6-6 N=14	
				5			20	3-2-1-3 N=3	
							20	3-4-4-6 N=8	
				10			22	3-3-3-4 N=6	
				15			22	3-4-5-3 N=9	
		Grades to brown							
				20			20	2-3-3-2 N=6	
					▽				
		Grades wet		25			19	WH-WH-1-1 N=1	
				30					

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *After S-8*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-24-2020 | Boring Completed: 08-24-2020

Drill Rig: Diedrich D-50 | Driller: S. Morey

Project No.: JB205071

BORING LOG NO. B-9

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6894° Longitude: -73.8176°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
2		**POORLY GRADED SAND (SP)**, fine grained, brownish tan, moist, very loose to loose *(continued)*					19	WH-2-3-3 N=5	
				35			17	1-3-3-5 N=6	
				40			7	WH-WH-2-1 N=2	
		Grades to gray		45			22	WH-WH-WH-2 N=WH	
		50.0	198+/-	50			19	WH-3-4-6 N=7	29.1
		SILTY SAND (SM), gray, wet, loose							
3		55.0	193+/-	55			19	WH-3-3-4 N=6	
		CLAYEY SILT (ML), gray, wet, medium stiff							
		60.0	188+/-	60					

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *After S-8*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-24-2020 | Boring Completed: 08-24-2020

Drill Rig: Diedrich D-50 | Driller: S. Morey

Project No.: JB205071

BORING LOG NO. B-9

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6894° Longitude: -73.8176°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
2		**SANDY SILT (ML)**, gray, wet, medium stiff					20	3-3-4-4 N=7	
		65.0	183+/-	65					
2		**SILT (ML)**, gray, wet, medium stiff					24	WH-3-2-3 N=5	
		70.0	178+/-	70					
3		**LEAN CLAY (CL)**, with silty sand seams, gray, wet, very stiff					19	3-7-10-16 N=17	
		75.0	173+/-	75					
		VARVED SILT AND CLAY (CL-ML), gray, moist, very stiff					24	4-10-6-6 N=16	
		77.0	171+/-						
		Boring Terminated at 77 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *After S-8*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-24-2020 | Boring Completed: 08-24-2020

Drill Rig: Diedrich D-50 | Driller: S. Morey

Project No.: JB205071

BORING LOG NO. B-10

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6891° Longitude: -73.8177°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		POORLY GRADED SAND (SP), fine grained, brownish tan, moist, loose to medium dense							
							14	5-7-7-8 N=14	
							23	8-6-5-5 N=11	
				5			18	1-3-3-3 N=6	
		10.0	238+/-	10					
2		**POORLY GRADED SAND WITH SILT (SP-SM)**, fine grained, brownish tan, moist, very loose to loose					16	2-3-3 N=6	8.6
				15			12	1-1-1 N=2	
					▽				
		20.0	228+/-	20					
		SANDY SILT (ML), brown, wet, medium stiff					17	2-2-2 N=4	
		25.0	223+/-	25					
3		**SILT (ML)**, brown, wet, stiff					12	2-4-7 N=11	
		26.5	221.5+/-						
		Boring Terminated at 26.5 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *At completion of drilling*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-21-2020 | Boring Completed: 08-21-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-11

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.689° Longitude: -73.818°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.3	247.5+/-						
		ASPHALT							
		0.7	247.5+/-						
		AGGREGATE BASE COURSE							
2		**POORLY GRADED SAND (SP)**, fine grained, brownish tan, moist, very loose to loose				X	20	6-5-5-6 N=10	
						X	22	4-3-4-4 N=7	
				5		X	18	3-3-4-3 N=7	
				10		X	12	1-1-1 N=2	
		Grades to brown							
				15		X	18	1-1-2 N=3	
					▽				
		Grades wet		20		X	12	1-2-2 N=4	
		25.0	223+/-						
3		**SILT (ML)**, brown, wet, stiff		25		X	12	5-6-7 N=13	
		30.0	218+/-	30					

Stratification lines are approximate. In-situ, the transition may be gradual.
Water added to hold running sands

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *After S-6*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-24-2020 | Boring Completed: 08-24-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-11

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.689° Longitude: -73.818°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
						X	8	2-3-6 N=9	
				35		X	8	2-4-5 N=9	
				40		X	12	1-2-4 N=6	
2		45.0	203+/-	45		X	18	2-3-6 N=9	
				50		X	12	2-3-6 N=9	
				55		X	12	2-3-7 N=10	
		60.0	188+/-	60					

SILTY SAND (SM), fine grained, brown, wet, loose

POORLY GRADED SAND (SP), fine grained, brown, wet, loose

SILTY SAND (SM), fine grained, gray, wet, medium dense

Stratification lines are approximate. In-situ, the transition may be gradual.
Water added to hold running sands

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *After S-6*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-24-2020 | Boring Completed: 08-24-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. B-11

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.689° Longitude: -73.818°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
2			**SANDY SILT (ML)**, with banded clay, gray, wet, stiff				18	2-3-6 N=9	
		65.0	183+/-	65					
3			**BANDED CLAY (CL)**, gray, moist, medium stiff to stiff				18	4-7-6 N=13	
				70			18	2-3-4 N=7	30.4
		75.0	173+/-	75					
			VARVED SILT AND CLAY (CL-ML), gray, moist, medium stiff				18	2-3-3 N=6	
		76.5	171.5+/-						
			Boring Terminated at 76.5 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.
Water added to hold running sands

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *After S-6*

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-24-2020 | Boring Completed: 08-24-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. I-1

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.69° Longitude: -73.8193°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.0	248+/-						
		TOPSOIL 1.2	247+/-				17	WH-WH-WH-1 N=WH	
2		**SILTY SAND (SM)**, trace rootlets, fine grained, dark brown, moist, very loose					20	1-1-2-2 N=3	
		Some thicker tree roots							
		Same. Large tree root encountered. Medium dense		5			2	2-4-6-5 N=10	
		6.0	242+/-						
		POORLY GRADED SAND (SP), fine grained, brown, moist, loose					18	3-3-4-4 N=7	
		8.0	240+/-						
		Boring Terminated at 8 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Set 4" PVC 4' west of boring at 4' depth below grade

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

No measurable groundwater upon completion of drilling

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-13-2020 | Boring Completed: 08-13-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. I-2

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6899° Longitude: -73.8187°

Approximate Surface Elev.: 247 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.3	246.5+/-						
		ASPHALT							
		0.9	246+/-						
		AGGREGATE BASE COURSE							
1		**FILL - SILTY SAND (SM)**, with pieces of wood, rootlets, and brownish tan fine sand, dark brown, moist, loose		5			19	4-5-3-3 N=8	
							20	2-3-2-3 N=5	
							18	2-3-3-6 N=6	
		8.0	239+/-						
2		**POORLY GRADED SAND (SP)**, fine grained, brownish tan, moist, medium dense					24	6-7-5-7 N=12	
		9.0	238+/-						
		Boring Terminated at 9 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.
Set 4" PVC at 4' below grade

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

No measurable groundwater upon completion of drilling

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started:

Boring Completed:

Drill Rig: CME 55

Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. I-3

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6897° Longitude: -73.8182°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.4	247.5+/-						
		ASPHALT							
		1.1	247+/-						
		AGGREGATE BASE COURSE							
1		**FILL - POORLY GRADED SAND WITH SILT (SP-SM)**, fine grained, brown, moist, medium dense					22	3-7-10 N=17	
							16	12-8-11-15 N=19	
		5.0	243+/-	5					
		FILL - GRAVEL (GP), with pieces of wood, gray, moist, medium dense					24	14-8-8-8 N=16	
		6.0	242+/-						
2		**POORLY GRADED SAND (SP)**, trace rootlets, fine grained, brownish tan, moist, loose to medium dense					19	6-5-4-6 N=9	
		9.0	239+/-						
		Boring Terminated at 9 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Set 4" PVC at 4' below grade

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

No measurable groundwater upon completion of drilling

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-21-2020 | Boring Completed: 08-21-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. I-4

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6895° Longitude: -73.8176°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.4	247.5+/-						
		ASPHALT							
		0.9	247+/-						
		AGGREGATE BASE COURSE							
1		**FILL - POORLY GRADED SAND (SP)**, brown, moist, medium dense					20	7-7-4-5 N=11	
		4.0	244+/-						
		FILL - SILTY SAND (SM), trace organics, black, moist, loose					23	8-5-4-4 N=9	
		5.0	243+/-	5					
		POSSIBLE FILL: POORLY GRADED SAND WITH SILT (SP-SM), trace rootlets,					18	8-4-4-4 N=8	
		6.0 brown, moist, medium dense	242+/-						
2		**POORLY GRADED SAND (SP)**, fine grained, orangish brown, moist, loose					16	4-4-4-5 N=8	
		Grades to brownish tan							
		9.0	239+/-						
		Boring Terminated at 9 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.
Set 4" PVC at 4' below grade

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

No measurable groundwater upon completion of drilling

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: 08-21-2020 | Boring Completed: 08-21-2020

Drill Rig: CME 55 | Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. I-5

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.6896° Longitude: -73.8187°

Approximate Surface Elev.: 247 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.3	246.5+/-						
		0.4	246.5+/-						
		ASPHALT							
		AGGREGATE BASE COURSE							
1		**FILL - SILTY SAND (SM)**, trace organics (rootlets and wood), dark brown, moist, medium dense					22	1-5-6-4 N=11	
		3.0	244+/-						
2		**POORLY GRADED SAND (SP)**, trace rootlets, fine grained, orangish brown, moist, loose		5			22	2-2-2-4 N=4	
		Grades to brownish tan					24	3-2-3-3 N=5	
							24	3-4-5-5 N=9	
		9.0	238+/-						
		Boring Terminated at 9 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.
Set 4" PVC at 4' below grade

Hammer Type: Automatic

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

No measurable groundwater upon completion of drilling

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started:

Boring Completed:

Drill Rig:

Driller: J. Lamm

Project No.: JB205071

BORING LOG NO. I-6

PROJECT: Proposed Student Housing

CLIENT: Scenic RE LLC
New York, NY

SITE: 1415 Washington Avenue
Albany, NY

LOCATION See Exploration Plan

Latitude: 42.689° Longitude: -73.8183°

Approximate Surface Elev.: 252 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	WATER CONTENT (%)
		0.3	252+/-						
		ASPHALT							
		0.8	251.5+/-						
		AGGREGATE BASE COURSE							
2		**POORLY GRADED SAND (SP)**, fine grained, brownish tan, moist, loose to medium dense		5			22	7-10-8-7 N=18	
							24	4-4-4-4 N=8	
							20	2-3-3-2 N=6	
							22	2-2-2-2 N=4	
		9.0	243+/-						
		Boring Terminated at 9 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Set 4" PVC at 4' below grade

Advancement Method:
4 1/4" ID HSA

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

No measurable groundwater upon completion of drilling

Terracon
30 Corporate Cir Ste 201
Albany, NY

Boring Started: | Boring Completed:

Drill Rig: | Driller: J. Lamm

Project No.: JB205071

INFILTRATION TEST RESULTS

PROJECT: Proposed Student Housing	**PROJECT NO.** JB205071
PROJECT LOCATION: Albany, New York	**TEST DATE:** 8/25/20
WEATHER: Sunny, 75	**TESTER:** J.Lamm

Test Location	Test Depth (feet)	Trial No.	Water Drop (in)	Elapsed Time (min)	Infiltration Rate (inches/hour)
I-1	4.0	1	24	12	> 24
		2	24	14	> 24
		3	24	17	> 24
		4	24	21	> 24
		Infiltration rate for trial no. 4 = > 24 inches per hour Average infiltration rate for trials no. 1-4 = > 24 inches per hour			
I-2	4.0	1	23	60	23
		2	18	60	18
		3	16	60	16
		4	13	60	13
		Infiltration rate for trial no. 4 = 13 inches per hour Average infiltration rate for trials no. 1-4 = 17.5 inches per hour			

Notes:

(1) Testing was conducted in general accord with the “Infiltration Testing Requirements” outlined in Appendix D of the New York State Stormwater Management Design Manual.

(2) Infiltration tests were located alongside companion test borings designated correspondingly.

SOIL CLASSIFICATION AT TEST DEPTH

Test Location I-1: Silty sand (SM) dark brown, moist

Test Location I-2: Silty sand (SM), dark brown, moist

INFILTRATION TEST RESULTS

PROJECT: Proposed Student Housing	**PROJECT NO.** JB205071
PROJECT LOCATION: Albany, New York	**TEST DATE:** 8/25/2020
WEATHER: Sunny, 75	**TESTER:** J.Lamm

Test Location	Test Depth (feet)	Trial No.	Water Drop (in)	Elapsed Time (min)	Infiltration Rate (inches/hour)
I-3	4.0	1	14	60	14
		2	11	60	11
		3	9	60	9
		4	9	60	9
		Infiltration rate for trial no. 4 = 9.0 inches per hour Average infiltration rate for trials no. 1-4 = 10.8 inches per hour			
I-4	4.0	1	21	60	21
		2	17	60	17
		3	16	60	16
		4	14	60	14
		Infiltration rate for trial no. 4 = 14.0 inches per hour Average infiltration rate for trials no. 1-4 = 17.0 inches per hour			

Notes:

(3) Testing was conducted in general accord with the “Infiltration Testing Requirements” outlined in Appendix D of the New York State Stormwater Management Design Manual.

(4) Infiltration tests were located alongside companion test borings designated correspondingly.

SOIL CLASSIFICATION AT TEST DEPTH

Test Location I-3: Poorly graded sand (SP), brown, moist

Test Location I-4: Silty sand (SM), black, organics, moist

INFILTRATION TEST RESULTS					
PROJECT: Proposed Student Housing				**PROJECT NO.** JB205071	
PROJECT LOCATION: Albany, New York				**TEST DATE:** 8/25/2020	
WEATHER: Sunny, 75				**TESTER:** J.Lamm	
Test Location	**Test Depth (feet)**	**Trial No.**	**Water Drop (in)**	**Elapsed Time (min)**	**Infiltration Rate (inches/hour)**
I-5	4.0	1	16	60	16
		2	10	60	10
		3	11	60	11
		Infiltration rate for trial no. 3 = 11.0 inches per hour Average infiltration rate for trials no. 1-3 = 12.3 inches per hour			
I-6	4.0	1	11	60	11
		2	11	60	11
		3	8.5	60	8.5
		Infiltration rate for trial no. 3 = 8.5 inches per hour Average infiltration rate for trials no. 1-3 = 10.2 inches per hour			

Notes:

(5) Testing was conducted in general accord with the “Infiltration Testing Requirements” outlined in Appendix D of the New York State Stormwater Management Design Manual.

(6) Infiltration tests were located alongside companion test borings designated correspondingly.

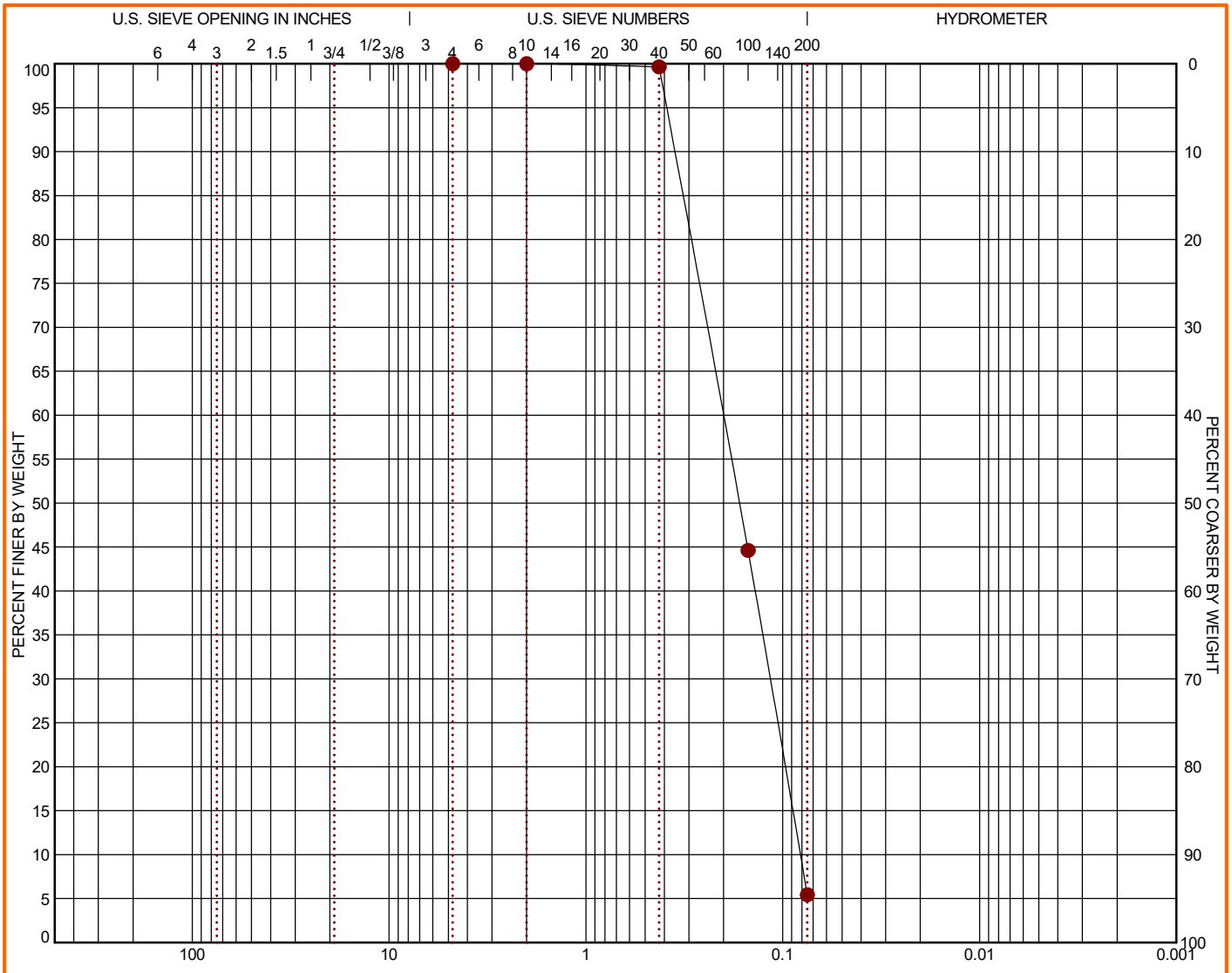
SOIL CLASSIFICATION AT TEST DEPTH

Test Location I-5: Poorly graded sand (SP), orangish brown, moist

Test Location I-6: Poorly graded sand (SP), tannish brown, moist

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BORING ID	DEPTH	% COBBLES	% GRAVEL	% SAND	% SILT	% FINES	% CLAY	USCS
●	B-3	10 - 11.5	0.0	0.0	94.6		5.4		SP-SM

GRAIN SIZE			
	●		
D_{60}	0.201		
D_{30}	0.116		
D_{10}	0.081		

COEFFICIENTS			
	●		
C_C	0.82		
C_U	2.47		

● Sieve	% Finer	Sieve	% Finer	Sieve	% Finer
#4	100.0				
#10	100.0				
#40	99.64				
#100	44.62				
#200	5.44				

SOIL DESCRIPTION	
●	POORLY GRADED SAND with SILT
	(SP-SM)

REMARKS	
●	

PROJECT: Proposed Student Housing

SITE: 1415 Washington Avenue
Albany, NY

Terracon
30 Corporate Cir Ste 201
Albany, NY

PROJECT NUMBER: JB205071

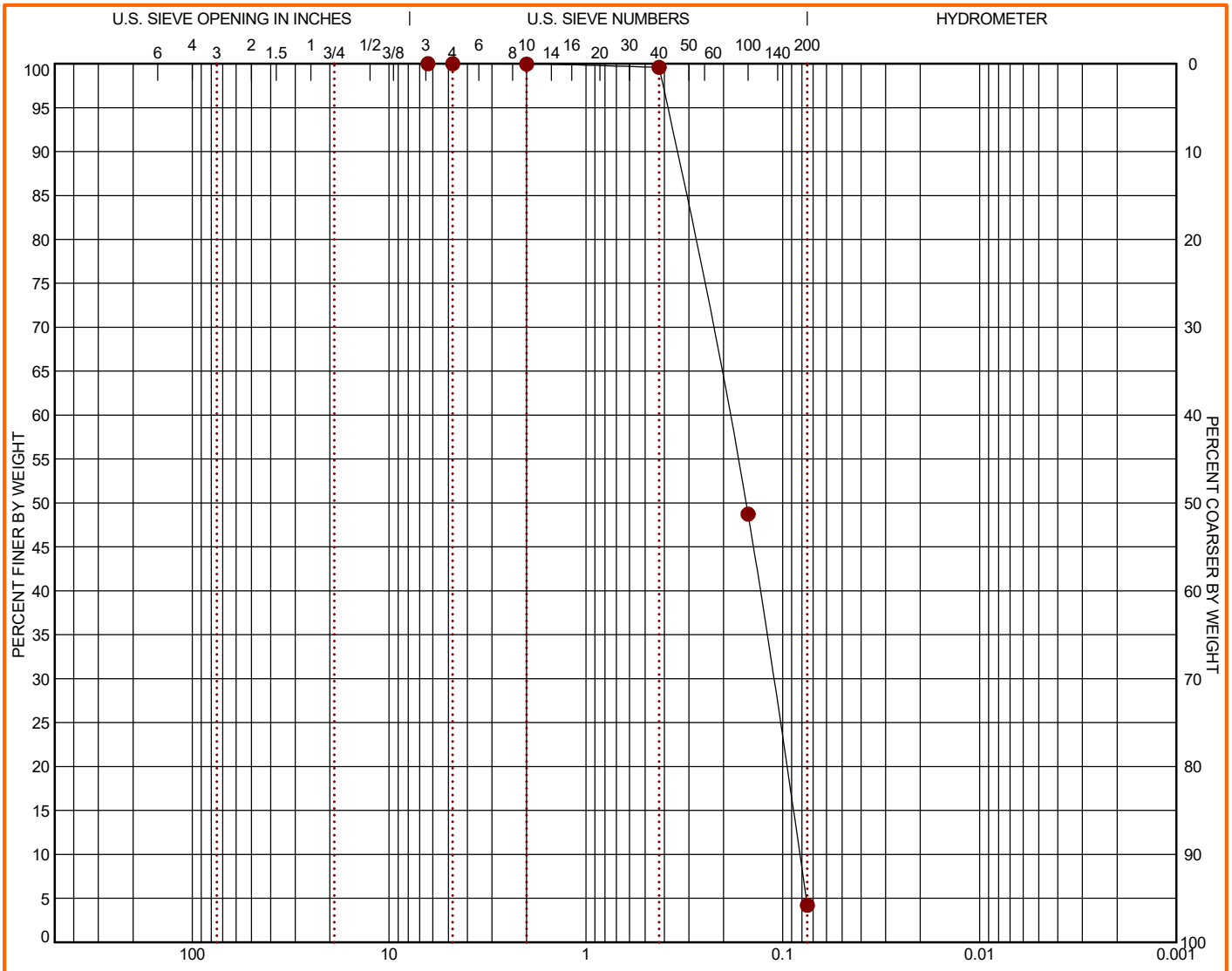
CLIENT: Scenic RE LLC
New York, NY

GRAIN SIZE: USCS 1 JB205071 STUDENT HOUSING.GPJ TERRACON_DATATEMPLATE.GDT 9/4/20

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT.

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BORING ID	DEPTH	% COBBLES	% GRAVEL	% SAND	% SILT	% FINES	% CLAY	USCS
●	B-4	5 - 7	0.0	0.0	95.8		4.2		SP

GRAIN SIZE			
	●		
D_{60}	0.189		
D_{30}	0.112		
D_{10}	0.082		

COEFFICIENTS			
	●		
C_C	0.81		
C_U	2.30		

●					
Sieve	% Finer	Sieve	% Finer	Sieve	% Finer
1/4"	100.0				
#4	100.0				
#10	99.96				
#40	99.58				
#100	48.73				
#200	4.21				

SOIL DESCRIPTION
● POORLY GRADED SAND (SP)

REMARKS
●

PROJECT: Proposed Student Housing

SITE: 1415 Washington Avenue
Albany, NY

Terracon
30 Corporate Cir Ste 201
Albany, NY

PROJECT NUMBER: JB205071

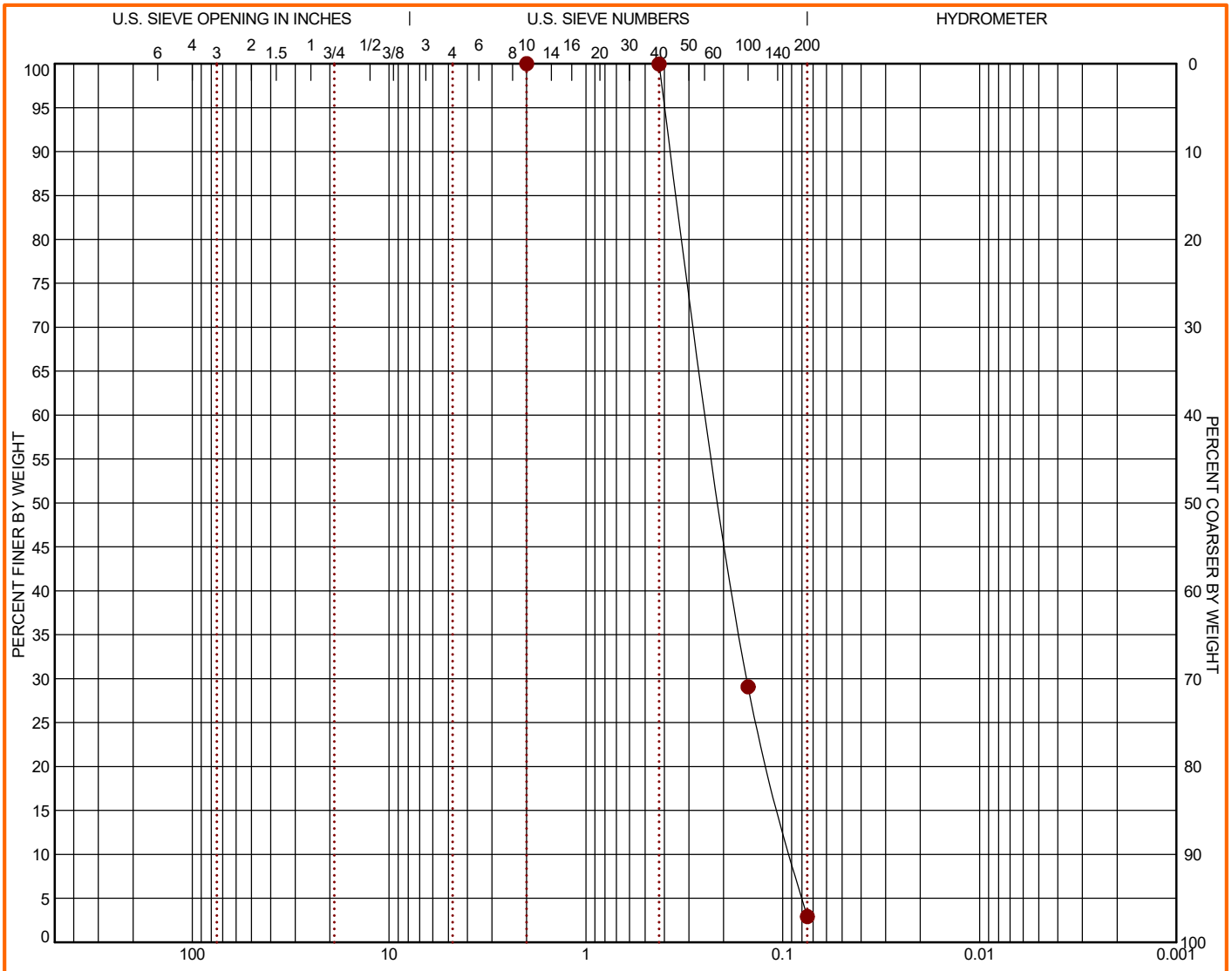
CLIENT: Scenic RE LLC
New York, NY

GRAIN SIZE: USCS 1 JB205071 STUDENT HOUSING.GPJ TERRACON_DATATEMPLATE.GDT 9/4/20

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT.

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BORING ID	DEPTH	% COBBLES	% GRAVEL	% SAND	% SILT	% FINES	% CLAY	USCS
●	B-5	5 - 6.5	0.0	0.0	97.1		2.9		SP

GRAIN SIZE			
	●		
D_{60}	0.236		
D_{30}	0.152		
D_{10}	0.09		

COEFFICIENTS			
	●		
C_C	1.08		
C_U	2.61		

●	Sieve	% Finer	Sieve	% Finer	Sieve	% Finer
	#10	100.0				
	#40	99.96				
	#100	29.08				
	#200	2.92				

SOIL DESCRIPTION
● POORLY GRADED SAND (SP)

REMARKS
●

PROJECT: Proposed Student Housing

PROJECT NUMBER: JB205071

SITE: 1415 Washington Avenue
Albany, NY

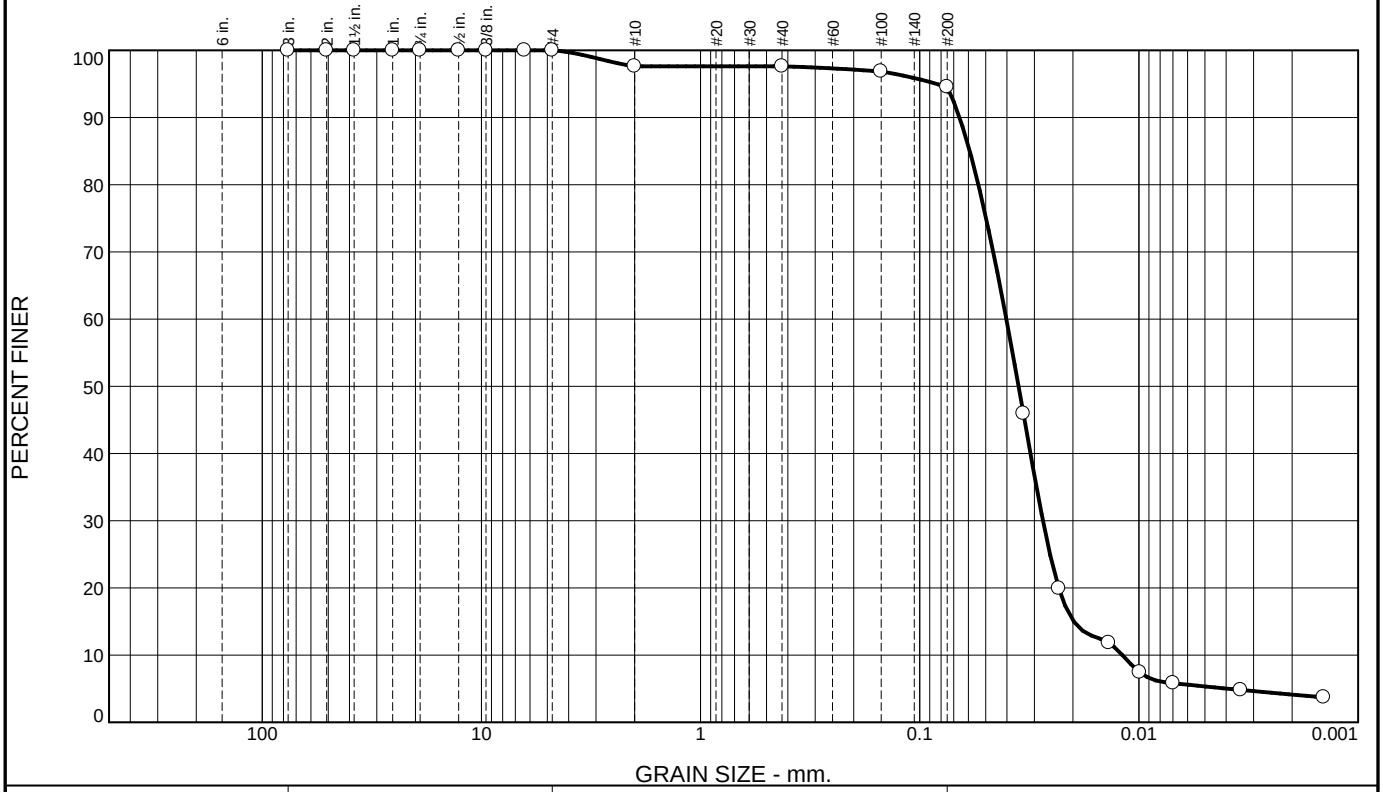
Terracon
30 Corporate Cir Ste 201
Albany, NY

CLIENT: Scenic RE LLC
New York, NY

GRAIN SIZE: USCS 1 JB205071 STUDENT HOUSING.GPJ TERRACON_DATATEMPLATE.GDT 9/4/20

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	2.4	0.0	3.1	89.2	5.3

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3"	100.0		
2"	100.0		
1.5"	100.0		
1"	100.0		
0.75"	100.0		
0.5"	100.0		
0.375"	100.0		
0.25"	100.0		
#4	100.0		
#10	97.6		
#40	97.6		
#100	96.8		
#200	94.5		

* (no specification provided)

Material Description

SILT, trace f-c sand and clay

Atterberg Limits

PL= NP LL= NP PI= NP

Coefficients

D_{90}= 0.0658 D_{85}= 0.0591 D_{60}= 0.0403
D_{50}= 0.0354 D_{30}= 0.0274 D_{15}= 0.0198
D_{10}= 0.0119 C_u= 3.38 C_c= 1.57

Classification

USCS= ML AASHTO= A-4(0)

Remarks

Per ASTM D422

Source of Sample: Soil Borings **Depth:** 45'-46.5'
Sample Number: B-6/S-11 **Date:** 9-2-20

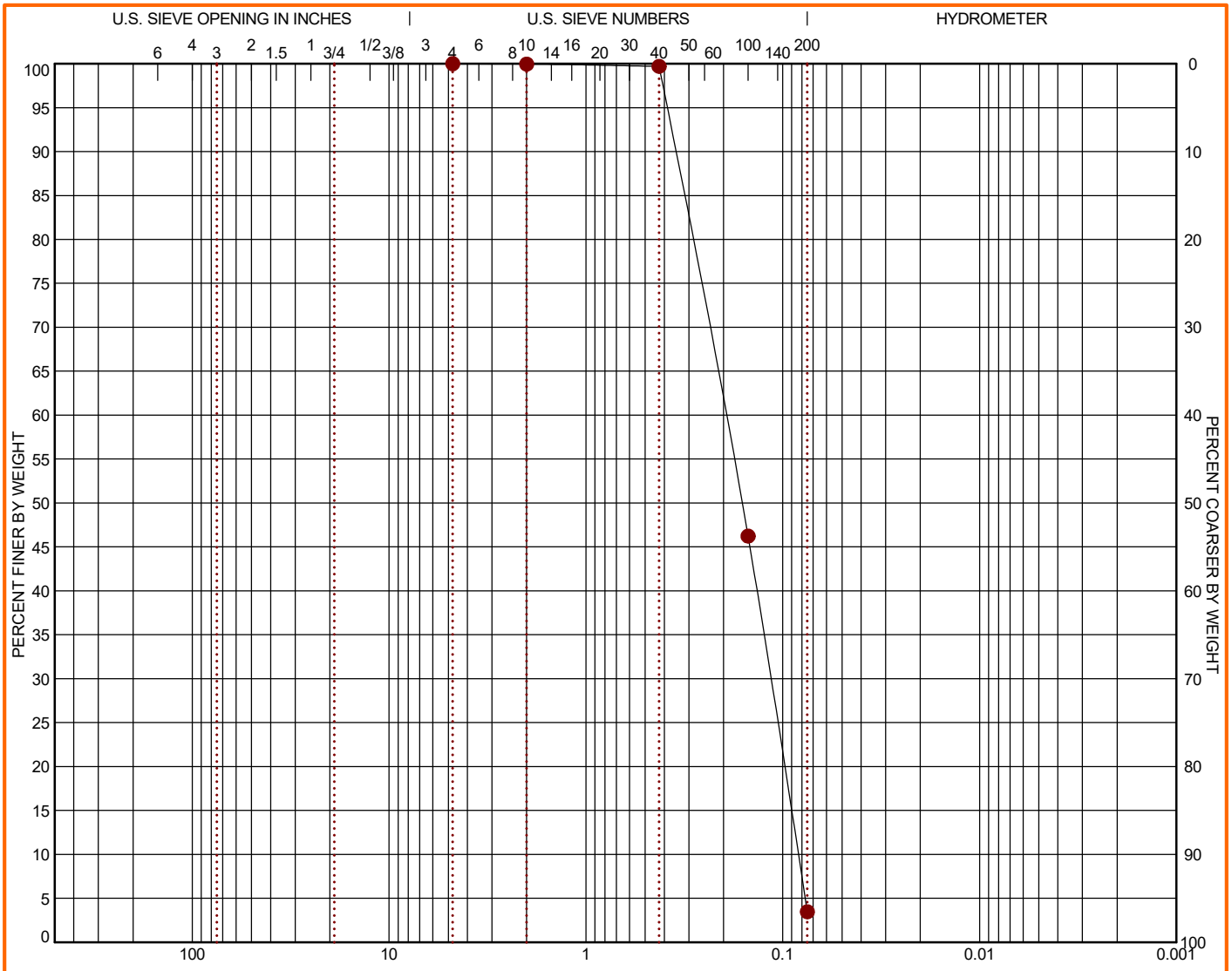
EVERGREEN TESTING, INC.
A Terracon Company
Watervliet, NY

Client: Scenic RE LLC
Project: Proposed Student Housing
Albany, NY
Project No: JB205071 **Figure** B-6/S-11

Tested By: AB **Checked By:** JH

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BORING ID	DEPTH	% COBBLES	% GRAVEL	% SAND	% SILT	% FINES	% CLAY	USCS
●	B-7	20 - 21.5	0.0	0.0	96.5		3.5		SP

GRAIN SIZE			
	●		
D_{60}	0.196		
D_{30}	0.115		
D_{10}	0.083		

COEFFICIENTS			
	●		
C_C	0.81		
C_U	2.35		

●					
Sieve	% Finer	Sieve	% Finer	Sieve	% Finer
#4	100.0				
#10	99.95				
#40	99.7				
#100	46.23				
#200	3.47				

SOIL DESCRIPTION
● POORLY GRADED SAND (SP)

REMARKS
●

PROJECT: Proposed Student Housing

PROJECT NUMBER: JB205071

SITE: 1415 Washington Avenue
Albany, NY

Terracon
30 Corporate Cir Ste 201
Albany, NY

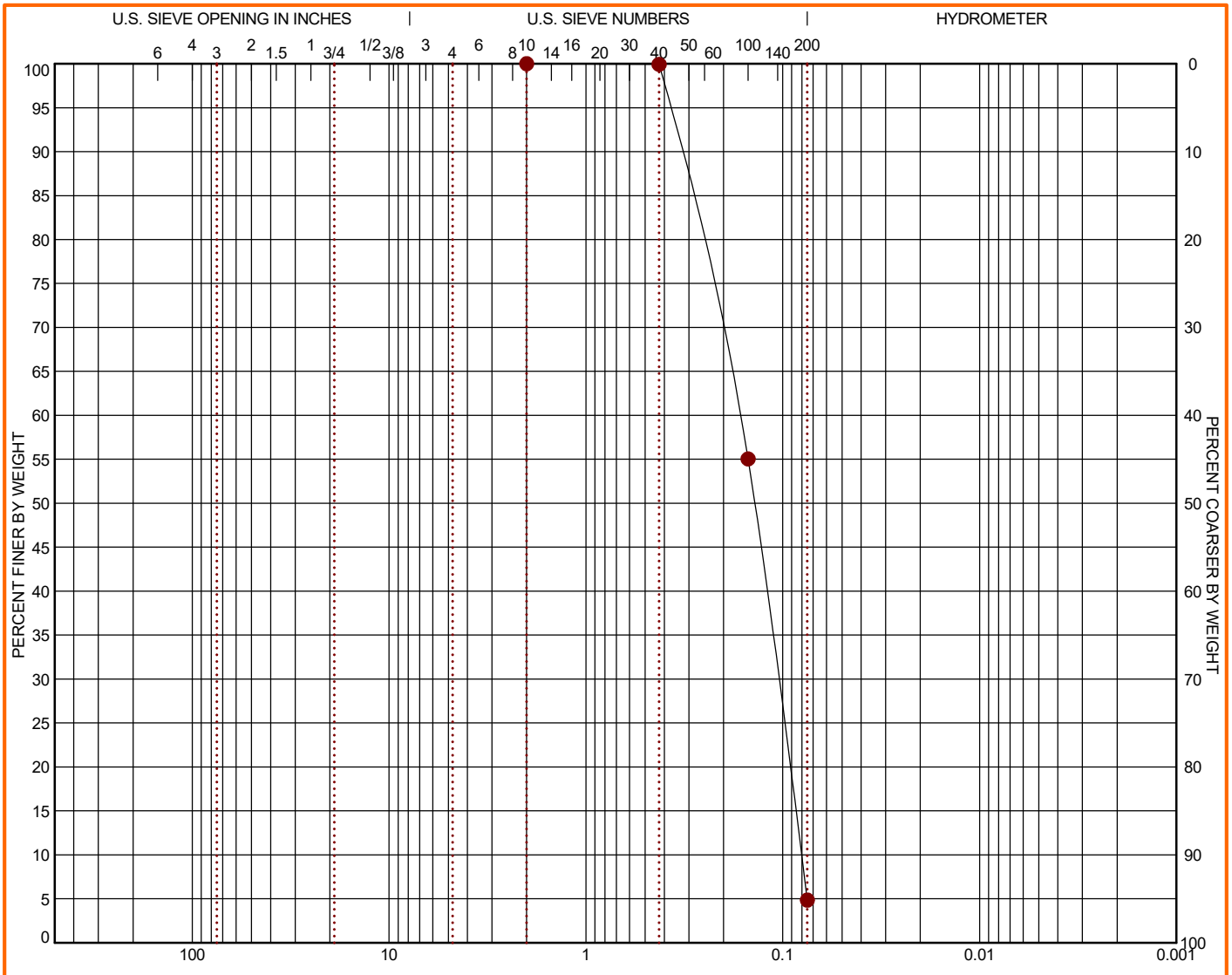
CLIENT: Scenic RE LLC
New York, NY

GRAIN SIZE: USCS 1 JB205071 STUDENT HOUSING.GPJ TERRACON_DATATEMPLATE.GDT 9/4/20

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT.

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BORING ID	DEPTH	% COBBLES	% GRAVEL	% SAND	% SILT	% FINES	% CLAY	USCS
●	B-8	15 - 17	0.0	0.0	95.1		4.9		SP

GRAIN SIZE			
	●		
D_{60}	0.168		
D_{30}	0.106		
D_{10}	0.081		

COEFFICIENTS			
	●		
C_C	0.83		
C_U	2.09		

● Sieve	% Finer	Sieve	% Finer	Sieve	% Finer
#10	100.0				
#40	99.92				
#100	55.05				
#200	4.86				

SOIL DESCRIPTION
● POORLY GRADED SAND (SP)

REMARKS
●

PROJECT: Proposed Student Housing

SITE: 1415 Washington Avenue
Albany, NY

Terracon
30 Corporate Cir Ste 201
Albany, NY

PROJECT NUMBER: JB205071

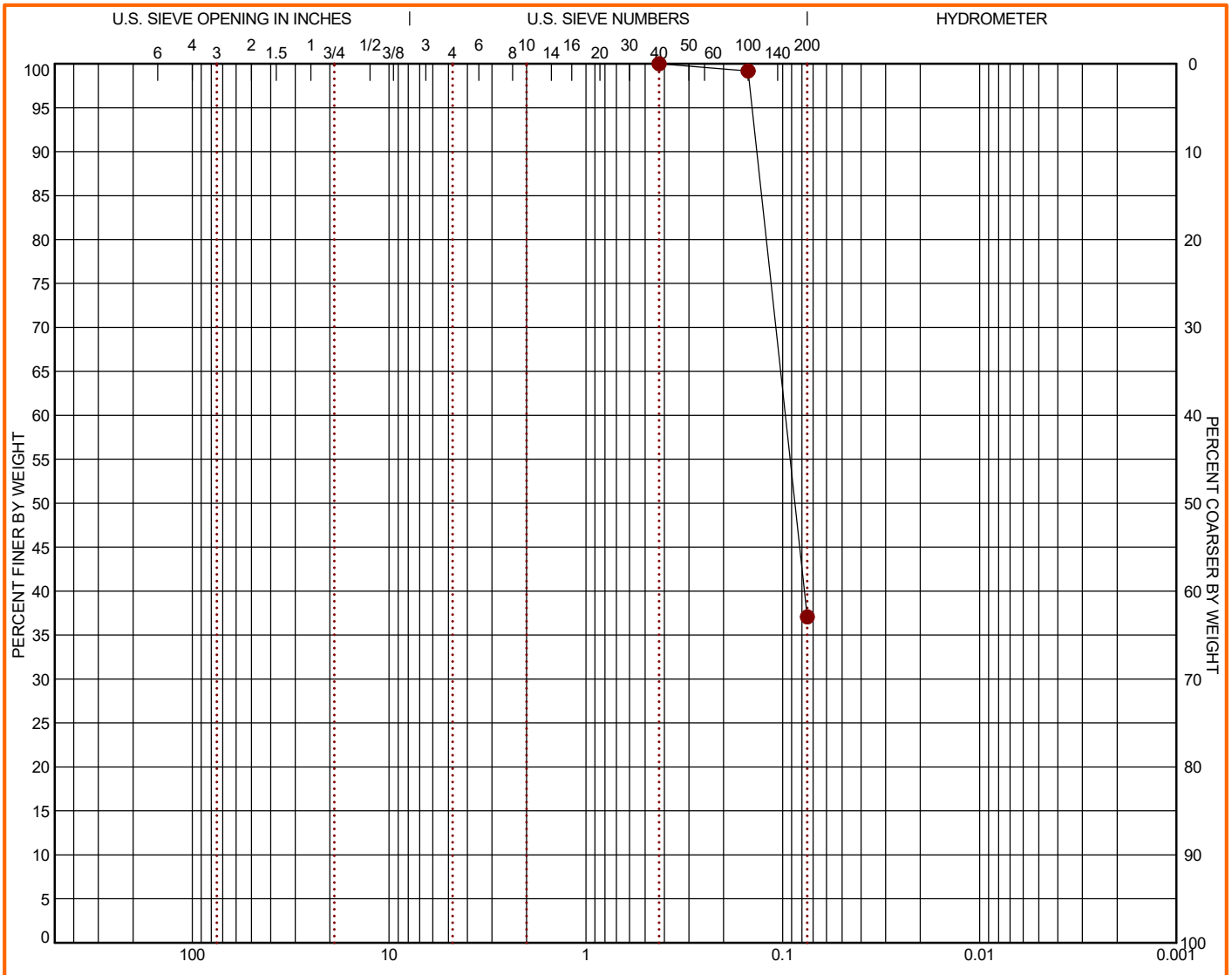
CLIENT: Scenic RE LLC
New York, NY

GRAIN SIZE: USCS 1 JB205071 STUDENT HOUSING.GPJ TERRACON_DATATEMPLATE.GDT 9/4/20

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT.

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BORING ID	DEPTH	% COBBLES	% GRAVEL	% SAND	% SILT	% FINES	% CLAY	USCS
●	B-9	50 - 52	0.0	0.0	62.9		37.1		SM

GRAIN SIZE			
	●		
D_{60}	0.097		
D_{30}			
D_{10}			

COEFFICIENTS			
	●		
C_C			
C_U			

● Sieve	% Finer	Sieve	% Finer	Sieve	% Finer
#40	100.0				
#100	99.17				
#200	37.08				

SOIL DESCRIPTION
● SILTY SAND (SM)

REMARKS
●

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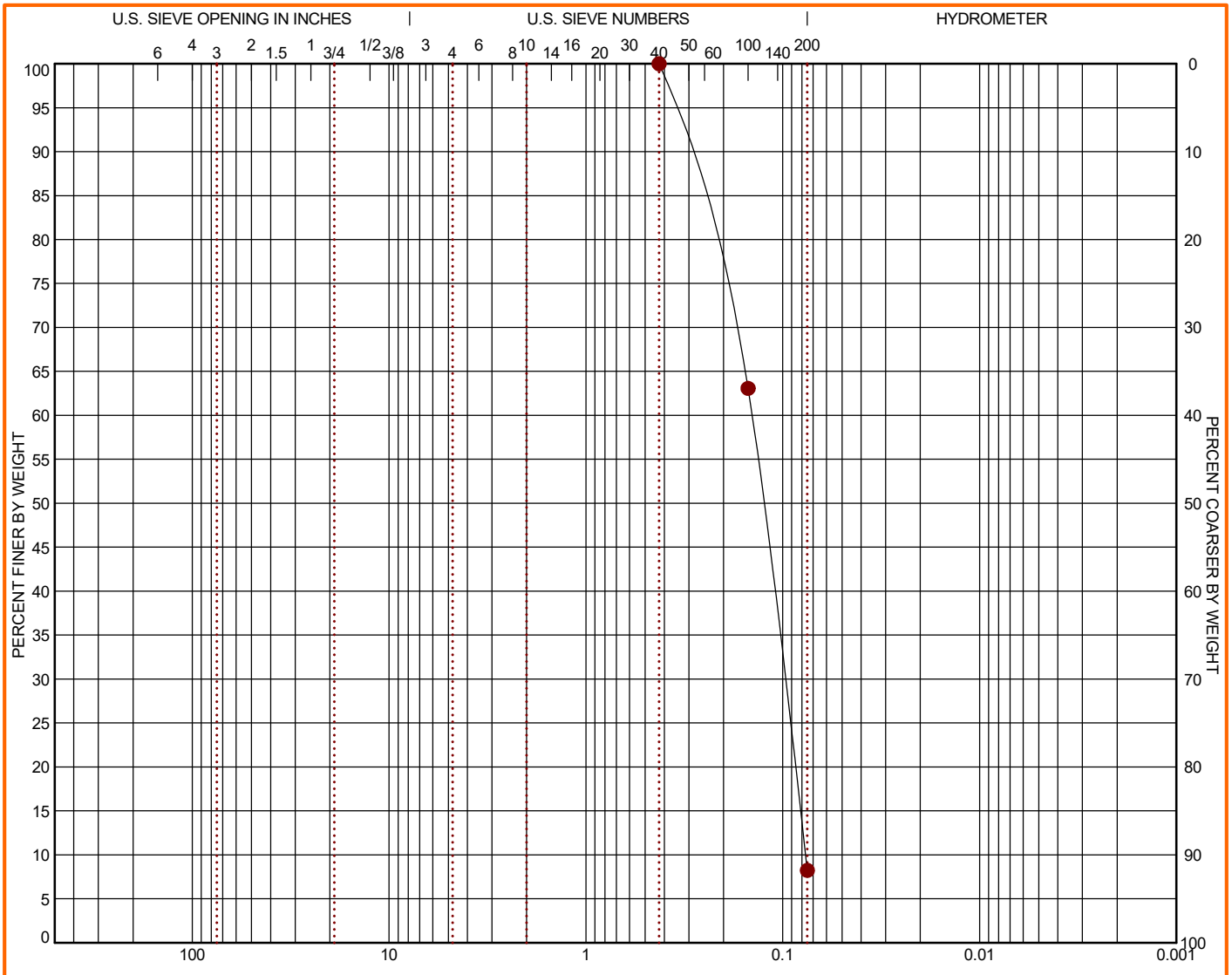
LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS 1 JB205071 STUDENT HOUSING.GPJ TERRACON_DATATEMPLATE.GDT 9/4/20

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BORING ID	DEPTH	% COBBLES	% GRAVEL	% SAND	% SILT	% FINES	% CLAY	USCS
●	B-10	10 - 11.5	0.0	0.0	91.8		8.2		SP-SM

GRAIN SIZE			
	●		
D_{60}	0.144		
D_{30}	0.099		
D_{10}	0.077		

COEFFICIENTS			
	●		
C_C	0.88		
C_U	1.88		

● Sieve	% Finer	Sieve	% Finer	Sieve	% Finer
#40	100.0				
#100	63.07				
#200	8.23				

SOIL DESCRIPTION
● POORLY GRADED SAND with SILT
(SP-SM)

REMARKS
●

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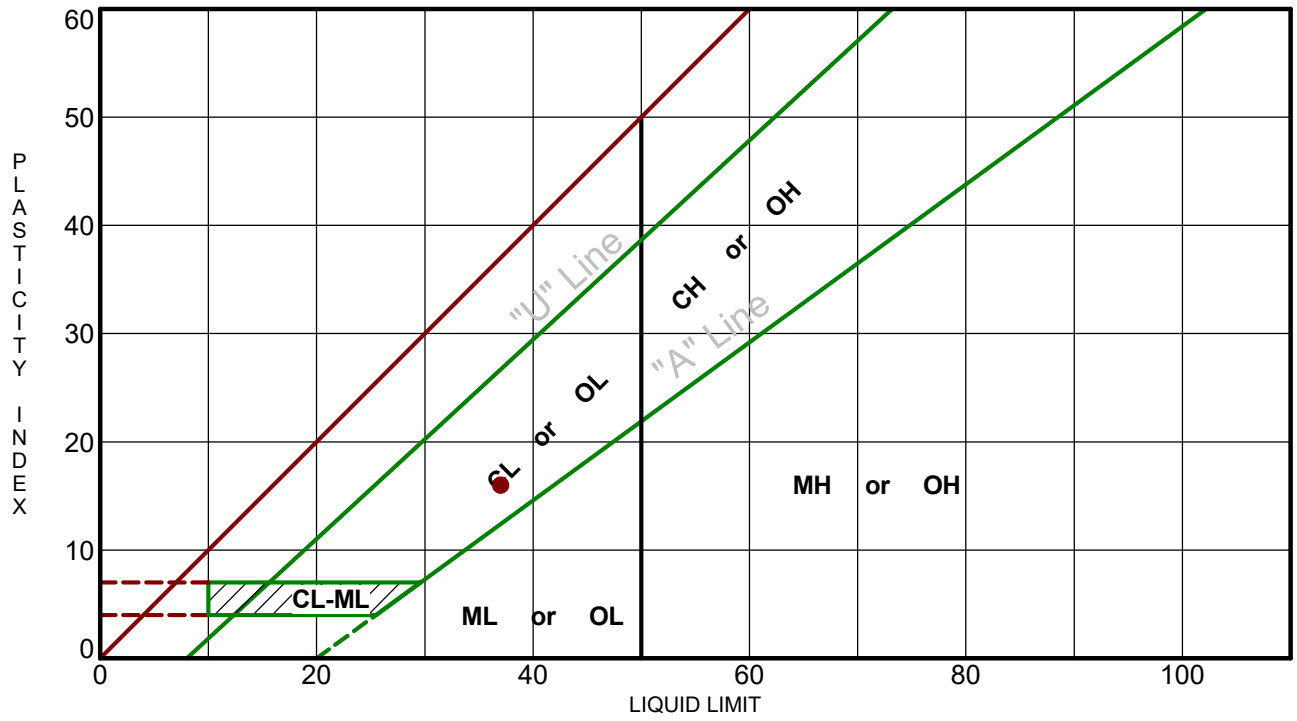
GRAIN SIZE: USCS 1 JB205071 STUDENT HOUSING.GPJ TERRACON_DATATEMPLATE.GDT 9/4/20

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT.

ATTERBERG LIMITS RESULTS

ASTM D4318



Boring ID	Depth	LL	PL	PI	Fines	USCS	Description
● B-11	70 - 71.5	37	21	16		CL	Lean Clay

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Summary of Laboratory Results

BORING ID	Depth (Ft.)	Water Content (%)
B-3	10 - 11.5	5
B-4	5 - 7	6.8
B-5	5 - 6.5	5.4
B-6	45 - 46.5	27.8
B-7	20 - 21.5	29.9
B-8	15 - 17	7
B-9	50 - 52	29.1
B-10	10 - 11.5	8.6
B-11	70 - 71.5	30.4

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SUPPORTING INFORMATION

Contents:

Note: All attachments are one page unless noted above

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS
Proposed Student Housing ■ Albany, NY
Terracon Project No. JB205071

SAMPLING	WATER LEVEL	FIELD TESTS
Split Spoon	**Water Initially Encountered** **Water Level After a Specified Period of Time** **Water Level After a Specified Period of Time** **Cave In Encountered** Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.	**N** Standard Penetration Test Resistance (Blows/Ft.) **(HP)** Hand Penetrometer **(T)** Torvane **(DCP)** Dynamic Cone Penetrometer **UC** Unconfined Compressive Strength **(PID)** Photo-Ionization Detector **(OVA)** Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification as noted on the soil boring logs is based Unified Soil Classification System. Where sufficient laboratory data exist to classify the soils consistent with ASTM D2487 "Classification of Soils for Engineering Purposes" this procedure is used. ASTM D2488 "Description and Identification of Soils (Visual-Manual Procedure)" is also used to classify the soils, particularly where insufficient laboratory data exist to classify the soils in accordance with ASTM D2487. In addition to USCS classification, coarse grained soils are classified on the basis of their in-place relative density, and fine-grained soils are classified on the basis of their consistency. See "Strength Terms" table below for details. The ASTM standards noted above are for reference to methodology in general. In some cases, variations to methods are applied as a result of local practice or professional judgment.

LOCATION AND ELEVATION NOTES

Exploration point locations as shown on the Exploration Plan and as noted on the soil boring logs in the form of Latitude and Longitude are approximate. See Exploration and Testing Procedures in the report for the methods used to locate the exploration points for this project. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Descriptive Term (Density)	**Standard Penetration or N-Value Blows/Ft.**	**Descriptive Term (Consistency)**	**Unconfined Compressive Strength Qu, (tsf)**	**Standard Penetration or N-Value Blows/Ft.**
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30
		Hard	> 4.00	> 30

RELEVANCE OF SOIL BORING LOG

The soil boring logs contained within this document are intended for application to the project as described in this document. Use of these soil boring logs for any other purpose may not be appropriate.

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]					Soil Classification	
					Group Symbol	Group Name [B]
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$ [E]		GW	Well-graded gravel [F]
			$Cu < 4$ and/or [Cc<1 or Cc>3.0] [E]		GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH		GM	Silty gravel [F, G, H]
			Fines classify as CL or CH		GC	Clayey gravel [F, G, H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$ [E]		SW	Well-graded sand [I]
			$Cu < 6$ and/or [Cc<1 or Cc>3.0] [E]		SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH		SM	Silty sand [G, H, I]
			Fines classify as CL or CH		SC	Clayey sand [G, H, I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots on or above "A"		CL	Lean clay [K, L, M]
			PI < 4 or plots below "A" line [J]		ML	Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay [K, L, M, N]
			Liquid limit - not dried			Organic silt [K, L, M, O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line		CH	Fat clay [K, L, M]
			PI plots below "A" line		MH	Elastic Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay [K, L, M, P]
			Liquid limit - not dried			Organic silt [K, L, M, Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve.

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.