ECS Florida, LLC

Geotechnical Engineering Report

Titusville Resort and Destination – Post Demolition Phase

3550 South Washington Avenue
Titusville, Brevard County, Florida 32780

ECS Project Number 56:1380-B

May 13, 2024 - Revised

ECS FLORIDA, LLC
"One Firm. One Mission."
Geotechnical • Construction Materials • Environmental • Facilities

May 13, 2024 - Revised

Mr. Jesse Wright, CEO
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Torrance, California 90505

ECS Project No. 56:1380-B

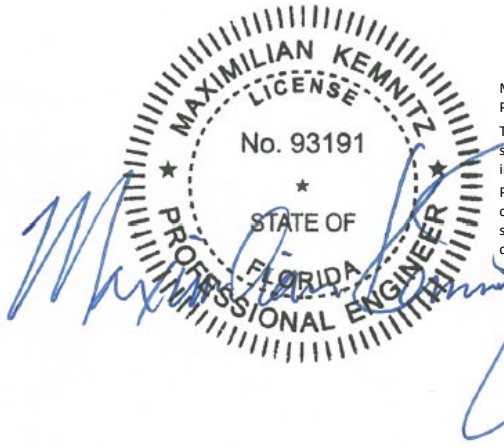
Reference: Geotechnical Engineering Report
Titusville Resort & Destination – Post Demolition Phase
3550 South Washington Avenue
Titusville, Brevard County, Florida 32780

Dear Mr. Wright:

ECS Florida, LLC (ECS) has completed the subsurface exploration, laboratory testing, and geotechnical engineering analyses for the above-referenced project (Phases 1 and 2). Our services were performed in general accordance with our agreed-to scope of work. This report presents our understanding of the geotechnical aspects of the project along with the results of the field exploration and laboratory testing conducted, and our foundation design and earthwork construction recommendations. This report includes the remainder of the required seven (7) additional Standard Penetration Test (SPT) borings performed within the razed building footprints, along with a pressure-meter test scope.

It has been our pleasure to be of service to **Titusville Resort and Destination, LLC** during the design phase of this project. We would appreciate the opportunity to remain involved during the construction phase operations as well to verify the assumptions of subsurface conditions made for this report. Please contact us if you have any questions concerning this report, or if we can be of further assistance.

Respectfully submitted,
ECS Florida, LLC



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EXECUTIVE SUMMARY

This Executive Summary is intended as a very brief overview of the primary geotechnical conditions that are expected to affect design and construction of the proposed Titusville Resort and Destination project, Phases 1 and 2, to be located at 3550 South Washington Avenue in Titusville, Brevard County, Florida. The project will include design and construction of one 4-story assisted living building and one 6-story multifamily residential building with an observation deck, along with a leasing/club house building and swimming pool, a 5-story hotel building with attached 1-story restaurant building and multiple 1-story commercial buildings with associated paved parking, drive areas and stormwater areas, rain garden and bioswales. Information gleaned from the Executive Summary should not be utilized in lieu of reading the entire geotechnical report.

- Based on the results of our exploration borings and pressuremeter testing, we consider the subsurface conditions at the site adaptable for support of the proposed structures on a properly designed conventional shallow foundation system with a maximum allowable bearing pressure of up to 5,000 psf. Provided the site preparation and earthwork construction recommendations outlined in Section 5.0 of this report are performed, the parameters presented in Section 4.1 of this report may be used for foundation design.

- We consider the subsurface conditions at the site favorable for support of flexible and rigid pavement sections when constructed on properly prepared subgrade soils as outlined in Section 5.0 of this report.

- Very loose to loose soils sands were encountered in the upper 2 to 10 feet below the existing ground surface at some of the boring locations. As outlined in Section 5.1.4, a heavy vibratory roller should be used to compact the surface soils below the proposed footings. To further compact the soil below the proposed hotel footprint, we recommend over-excavating the upper 3 feet of soil within foundation areas before compaction of the subgrade with the heavy vibratory roller. Dynamic cone penetrometer (DCP) soundings should also be performed subsequent to the surface soil heavy compaction operations to confirm densification of the sands as recommended herein. This recommendation is particularly important due to the higher allowable bearing pressure provided herein as a result of the pressuremeter testing performed by ECS.

- The fine sand (SP), fine sand with clay (SP-SC) and fine sand with silt (SP-SM) encountered at the stormwater management area boring locations from existing ground surface to depths of 10 feet below ground surface may be used as structural fill soil.

- The borings encountered groundwater at depths varying from 4.5 to 6 feet below the existing ground surface at the time of our exploration, and the normal seasonal high groundwater level is estimated to be up to 1-foot higher than the levels estimated at the time of drilling. Groundwater control may be necessary in order to compact the existing soils and install shallow foundations. Temporary groundwater control measures will be required for deeper excavations, such as those typically required to install utilities.

- Boring locations PB-03 through PB-05 are considered preliminary for Phase 3, including Buildings A, B, C, and D, as shown on the Boring Location Diagram, and additional borings are recommended to determine final geotechnical design recommendations for this phase of the project once the remaining shopping mall buildings are demolished.

- We recommend that ECS be provided the opportunity to review the foundation plans and earthwork specifications to verify that our recommendations have been properly interpreted and implemented. ECS should also be retained to perform the construction material testing and observations required for this project, to verify that our recommendations have been satisfied.

1.0 INTRODUCTION

The purpose of this study was to provide geotechnical information for the design of foundations, pavements, and stormwater management facilities for Titusville Resort and Destination, Phase 1 and 2. The project will include design and construction of one 4-story assisted living building and one 6-story multifamily residential building with an observation deck, along with a leasing/club house building and swimming pool, a 5-story hotel building with attached 1-story restaurant building and multiple 1-story commercial buildings with associated paved parking, drive areas and stormwater areas, rain garden and bioswales.

Our services were provided in general accordance with our Proposal No. 56-0964, dated February 28, 2024, and as authorized by you on March 12, 2024, which includes our Terms and Conditions of Service.

This report contains the procedures and results of our subsurface exploration and laboratory testing programs, review of existing site conditions, engineering analyses, and recommendations for the design and construction of the project.

The report includes the following items:

- A brief review and description of our field and laboratory test procedures and the results of testing conducted.
- A review of surface topographical features and site conditions.
- A review of area and site geologic conditions.
- A review of subsurface soil stratigraphy with pertinent available physical properties.
- Final copies of our soil boring logs for pre- and post-demolition phases.
- Recommendations for foundation design parameters, including our estimate of the performance of the foundation system. Updated recommendations include the results of pressuremeter testing for Buildings F, G and H.
- Swimming pool recommendations
- General recommendations for pavement design.
- Stormwater pond considerations and the results of permeability testing.
- Recommendations for site preparation and construction of compacted fills, including an evaluation of on-site soils for use as compacted fills.

2.0 PROJECT INFORMATION

2.1 PROJECT LOCATION/CURRENT SITE USE

The project site is located at 3550 South Washington Avenue, Titusville, Florida. The site was bordered to the north and south by residential properties, to the east by South Washington Avenue (US Highway 1) and to the west by South Hopkins Avenue. The general site location is shown below; the aerial photograph is showing site conditions as they existed pre-demolition.

Site Location

At the time of our exploration, the site was developed with the western portion of the previously existing 286,348 SF single story shopping mall building; the eastern half of the mall building in the area of proposed Buildings F, G and H (Phases 1 and 2) had been demolished. Asphalt paved parking and drive areas still existing around the existing/former building locations. Based on available site survey information provided to ECS, the site elevation in the area of the current borings was approximately El. 11, and remaining site areas ranged from approximately El. 8 to 11.

2.2 PAST SITE HISTORY/USES

ECS has reviewed aerial photographs of the subject site on Google Earth. The aerial photographs reviewed were dated 1984, 1994, 1999, 2002, 2003, 2004, 2005, 2006, 2007, 2009, 2010, 2012, 2013, 2014, 2016, 2017 and 2020. The 1984 aerial photograph shows the site developed with the current mall structures. The 1999 through 2020 aerial photographs showed no major changes in the site features.

2.3 SOIL SURVEY MAPPING

Based on the Web Soil Survey for Brevard County, Florida, as prepared by the U.S. Department of Agriculture Natural Resource Conservation Service, the predominant soil types existing within the site area are described in the following table. The site area is illustrated superimposed on the USDA-NRCS Soil Survey Map included as the following figure:

Web Soil Survey Data

Soil Type	Constituents	Drainage Class	Water Table
50 - Pomello-Urban Land Complex	Sand	Moderately Well drained	About 24 to 42 inches
69 - Urban Land, 0 to 2 percent slopes	Sand	Well Drained	-

Urban Land:

Urban land (Ur) consists of areas that are 60 to more than 75 percent covered with streets, buildings, large parking lots, shopping centers, industrial parks, airports, and related facilities. Unoccupied areas, mostly lawns, parks, vacant lots, and playgrounds, are Astatula, Paola, Myakka, St. Lucie, Immokalee, Pomello, Cocoa, and Ca-naveral soils in tracts too small to be mapped separately. Not assigned to a capability unit, range site, or woodland group.

Soil mapping of the site vicinity included soil types and numbers are presented in figure below, obtained from the USDA Web Soil site.

Site Soil Survey

2.4 PROPOSED CONSTRUCTION

We understand the proposed construction includes one 4-story assisted living building and one 6-story multifamily residential building along with a leasing/club house building and swimming pool, a 5-story hotel building with attached 1-story restaurant building and multiple 1-story commercial buildings with associated paved parking, drive areas and stormwater areas, rain garden and bioswales. We were provided by CES Design Group, Inc. estimated structural loading for the assisted living/multifamily residential buildings (Buildings F and G), of 40 kips per linear foot (klf) maximum wall and 300-kip maximum column loads. For the proposed hotel building (Building F), we have presumed maximum wall, column, and floor loads of 30 klf, 500 kips, and 250 pounds per square foot (psf), respectively. We also expect that less than 2 feet of fill (and only nominal cuts) will be required to achieve final grades in structural areas.

The following information explains our understanding of the planned development including proposed buildings and related infrastructure.

Design Values for Residential Apartment Buildings G and H

SUBJECT	DESIGN INFORMATION / EXPECTATIONS
# of Buildings	2
# of Stories	6-Story Maximum
Usage	Assisted Living/Multifamily Residential
Framing	Reinforced concrete with some steel framing and concrete slab on grade (provided)
Column Loads	300 kips (Full Dead and Factored Live) (provided)
Wall Loads	40 kips per linear foot (klf) maximum (provided)
Floor Loads	250 pounds per square foot (psf) maximum (assumed)

Design Values for Restaurant and Commercial Buildings – Phase 1 and 3

SUBJECT	DESIGN INFORMATION / EXPECTATIONS
# of Buildings	3
# of Stories	1- to 2-Story Maximum
Usage	Commercial
Framing	Masonry and/or wood-frame with concrete slab-on-grade (assumed)
Column Loads	Estimated 50 kips (Full Dead and Factored Live) (assumed)
Wall Loads	Estimated 3 kips per linear foot (klf) maximum (assumed)
Floor Loads	150 pounds per square foot (psf) maximum (assumed)

Design Values for Hotel Building F

SUBJECT	DESIGN INFORMATION / EXPECTATIONS
# of Stories	5-Story Maximum
Usage	Hotel
Framing	Reinforced concrete with some steel framing and concrete slab on grade (provided)
Column Loads	Estimated 500 kips (Full Dead and Factored Live) (assumed)
Wall Loads	Estimated 30 kips per linear foot (klf) maximum (assumed)
Floor Loads	250 pounds per square foot (psf) maximum (assumed)

*If the provided and assumed structural loads differ from final design loads, this report needs to be revised to update and/or modify our foundation recommendations, bearing capacity, and settlement calculations.

3.0 FIELD EXPLORATION AND LABORATORY TESTING

Our exploration procedures are explained in greater detail in Appendix B including the insert titled Subsurface Exploration Procedures. Our scope of exploration work included drilling the following:

Pre-demolition scope -

- Standard Penetration Test (SPT) Borings B-01 to B-09, P-01 and PB-01 to PB-06, and Auger Borings R-01 to R-07. Borings PB-03 to PB-05 were performed in the Phase 3 area of the proposed development.

Post-demolition scope -

- SPT Borings BF-01 to BF-07 along with performing pressuremeter testing at three locations (PM-01 to PM-03) on the site (see Section 3.2, Pressuremeter Testing).

Our borings were located with a handheld GPS unit and their approximate locations are shown on the Boring Location Diagram (Figure 2) in Appendix A.

3.1 SUBSURFACE CHARACTERIZATION FROM BORINGS

The subsurface conditions encountered were generally consistent with published geological mapping. The following sections provide generalized characterizations of the soil strata. Please refer to the boring logs in Appendix B.

Subsurface Stratigraphy of SPT Borings

Approximate Depth Range (ft)	Stratum	Description	Ranges of SPT[(1)] N-values (bpf)
0 – 0.4 to 0.7	N/A	Topsoil[(2)]	---
0.4 to 0.7 – 35 to 50	I	Very Loose to Very Dense Fine Sand (SP), Fine Sand with Claye (SP-SC) and Fine Sand with Silt (SP-SM), often contains significant shell fragments	4 to 53
35 to 50 – 65 to 75	II	Medium Dense to Dense Fine Sand with Clay (SP-SC) and Clayey Fine Sand (SC), often contains significant shell fragments	7 to 37
65 to 70 – 75	III	Soft to Hard, Limestone[(2)]	22 to 54

Notes: (1) Standard Penetration Test.

(2) Topsoil or limestone were not encountered in the post-demolition Borings BF-01 to BF-07.

Subsurface Stratigraphy of Pavement (Auger) Borings

Approximate Depth Range (ft)	Stratum	Description
0 – 0.4 to 0.7	N/A	Topsoil
0.4 to 0.7 – 6	I	Fine Sand (SP)

3.2 PRESSUREMETER TESTING

To optimize the net allowable bearing pressures for foundation design at the site, ECS has performed pressuremeter testing. In the pressuremeter test, a radially expanding cylindrical probe is directly pushed into the soil at the desired test depth. After insertion, the probe is expanded incrementally against the side of the surrounding soil with pressurized liquid. Each pressure increment is maintained until the readings stabilize. The pressure increments are continued until failure of the soil is reached. The change in diameter of each hole under each pressure increment is measured by the volume change in the center portion of the probe.

By plotting the probe volume versus pressure, a stress-volumetric strain curve is obtained. From this curve, the pressuremeter modulus is determined, which is derived from the slope of the stress-volumetric strain curve in the elastic zone. The pressuremeter modulus is used to estimate the soil elastic modulus, which is used to estimate foundation (and other loaded area) settlements. The Pressuremeter Testing was performed at the locations PM-01 to PM-03 (see Figure 2, Appendix A). ECS notes that the test results from location PM-02 were not considered reliable; therefore, only the results from PM-01 and PM-03 were used to determine net allowable bearing capacity for design recommendations. The results of the pressuremeter testing are presented in Appendix D.

3.3 GROUNDWATER OBSERVATIONS

Groundwater levels were measured during our field exploration and are presented in our boring logs in Appendix B. Groundwater depths measured at the time of drilling ranged from 3.5 to 6 feet below the ground surface. Variations in the long-term water table may occur as a result of changes in precipitation, evaporation, surface water runoff, construction activities, and other factors.

Estimated Seasonal High Groundwater

The normal seasonal high groundwater level is affected by a number of factors. The drainage characteristics of the soils, land surface elevation, relief points such as drainage ditches, lakes, rivers, swamp areas, etc., and distance to relief points are some of the more important factors influencing the seasonal high groundwater level.

Based on our interpretation of the site conditions, including the boring logs and Web Soil Survey, we estimate the normal seasonal high groundwater level at the boring locations to be up to 1.5 feet higher than the depths encountered in our borings, as shown on the Boring Logs. It is possible that groundwater levels may exceed the estimated normal seasonal high groundwater level as a result of significant or prolonged rains.

3.4 LABORATORY TESTING

Each sample was visually classified on the basis of texture and plasticity in accordance with ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedures) and including USCS classification symbols, and ASTM D2487 Standard Practice for Classification for Engineering Purposes (Unified Soil Classification System (USCS)). After classification, the samples were grouped in the major zones noted on the boring logs in Appendix B. The group symbols for each soil type are indicated in parentheses along with the soil descriptions. The stratification lines between strata on the logs are approximate; in situ, the transitions may be gradual.

The laboratory testing consisted of selected tests performed on samples obtained during our field exploration operations. Classification and index property tests were performed on representative soil samples and included percent fines tests (ASTM D1140), moisture content tests (ASTM D2216), Atterberg Limits (ASTM D4318) and falling head permeability tests (ASTM D5084-16a).

4.0 DESIGN RECOMMENDATIONS

4.1 FOUNDATION AREA PREPARATION

Very loose to loose soils sands were encountered in the upper 2 to 10 feet below the existing ground surface at some of the boring locations. As outlined in Section 5.1.4, a heavy vibratory roller should be used to compact the surface soils below the proposed footings. To further compact the soil below the proposed hotel footprint, we recommend over-excavating the upper 3 feet of soil within foundation areas before compaction of the subgrade with the heavy vibratory roller. After subgrade compaction, the over-excavated sandy soils can be reused as the compacted structural backfill. Dynamic cone penetrometer (DCP) soundings, performed by hand, should also be performed subsequent to the surface soil heavy compaction operations to confirm densification of the sands within the upper 4 feet of the footing bearing elevations. This recommendation is particularly important due to the higher allowable bearing pressure provided herein as a result of the pressuremeter testing performed by ECS.

4.2 FOUNDATION DESIGN

Provided subgrades and structural fills are prepared as recommended in this report, including necessary over-excavation at the hotel location, proof-rolling, and compaction at existing subgrade or footing bottom elevation (hotel area) with a heavy vibratory drum roller – followed by verification (Quality Control) testing, the proposed structures can be supported by shallow column and continuous wall footings using the following parameters:

Apartment Buildings G and H Foundation Parameters – Phase 1

Design Parameter	Column Footing	Wall Footing
Minimum Width	24 inches	24 inches
Minimum Footing Embedment Depth (below slab or finished grade)	24 inches	18 inches
Estimated Maximum Total Settlement[1]	1 inch	1 inch
Estimated Maximum Differential Settlement[2]	Less than ½ inches between columns	Less than ½ inches over 50 feet
Net Allowable Bearing Pressure[3]	**3,000 psf at 18-inch embedment depth (walls) 5,000 psf at 24-inch embedment (columns and walls)**	
Acceptable Bearing Soil Material	Medium Dense Fine Sand (SP) – Stratum I or Compacted Fill	

Hotel Building F Foundation Parameters – Phase 2

Design Parameter	Column Footing	Wall Footing
Minimum Width	24 inches	24 inches
Minimum Footing Embedment Depth (below slab or finished grade)	24 inches	18 inches
Estimated Maximum Total Settlement[1]	1 inch	1 inch
Estimated Maximum Differential Settlement[2]	Less than ½ inches between columns	Less than ½ inches over 50 feet
Net Allowable Bearing Pressure[3]	**3,000 psf at 18-inch embedment depth (walls) 5,000 psf at 24-inch embedment (columns and walls)**	
Acceptable Bearing Soil Material	Medium Dense Fine Sand (SP) – Stratum I or Compacted Fill	

Commercial Buildings Foundation Parameters – Phase 1

Design Parameter	Column Footing	Wall Footing
Minimum Width	24 inches	18 inches
Minimum Footing Embedment Depth (below slab or finished grade)	18 inches	18 inches
Estimated Maximum Total Settlement[1]	1 inch	1 inch
Estimated Maximum Differential Settlement[2]	Less than ½ inches between columns	Less than ½ inches over 50 feet
Net Allowable Bearing Pressure[3]	2,500 psf	
Acceptable Bearing Soil Material	Medium Dense Fine Sand (SP) – Stratum I or Compacted Fill	

1. Based on estimated structural loads. If final loads are different, ECS must be contacted to update foundation recommendations and settlement calculations.
2. Based on maximum column/wall loads and variability in borings. Differential settlement can be re-evaluated once the foundation plans are more complete.
3. Net allowable bearing pressure is the applied pressure in excess of the surrounding overburden soils above the base of the foundation.

Depending on the final floor elevations of the buildings, we anticipate that most of the soils at the foundation bearing elevation are anticipated to be suitable for support of the proposed structures, after preparation in accordance with Section 5.0 of this report. The bearing level soils, after compaction, should exhibit densities equivalent to 95 percent of the modified Proctor maximum dry density (ASTM D 1557) to a depth of at least one foot below foundation bearing levels.

For turn down slabs and interior wall footings the minimum width should also be 18 inches, however the sloped transition portion of the turn-down may be included when determining the footing width. Even though the maximum allowable soil bearing pressure may not be achieved, these width recommendations should control the size of the foundations.

4.3 SLABS ON GRADE

The floor slabs can be constructed as a slab-on-ground, provided the site is prepared as outlined in Section 5.0. A minimum clearance of 2 feet is recommended between the estimated seasonal high groundwater table and the bottom of the floor slab. It is recommended the floor slab bearing soils be covered with an impervious membrane to reduce moisture entry and floor dampness. A 6-mil thick plastic membrane is commonly used for this purpose. Care should be exercised not to tear

large sections of the membrane during placement of reinforcing steel and concrete. In addition, we recommend that a minimum separation of two feet be maintained between the finished floor levels and the estimated normal seasonal high groundwater level.

Subgrade Modulus: Provided the placement of structural fill per the recommendations discussed herein, the slab may be designed assuming a modulus of subgrade reaction, k_1 of 150 pci (lbs/cu. inch). The modulus of subgrade reaction value is based on a 1 ft by 1 ft plate load test basis.

4.4 PAVEMENTS

Based on the results of our exploration, we consider the subsurface conditions at the site favorable for support of a flexible or rigid pavement section when constructed on properly prepared subgrade soils as outlined in Section 5.0 of this report. Typical pavement sections used in northeast Florida are presented in the following sections. If requested, we can prepare a project-specific pavement design if specific traffic data is provided.

In general, heavy duty sections are areas that will be subjected to trucks, buses, or other similar vehicles including main drive lanes of the development. Light duty sections are appropriate for vehicular traffic and parking areas.

4.4.1 Flexible Pavement Recommendations

TYPICAL FLEXIBLE PAVEMENT SECTIONS		
MATERIAL	**LIGHT DUTY**	**HEAVY DUTY**
Asphaltic Concrete Surface Course (SP-9.5 or Type S)	1.5 inches	2 inches
Limerock Base	6 inches	8 inches
Stabilized Subgrade	12 inches	12 inches

Base and Subgrade: The limerock base course should have a minimum Limerock Bearing Ratio (LBR) of 100 and should be compacted to 98 percent of the modified Proctor maximum dry density (ASTM D 1557) value.

The subgrade material should have a minimum LBR of 40 and be compacted to 98 percent of the modified Proctor maximum dry density (ASTM D1557) value.

Underdrains: Satisfactory pavement life is dependent on dry/strong pavement support provided by the base and subgrade courses. Accordingly, a minimum clearance of 2 feet must be maintained between the normal seasonal high groundwater table and the bottom of the limerock base layer. Depending on final pavement grades, FDOT Type I or II underdrains may be required to maintain dry base and subgrade materials.

4.4.2 Rigid Pavement Recommendations

Our recommendations for slab thickness for standard duty and heavy duty concrete pavements are based on a) subgrade soils densified to 98 percent of the modified Proctor maximum dry density (ASTM D1557) b) modulus of subgrade reaction (k) equal to 200 pounds per cubic inch, c) a 20 year design life.

TYPICAL RIGID PAVEMENT SECTIONS		
	LIGHT DUTY	**HEAVY DUTY**
Minimum Concrete Thickness	5 inches	6 inches
Maximum Control Joint Spacing	10 feet x 10 feet	12 feet x 12 feet
Recommended Sawcut Depth	1 ¼ inches	1 ½ inches

We recommend using concrete with a minimum 28-day compressive strength of 4,000 psi and a minimum 28-day flexural strength (modulus of rupture) of at least 600 pounds per square inch, based on 3rd point loading of concrete beam test samples. Layout of the sawcut control joints should form square panels. The joints should be sawed within six hours of concrete placement or as soon as the concrete has developed sufficient strength to support workers and equipment. We recommend allowing ECS to review and comment on the final concrete pavement design, including section and joint details (type of joints, joint spacing, etc.), prior to the start of construction.

For further details on concrete pavement construction, please reference the "Guide to Jointing on Non-Reinforced Concrete Pavements" published by the Florida Concrete and Products Associates, Inc., and "Building Quality Concrete Parking Areas", published by the Portland Cement Association.

4.5 STORMWATER MANAGEMENT FACILITIES

4.5.1 Soil Permeability Rate

The results of the permeability tests indicated the following vertical/horizontal permeabilities:

Laboratory Permeability Results

Test Location	Soil Type	Test Depth (feet)	Measured Mean Permeability (ft/day) K_m	Estimated Horizontal Permeability (ft/day) K_h	Estimated Vertical Permeability (ft/day) K_v
R-2	SP	4 to 6	19.2	19.2	19.2
R-3	SP	4 to 6	16.0	16.0	16.0
P-1	SP-SM	4 to 6	2.2	3.3	2.2
BF-05	SP	4 to 6	12.3	12.3	12.3
BF-06	SP-SM	4 to 6	10.8	13.2	8.8
BF-07	SP-SM	4 to 6	3.8	4.7	3.1

Note the laboratory permeability tests performed are remolded samples from our soil boring samples. For pond design calculations, we recommend an appropriate factor of safety be applied to the above permeability values.

4.5.2 Borrow Suitability

Based on the boring results and classification of the soil samples, the predominant fine sand, fine sand with silt and fine sand with clay (SP, SP-SM, SP-SC), as encountered in the borings, are able to

be used as structural fill soil. Clayey sand (SC) soils may be encountered in the near surface materials at the site and are not recommended for use as structural fill without the approval of the geotechnical engineer.

It should be anticipated that the soils in the proposed pond areas below the groundwater level will have moisture contents in excess of the Modified Proctor optimum moisture content. This will require stockpiling or spreading to drain the excess moisture. Generally, the wet soils should be dried to bring the soil moisture content within ±2 percent of the soil's optimum moisture content to facilitate placement and compaction.

4.6 BELOW GRADE POOL DESIGN RECOMMENDATIONS

4.6.1 General

Based on the results of the boring performed within the proposed swimming pool structure area, it is our opinion that the soils encountered at the boring locations are adaptable for support of the proposed pool construction. We anticipate that the pool structures will exert little or no net downward pressure on the soils; rather, the structure may be subject to hydrostatic uplift pressure when the pool is empty. Below-grade structures should be designed to resist lateral earth pressures and hydrostatic uplift pressures appropriate for their depth below existing grade and wet season groundwater table.

The walls of the structure should be designed to resist at-rest lateral earth pressures, with equivalent fluid densities above and below the water table being as follows:

- Above Water Table - Equivalent Fluid Density 60 pcf
- Below Water Table - Equivalent Fluid Density 90 pcf

For wall design purposes, the groundwater level should be assumed to be at prevailing grade.

4.6.2 Uplift Protection

When the water level within below-grade pool structures is maintained at or above the surrounding groundwater level, no net buoyancy will occur to the structure. However, a positive means of uplift protection will be necessary when the pool structure is drained for maintenance or as water levels fluctuate within the pool. Hydrostatic uplift forces can be resisted in several ways including:

1. Addition of dead weight to the structure.
2. Mobilizing the dead weight of the soil surrounding the structure through extension of footings outside the perimeter of the structure.
3. Use of a permanent gravity or mechanical dewatering system that is operated only when the structure is to be drained.
4. Use of pressure relief valves in the bottom of the pool in combination with one or more of the above methods.

We anticipate that options one or two may be needed for this construction depending on the depth of the pools. At your request, we would be pleased to assist you in evaluating uplift protection requirements.

5.0 SITE CONSTRUCTION RECOMMENDATIONS

5.1 SUBGRADE PREPARATION

5.1.1 Stripping and Grubbing

Prior to construction, the location of existing underground utilities within the construction area should be established. Provisions should then be made to relocate interfering utilities to appropriate locations. Underground pipes that are not properly removed or plugged may serve as conduits for subsurface erosion, which may subsequently lead to excessive settlement of overlying structures.

The "footprint" of the proposed buildings plus a minimum additional margin of 5 feet, and of the hardscape areas (parking/driveway) plus a minimum additional margin of 3 feet, should be stripped of all surface vegetation, stumps, demolition debris, organic topsoil, concrete, asphalt or other deleterious materials. During grubbing operations, roots with a diameter greater than 0.5-inch, stumps, or small roots in a concentrated state, should be grubbed and completely removed.

Based on the results of our field exploration, it should be anticipated that 1 inch to 1.5 inches of asphalt and 3 to 6 inches of limerock may be encountered across the site. The actual depths of unsuitable soils and materials should be determined by ECS using visual observation and judgment during earthwork operations. Any topsoil removed from the building and parking/drive areas can be stockpiled and used subsequently in non-structural areas.

5.1.2 Proofrolling

After removing all unsuitable surface materials, cutting to the proposed grade, and prior to the placement of any structural fill or other construction materials, the exposed subgrade should be evaluated by the Geotechnical Engineer or authorized representative. The exposed subgrade should be thoroughly proofrolled with previously approved construction equipment having a minimum axle load of 20 tons (e.g. fully loaded tandem-axle dump truck). The areas subject to proofrolling should be traversed by the equipment in two perpendicular (orthogonal) directions with overlapping passes of the vehicle under the observation of the Geotechnical Engineer or authorized representative. This procedure is intended to assist in identifying any localized yielding materials. In the event that unstable or “pumping” subgrade is identified by the proofrolling, those areas should be marked for repair prior to the placement of any subsequent structural fill or other construction materials. Methods of repair of unstable subgrade, such as undercutting or moisture conditioning, should be discussed with the Geotechnical Engineer to determine the appropriate procedure with regard to the existing conditions causing the instability. A test pit(s) may be excavated to explore the shallow subsurface materials in the area of the instability to help in determined the cause of the observed unstable materials and to assist in the evaluation of the appropriate remedial action to stabilize the subgrade.

5.1.3 Temporary Groundwater Control

Because of the need for densification of the soils within the upper 2 feet below the stripped surface, temporary groundwater control measures may be required if the groundwater level is within 2 feet below the stripped and grubbed surface at the time of construction. Should groundwater control measures become necessary, dewatering methods should be determined by the contractor. We recommend the groundwater control measures, if necessary; remain in place until compaction of the existing soils is completed. The dewatering method should be maintained until backfilling has reached a height of 2 feet above the groundwater level at the time of construction. The site should be graded to direct surface water runoff from the construction area.

Note that discharge of produced groundwater to surface waters of the state from dewatering operations or other site activities is regulated and requires a permit from the State of Florida Department of Environmental Protection (FDEP). This permit is termed a Generic Permit for the Discharge of Produced Groundwater From Any Non-Contaminated Site Activity. If discharge of produced groundwater is anticipated, we recommend sampling and testing of the groundwater early in the site design phase to prevent project delays during construction. ECS can provide the sampling, testing, and professional consulting required to evaluate compliance with the regulations.

5.1.4 Subgrade Compaction

After completing the clearing and stripping operations and installing the temporary groundwater control measures (if required), the exposed surface in building and pavement areas should be compacted with a heavy vibratory roller having a minimum static, at-drum weight on the order of 15 to 20 tons. An approved heavy vibratory roller should be used to compact the surface soils and enable densification of near-surface very loose to loose soils. Because of the relatively dry condition of the surficial fine sands, these soils will likely need to be watered down to increase their moisture content to near their optimum value that will best facilitate compaction. With the soils properly moisture conditioned, our experience indicates that at least eight overlapping passes in each direction of the vibratory roller should achieve the desired densification of the surficial loose fine sands to depths of 2 to 10 feet. Typically, the material should exhibit moisture contents within ±2 percentage points of the modified Proctor optimum moisture content (ASTM D1557) during the compaction operations. Compaction should continue until densities of at least 95 percent of the modified Proctor maximum dry density (ASTM D1557) have been achieved within the upper 2 feet of the compacted natural soils at the site.

To further compact the soil below the proposed hotel footprint, we recommend over-excavating the upper 3 feet of soil before compaction of the subgrade. The heavy vibratory roller and methodology for subgrade compaction following over-excavation should be as previously discussed herein. We recommend that temporary groundwater control measures within this area be implemented so that the groundwater table is maintained a depth of 4 feet below the excavated subgrade bottom at the time of compaction operations. After subgrade compaction, the over-excavated sandy soils can be reused as the compacted structural backfill.

Should the bearing level soils experience pumping and soil strength loss during the compaction operations, compaction work should be immediately terminated, and (1) the disturbed soils should be removed and backfilled with compacted structural fill, or (2) the excess moisture content within the disturbed soils should be allowed to dissipate before recompacting.

Care should be exercised to avoid damaging any nearby structures while the compaction operation is underway. Prior to commencing compaction, occupants of adjacent structures should be notified, and the existing conditions of the structures should be documented with photographs and survey (if deemed necessary). Compaction should cease if deemed detrimental to adjacent structures, and ECS should be contacted immediately. We recommend the vibratory roller remain a minimum of 50 feet from existing structures. Within this zone, use of a track-mounted bulldozer, or a vibratory roller operating in the static mode, is recommended.

5.2 EARTHWORK OPERATIONS

5.2.1 Structural Backfill and Fill Soils

Structural fill is defined as a non-plastic, inorganic, granular soil having less than 10 percent material passing the No. 200 mesh sieve and containing less than 4 percent organic material. The fine sand

and fine sand with silt or fine sand with clay, without roots, as encountered in the borings, are suitable as fill materials and, with proper moisture control, should densify using conventional compaction methods. Soils with more than 10 to 12 percent passing the No. 200 sieve will be more difficult to compact, due to their nature to retain soil moisture, and may require drying. Clayey sand (SC) soils may be encountered in the near surface materials at the site and are not recommended for use as structural fill without the approval of the geotechnical engineer.

Structural Fill Compaction Requirements: Materials satisfactory for use as structural fill should consist of soils with the following compaction requirements.

STRUCTURAL FILL COMPACTION REQUIREMENTS	
Subject	**Requirement**
Compaction Standard	Modified Proctor, ASTM D1557
Required Compaction	95% of Max. Dry Density (general structural fill) 98% of Max. Dry Density (upper one foot below the proposed pavement base course)
Loose Thickness prior to compaction	12 inches if vibratory drum roller compaction equipment is used 8 inches if vibratory drum roller is used in static mode 8 inches if track-mounted compaction equipment is used 6 inches if hand-held compaction equipment is used

Fill materials should not be placed on excessively wet soils. Excessively wet soils should be scarified, aerated, and moisture conditioned. Proper drainage should be maintained during the earthwork phases of construction to prevent ponding of water which has a tendency to degrade subgrade soils. The contractor should minimize dusting or implement dust control measures, as required.

We recommend that the grading contractor have equipment on site during earthwork for both drying and wetting fill soils. Moisture control may be difficult during extended periods of rain. The control of moisture content of soils containing more than 10% fines may be difficult when these soils become wet. Further, such soils are easily degraded by construction traffic when the moisture content is elevated.

5.2.2 Foundation Areas

After satisfactory placement and compaction of the required structural fill, the foundation areas may be excavated to the planned bearing levels. The foundation bearing level soils, after compaction, should exhibit densities equivalent to 95 percent of the modified Proctor maximum dry density (ASTM D1557) to a depth of one foot below the bearing level. For confined areas, such as the footing excavations, any compactive effort should be provided by a lightweight vibratory sled or roller having a total weight on the order of 500 to 2,000 pounds. Within the hotel and apartment building areas, Dynamic Cone Penetrometer (DCP) soundings, performed by hand, should also be performed subsequent to the surface soil heavy compaction operations to confirm densification of the sands within the upper 4ßeet of the footing bearing elevations.

5.2.3 Flexible Pavement Areas

After completing the clearing/stripping operations in the pavement areas, any underlying clayey sands (and sandy clays) that are within 2 feet of the bottom of the pavement base should be over-excavated from within the pavement areas. Structural backfill and fill required to achieve the finish pavement grades then can be placed and compacted as described in Sections 5.2.1.

5.2.4 Rigid Pavement Areas

For a concrete pavement subgrade, we recommend using clean fine sand (SP), compacted to at least 98 percent of modified Proctor test maximum dry density (ASTM D1557) without additional stabilization.

5.3 UTILITY INSTALLATIONS

Utility Subgrades: The soil borings within proposed pavement areas predominantly encountered fine sands, fine sands with clay (SP-SC) and fine sands with silt (SP, SP-SM). It is our opinion that these soils are suitable bedding soils for pipelines and utility structures and replaced with compacted structural fill as described in Section 5.2.1 above. Where clayey sand (SC) or silty sand (SM) soils are encountered and it is determined that they contain more than 20 percent fines, these soils should be over-excavated to a depth of 12 inches below pipe invert or 24 inches below manhole structure base, and should be replaced with an approved structural fill.

Alternatively, a medium-duty woven geotextile, such as Mirafi 600X or equivalent, may be used as a separation barrier between the compacted backfill and the clayey/silty soils. If a woven geotextile is used, then no overexcavation is necessary for the pipeline, and the depth of overexcavation for the utility manholes may be reduced to 12 inches. The geotextile should be placed in the excavation bottom and along the sides above the silty/clayey soils creating a barrier between these soils and the sand backfill to preclude contamination of the backfill.

Utility Backfilling: Backfill placed around the pipe, and to a height of 2 feet above the top of pipe, should be placed in 6-inch lifts. Each lift should be compacted with hand-held equipment to 98 percent of the soil's Modified Proctor (ASTM D1557) maximum dry density. Backfill placed above the 2-foot zone above the top of pipe elevation may be placed in 12-inch lifts and compacted with heavier equipment. Typically, the backfill soil should exhibit moisture contents within ±2 percent of the soil's optimum moisture content as determined from the Proctor test. Care should be taken to avoid damaging the pipe during compaction operations.

Backfill placed around utility structures should be placed in 6-inch thick lifts, and compacted with hand-held equipment to the same in-place soil density stated above. Heavy equipment should not be used within 5 feet of the structures to prevent overstressing of the structure walls.

Utility Excavation Dewatering: Based on the groundwater depths encountered in our borings, groundwater will likely be encountered by utility excavations which extend below existing grades. It is expected that removal of groundwater will be required, especially for deeper utility excavations. The contractor should submit a dewatering plan prior to installing the site utilities.

Excavation Safety: All excavations and slopes should be made and maintained in accordance with OSHA excavation safety standards. The contractor is solely responsible for designing and constructing stable, temporary excavations and slopes and should shore, slope, or bench the sides of the excavations and slopes as required to maintain stability of both the excavation sides and bottom. The contractor's responsible person, as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations. ECS is providing this information solely as a service to our client. ECS is not assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.

Erosion Control: The surface soils may be erodible. Therefore, the Contractor should provide and maintain good site drainage during earthwork operations to maintain the integrity of the surface soils. All erosion and sedimentation controls should be in accordance with sound engineering practices and local requirements.

6.0 CLOSING

Our geotechnical exploration has been performed, our findings obtained, and our recommendations prepared, in accordance with generally accepted geotechnical engineering principles and practices. ECS is not responsible for any independent conclusions, interpretation, opinions, or recommendations made by others based on the data contained in this report.

Our scope of services was intended to evaluate the soil conditions within the zone of soil influenced by the foundation system. Our scope of services does not address geologic conditions, such as sinkholes or soil conditions existing below the depth of the soil borings.

ECS is currently performing environmental consulting service for the project. The environmental findings will be issued in a separate report.

If any of the project description information discussed in this report is inaccurate, either due to our interpretation of the documents provided or site or design changes that may occur later, ECS should be contacted immediately in order that we can review the report in light of the changes and provide additional or alternate recommendations as may be required to reflect the proposed construction.

We recommend that ECS be allowed to review the project's plans and specifications pertaining to our work so that we may ascertain consistency of those plans/specifications with the intent of the geotechnical report.

Field observations, monitoring, and quality assurance testing during earthwork and foundation installation are an extension of and integral to the geotechnical design recommendation. We recommend that the owner retain these quality assurance services and that ECS be allowed to continue our involvement throughout these critical phases of construction to provide general consultation as issues arise.

APPENDIX A – Diagrams & Reports

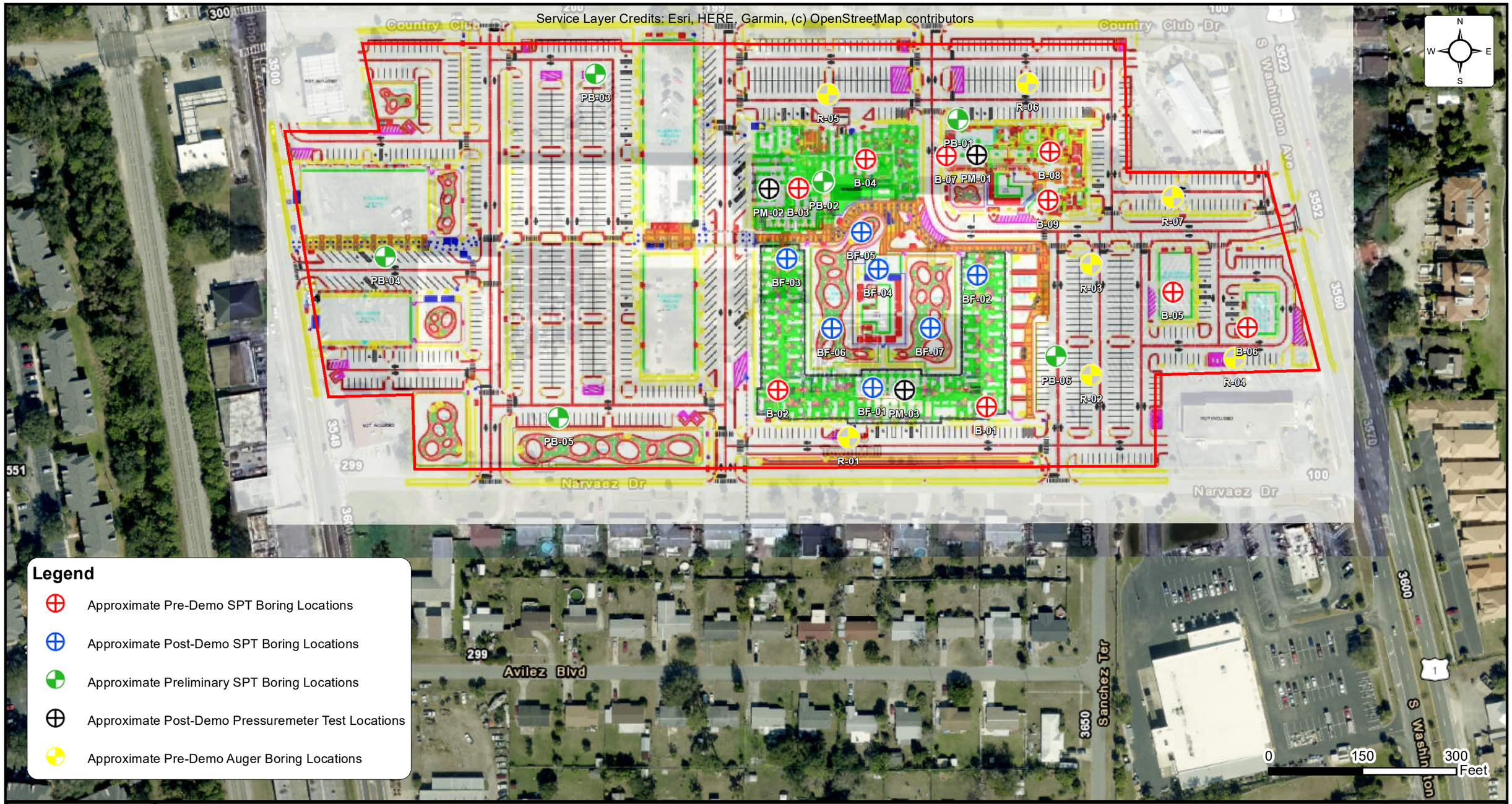
Figure 1 - Site Location Diagram
Figure 2 – Boring Location Diagram

SITE LOCATION DIAGRAM
TITUSVILLE MALL REDEVELOPMENT

3550 S. WASHINGTON AVENUE, TITUSVILLE, FLORIDA

TITUSVILLE RESORT AND DESTINATION, LLC

ENGINEER	MK6
SCALE	AS NOTED
PROJECT NO.	56:1380-B
FIGURE	1 OF 2
DATE	4/26/2024



Legend

- Approximate Pre-Demo SPT Boring Locations
- Approximate Post-Demo SPT Boring Locations
- Approximate Preliminary SPT Boring Locations
- Approximate Post-Demo Pressuremeter Test Locations
- Approximate Pre-Demo Auger Boring Locations

BORING LOCATION DIAGRAM
TITUSVILLE MALL REDEVELOPMENT

3550 S. WASHINGTON AVENUE, TITUSVILLE, FLORIDA

TITUSVILLE RESORT AND DESTINATION, LLC

ENGINEER	MK6
SCALE	AS NOTED
PROJECT NO.	56:1380-B
FIGURE	2 OF 2
DATE	5/14/2024

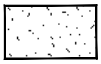
APPENDIX B – Field Operations

Reference Notes for Boring Logs
Subsurface Exploration Procedure: Standard Penetration Testing (SPT) ASTM D1586
Subsurface Exploration Procedure: Hand Auger Borings ASTM D1452SPT
SPT Boring Logs
Auger Boring Logs

REFERENCE NOTES FOR BORING LOGS

MATERIAL[1,2]


ASPHALT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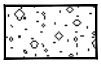
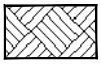
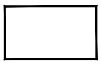
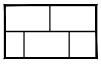

GRAVEL

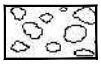

TOPSOIL

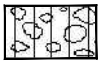

VOID


BRICK

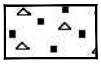

AGGREGATE BASE COURSE

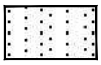

GW **WELL-GRADED GRAVEL**
gravel-sand mixtures, little or no fines

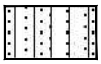

GP **POORLY-GRADED GRAVEL**
gravel-sand mixtures, little or no fines


GM **SILTY GRAVEL**
gravel-sand-silt mixtures

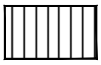

GC **CLAYEY GRAVEL**
gravel-sand-clay mixtures

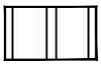

SW **WELL-GRADED SAND**
gravelly sand, little or no fines

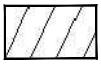

SP **POORLY-GRADED SAND**
gravelly sand, little or no fines


SM **SILTY SAND**
sand-silt mixtures

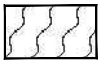

SC **CLAYEY SAND**
sand-clay mixtures

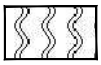

ML **SILT**
non-plastic to medium plasticity

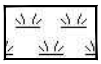

MH **ELASTIC SILT**
high plasticity


CL **LEAN CLAY**
low to medium plasticity


CH **FAT CLAY**
high plasticity


OL **ORGANIC SILT or CLAY**
non-plastic to low plasticity


OH **ORGANIC SILT or CLAY**
high plasticity


PT **PEAT**
highly organic soils

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS

SS	Split Spoon Sampler	PM	Pressuremeter Test
ST	Shelby Tube Sampler	RD	Rock Bit Drilling
WS	Wash Sample	RC	Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC	Rock Sample Recovery %
PA	Power Auger (no sample)	RQD	Rock Quality Designation %
HSA	Hollow Stem Auger		

PARTICLE SIZE IDENTIFICATION

DESIGNATION		PARTICLE SIZES
Boulders		12 inches (300 mm) or larger
Cobbles		3 inches to 12 inches (75 mm to 300 mm)
Gravel:	Coarse	¾ inch to 3 inches (19 mm to 75 mm)
	Fine	4.75 mm to 19 mm (No. 4 sieve to ¾ inch)
Sand:	Coarse	2.00 mm to 4.75 mm (No. 10 to No. 4 sieve)
	Medium	0.425 mm to 2.00 mm (No. 40 to No. 10 sieve)
	Fine	0.074 mm to 0.425 mm (No. 200 to No. 40 sieve)
Silt & Clay ("Fines")		<0.074 mm (smaller than a No. 200 sieve)

COHESIVE SILTS & CLAYS

UNCONFINED COMPRESSIVE STRENGTH, Q_P[4]	SPT[5] (BPF)	CONSISTENCY[7] (COHESIVE)
<0.25	<2	Very Soft
0.25 - <0.50	3 - 4	Soft
0.50 - <1.00	5 - 8	Firm
1.00 - <2.00	9 - 15	Stiff
2.00 - <4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

GRAVELS, SANDS & NON-COHESIVE SILTS

SPT[5]	DENSITY
<5	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
>50	Very Dense

RELATIVE AMOUNT[7]	COARSE GRAINED (%)[8]	FINE GRAINED (%)[8]
Trace	≤5	≤5
With	10 - 20	10 - 25
Adjective *(ex: "Silty")*	25 - 45	30 - 45

WATER LEVELS[6]

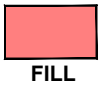

WL (First Encountered)


WL (Completion)


WL (Seasonal High Water)


WL (Stabilized)

FILL AND ROCK


FILL


POSSIBLE FILL


PROBABLE FILL


ROCK

[1]Classifications and symbols per ASTM D 2488-17 (Visual-Manual Procedure) unless noted otherwise.

[2]To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.

[3]Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-FILL)].

[4]Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

[5]Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf). SPT correlations per 7.4.2 Method B and need to be corrected if using an auto hammer.

[6]The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.

[7]Minor deviation from ASTM D 2488-17 Note 14.

[8]Percentages are estimated to the nearest 5% per ASTM D 2488-17.

SUBSURFACE EXPLORATION PROCEDURE: STANDARD PENETRATION TESTING (SPT) ASTM D 1586 Split-Barrel Sampling

Standard Penetration Testing, or **SPT**, is the most frequently used subsurface exploration test performed worldwide. This test provides samples for identification purposes, as well as a measure of penetration resistance, or N-value. The N-Value, or blow counts, when corrected and correlated, can approximate engineering properties of soils used for geotechnical design and engineering purposes.

SPT Procedure:

- Involves driving a hollow tube (split-spoon) into the ground by dropping a 140-lb hammer a height of 30-inches at desired depth
- Recording the number of hammer blows required to drive split-spoon a distance of 12 inches (in 3 or 4 Increments of 6 inches each)

- Auger is advanced* and an additional SPT is performed
- One SPT test is typically performed for every two to five feet

- Obtain two-inch diameter soil sample

**Drilling Methods May Vary—* The predominant drilling methods used for SPT are open hole fluid rotary drilling and hollow-stem auger drilling.

SUBSURFACE EXPLORATION PROCEDURE:
Hand Auger Borings
ASTM D1452

In this procedure, a shallow depth boring is made by manually rotating and advancing an auger to the desired depths while periodically removing the auger from the hole to clear and examine the auger cuttings. The auger cuttings are visually classified in the field in accordance with ASTM D2488. Disturbed samples are collected in each soil stratum and sealed in an airtight container and labeled appropriately.

Hand Auger Procedure:

- Involves manually rotating a tube or barrel type auger to the desired sample depth
- Recording the depth of changes in strata
- Describing soil in each major stratum in accordance with ASTM D2488
- Recording groundwater depth and location of seepage zones, when/if found
- Describing condition of augered hole (i.e. whether the hole remains open or the sides cave)

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Titusville Resort and Destination, LLC	**56:1380-B**	**BF-01**	**1 of 3**

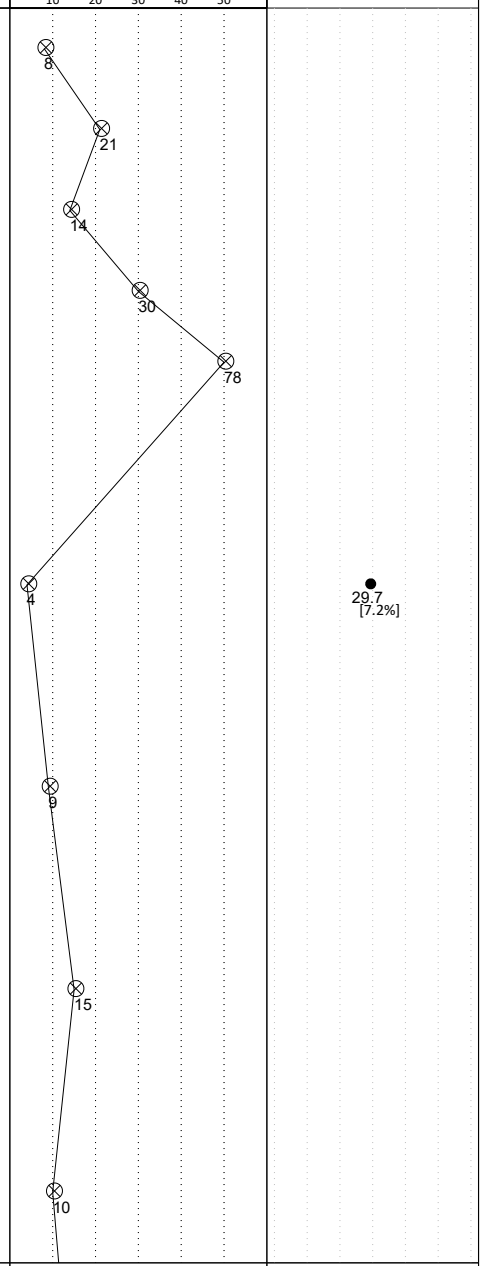
PROJECT NAME:	DRILLER/CONTRACTOR:
Titusville Mall Redevelopment	**Allstate Geotechnical Drilling Inc.**

SITE LOCATION: **3550 S. Washington Avenue, Titusville, Florida, 32780**

LOSS OF CIRCULATION

LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION: **11.0**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)*
0	S-1	SS	24	24	(SP) FINE SAND, brown/ light brown, moist to saturated, loose to medium dense		11	1-2-6-8 (8)
	S-2	SS	24	24				7-10-11-11 (21)
5	S-3	SS	24	24		▼ ▽	6	7-7-7-10 (14)
	S-4	SS	24	24	(SP-SM) FINE SAND WITH SILT, dark brown and gray and light brown, saturated, very dense to loose			5-10-20-27 (30)
	S-5	SS	18	18				21-32-46 (78)
10							1	
15	S-6	SS	18	18			-4	2-2-2 (4)
20	S-7	SS	18	18			-9	3-5-4 (9)
25	S-8	SS	18	18			-14	7-6-9 (15)
30	S-9	SS	18	18			-19	5-5-5 (10)



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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	**5.00**	BORING STARTED: **Mar 12 2024**		CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Mar 12 2024**		HAMMER TYPE: **Manual - Safety**
▼▽ WL (Seasonal High Water)	**4.00**	EQUIPMENT: **TRACK**	LOGGED BY: **SJ5**	DRILLING METHOD:
▽▽ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Titusville Resort and Destination, LLC	**56:1380-B**	**BF-01**	**2 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Mall Redevelopment	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S. Washington Avenue, Titusville, Florida, 32780**			LOSS OF CIRCULATION
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION: **11.0**
			BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)*
					(SP-SM) FINE SAND WITH SILT, dark brown and gray and light brown, saturated, very dense to loose			
	S-10	SS	18	18				7-6-8 (14)
35					(SC) CLAYEY FINE SAND, gray, saturated, loose to medium dense		-24	
	S-11	SS	18	18				4-3-4 (7)
40							-29	
	S-12	SS	18	18				6-7-6 (13)
45							-34	
	S-13	SS	18	18				6-7-7 (14)
50							-39	
	S-14	SS	18	18				3-3-6 (9)
55					(SC) CLAYEY SAND, gray, saturated, medium dense		-44	
	S-15	SS	18	18				9-7-13 (20)
60					(SP-SC) FINE SAND WITH CLAY, contains shell fragments, gray, saturated, medium dense to dense		-49	

CONTINUED ON NEXT PAGE

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MODIFIED CALIFORNIA SAMPLER BLOWS/FT
10 20 30 40 50

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **5.00**	BORING STARTED: **Mar 12 2024**	CAVE IN DEPTH:	
WL (Completion)	BORING COMPLETED: **Mar 12 2024**	HAMMER TYPE: **Manual - Safety**	
WL (Seasonal High Water) **4.00**	EQUIPMENT: **TRACK**	LOGGED BY: **SJ5**	DRILLING METHOD:
WL (Stabilized)			

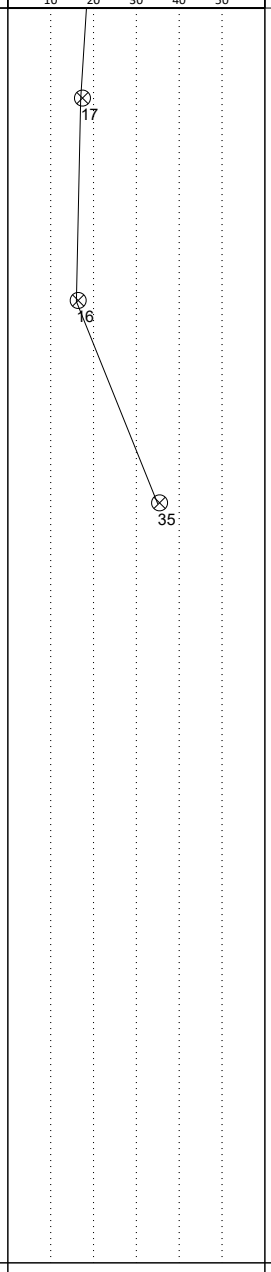
GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Titusville Resort and Destination, LLC	**56:1380-B**	**BF-01**	**3 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Mall Redevelopment	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S. Washington Avenue, Titusville, Florida, 32780**			LOSS OF CIRCULATION
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION: **11.0**
			BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)*
65	S-16	SS	18	18	(SP-SC) FINE SAND WITH CLAY, contains shell fragments, gray, saturated, medium dense to dense		-54	6-7-10 (17)
70	S-17	SS	18	18			-59	7-4-12 (16)
75	S-18	SS	18	18			-64	17-20-15 (35)
					END OF BORING AT 75 FT			
80							-69	
85							-74	
90							-79	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MODIFIED CALIFORNIA SAMPLER BLOWS/FT
10 20 30 40 50

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered) **5.00**	BORING STARTED: **Mar 12 2024**	CAVE IN DEPTH:	
▼ WL (Completion)	BORING COMPLETED: **Mar 12 2024**	HAMMER TYPE: **Manual - Safety**	
▼ WL (Seasonal High Water) **4.00**	EQUIPMENT: **TRACK**	LOGGED BY: **SJ5**	DRILLING METHOD:
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Titusville Resort and Destination, LLC	**56:1380-B**	**BF-02**	**1 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Mall Redevelopment	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S. Washington Avenue, Titusville, Florida, 32780**			LOSS OF CIRCULATION
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION: **11.0**

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ELEVATION (FT)	BLOWS/6" (N - Value)*
0	S-1	SS	24	24	(SP) FINE SAND, brown and light brown, moist to saturated, loose to medium dense	6	2-2-4-8 (6)
	S-2	SS	24	24			8-11-14-14 (25)
5	S-3	SS	24	24		1	9-7-11-14 (18)
	S-4	SS	24	24			9-9-13-10 (22)
	S-5	SS	24	24			8-9-9-11 (18)
10					(SP-SC) SAND WITH CLAY, light brown, saturated, medium dense	-4	
	S-6	SS	18	18			6-5-11 (16)
15					(SP) FINE SAND, light brown, saturated, medium dense	-9	
	S-7	SS	18	18			8-9-11 (20)
20					(SP-SC) FINE SAND WITH CLAY, gray, saturated, loose to medium dense	-14	
	S-8	SS	18	18			5-6-8 (14)
25						-19	
	S-9	SS	18	18			4-6-7 (13)
30							

CONTINUED ON NEXT PAGE

STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 / 20 40 60 80 100)
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MODIFIED CALIFORNIA SAMPLER BLOWS/FT (10 20 30 40 50)

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF (1 2 3 4 5)
WATER CONTENT %
[FINES CONTENT] % (10 20 30 40 50)

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **5.50**	BORING STARTED: **Mar 12 2024**	CAVE IN DEPTH:	
WL (Completion)	BORING COMPLETED: **Mar 12 2024**	HAMMER TYPE: **Manual - Safety**	
WL (Seasonal High Water) **4.50**	EQUIPMENT: **TRACK**	LOGGED BY: **SJ5**	DRILLING METHOD:
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Titusville Resort and Destination, LLC	**56:1380-B**	**BF-02**	**2 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Mall Redevelopment	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S. Washington Avenue, Titusville, Florida, 32780**			LOSS OF CIRCULATION
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION: **11.0**
			BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)*
					(SP-SC) FINE SAND WITH CLAY, gray, saturated, loose to medium dense			
35	S-10	SS	18	6			-24	9-11-17 (28)
40	S-11	SS	18	18			-29	6-5-6 (11)
45	S-12	SS	18	18			-34	6-3-5 (8)
					(SC) CLAYEY FINE SAND, gray, saturated, loose to medium dense			
50	S-13	SS	18	18			-39	3-4-3 (7)
55	S-14	SS	18	18			-44	5-4-6 (10)
60	S-15	SS	18	18			-49	6-6-7 (13)
					(SC) CLAYEY FINE SAND, gray, saturated, medium dense to loose			

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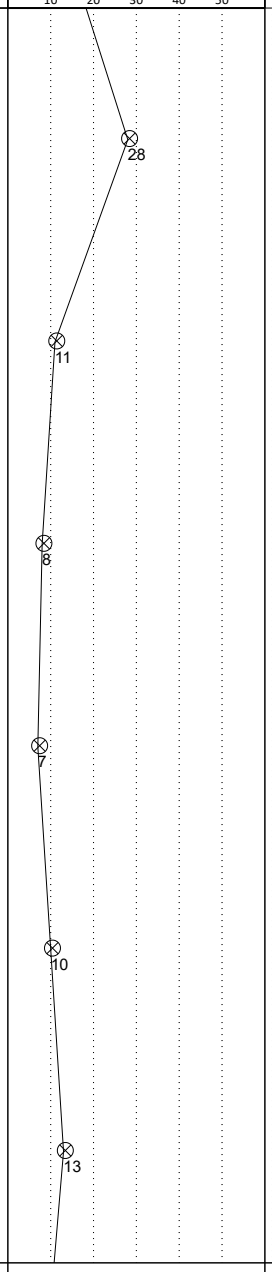
STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 / 20 40 60 80 100)
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MODIFIED CALIFORNIA SAMPLER BLOWS/FT (10 20 30 40 50)



LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF (1 2 3 4 5)
WATER CONTENT %
[FINES CONTENT] % (10 20 30 40 50)

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **5.50**	BORING STARTED: **Mar 12 2024**		CAVE IN DEPTH:
WL (Completion)	BORING COMPLETED: **Mar 12 2024**		HAMMER TYPE: **Manual - Safety**
WL (Seasonal High Water) **4.50**	EQUIPMENT: **TRACK**	LOGGED BY: **SJ5**	DRILLING METHOD:
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Titusville Resort and Destination, LLC	**56:1380-B**	**BF-02**	**3 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Mall Redevelopment	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S. Washington Avenue, Titusville, Florida, 32780**			LOSS OF CIRCULATION
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION: **11.0**
			BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)*
65	S-16	SS	18	18	(SC) CLAYEY FINE SAND, gray, saturated, medium dense to loose		-54	4-2-7 (9)
70	S-17	SS	18	18	(SP-SC) FINE SAND WITH CLAY, gray, saturated, medium dense		-59	4-5-7 (12)
75	S-18	SS	18	18			-64	8-16-11 (27)
					END OF BORING AT 75 FT			
80							-69	
85							-74	
90							-79	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MODIFIED CALIFORNIA SAMPLER BLOWS/FT
10 20 30 40 50

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **5.50**	BORING STARTED: **Mar 12 2024**	CAVE IN DEPTH:	
WL (Completion)	BORING COMPLETED: **Mar 12 2024**	HAMMER TYPE: **Manual - Safety**	
WL (Seasonal High Water) **4.50**	EQUIPMENT: **TRACK**	LOGGED BY: **SJ5**	DRILLING METHOD:
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Titusville Resort and Destination, LLC	**56:1380-B**	**BF-03**	**1 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Mall Redevelopment	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S. Washington Avenue, Titusville, Florida, 32780**			LOSS OF CIRCULATION
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION: **11.0**
			BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)*
	S-1	SS	24	24	(SP) FINE SAND, light brown, moist, loose to medium dense			2-3-5-7 (8)
	S-2	SS	24	24				6-8-5-8 (13)
5	S-3	SS	24	24	(SC) CLAYEY FIND SAND, few organics, light brown and light gray, moist to saturated, medium dense		6	16-16-13-12 (29)
	S-4	SS	24	24	(SP-SC) FINE SAND WITH CLAY, light brown and light gray, saturated, loose to medium dense			7-7-7-10 (14)
10	S-5	SS	24	24			1	4-7-10-15 (17)
	S-6	SS	18	18				4-6-9 (15)
15							-4	
	S-7	SS	18	18				5-5-7 (12)
20							-9	
	S-8	SS	18	18				3-3-4 (7)
25							-14	
	S-9	SS	18	18				4-6-7 (13)
30							-19	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MODIFIED CALIFORNIA SAMPLER BLOWS/FT
10 20 30 40 50

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50

33.0
[20.1%]

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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **5.00**	BORING STARTED: **Mar 12 2024**		CAVE IN DEPTH:
WL (Completion)	BORING COMPLETED: **Mar 12 2024**		HAMMER TYPE: **Manual - Safety**
WL (Seasonal High Water) **4.00**	EQUIPMENT: **TRACK**	LOGGED BY: **SJ5**	DRILLING METHOD:
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Titusville Resort and Destination, LLC	**56:1380-B**	**BF-03**	**2 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Mall Redevelopment	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S. Washington Avenue, Titusville, Florida, 32780**			LOSS OF CIRCULATION
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION: **11.0**
			BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)*
					(SP-SC) FINE SAND WITH CLAY, light brown and light gray, saturated, loose to medium dense			
	S-10	SS	18	18				5-7-5 (12)
35					(SP) FINE SAND, gray, saturated, medium dense, shells		-24	
	S-11	SS	18	18				3-2-9 (11)
40					(SP-SC) SAND WITH CLAY, contains shell fragments, gray, saturated, medium dense		-29	
	S-12	SS	18	18				4-9-7 (16)
45							-34	
	S-13	SS	18	18				7-6-5 (11)
50					(SC) CLAYEY SAND, gray, saturated, loose		-39	
	S-14	SS	18	18				6-3-4 (7)
55					(SC) CLAYEY SAND, gray, saturated, loose		-44	
	S-15	SS	18	18				2-3-3 (6)
60					(SC) CLAYEY SAND, gray, saturated, loose to medium dense		-49	

STANDARD PENETRATION BLOWS/FT (10 20 30 40 50 / 20 40 60 80 100)
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MODIFIED CALIFORNIA SAMPLER BLOWS/FT (10 20 30 40 50)

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF (1 2 3 4 5)
WATER CONTENT %
[FINES CONTENT] % (10 20 30 40 50)

19.3 [4.8%]

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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **5.00**	BORING STARTED: **Mar 12 2024**	CAVE IN DEPTH:	
WL (Completion)	BORING COMPLETED: **Mar 12 2024**	HAMMER TYPE: **Manual - Safety**	
WL (Seasonal High Water) **4.00**	EQUIPMENT: **TRACK**	LOGGED BY: **SJ5**	DRILLING METHOD:
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Titusville Resort and Destination, LLC	**56:1380-B**	**BF-03**	**3 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Mall Redevelopment	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S. Washington Avenue, Titusville, Florida, 32780**			LOSS OF CIRCULATION
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION: **11.0**
			BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)*
65	S-16	SS	18	18	(SC) CLAYEY SAND, gray, saturated, loose to medium dense		-54	6-7-4 (11)
70	S-17	SS	18	18			-59	2-4-3 (7)
75	S-18	SS	18	18	**END OF BORING AT 75 FT**		-64	6-7-5 (12)
80							-69	
85							-74	
90							-79	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MODIFIED CALIFORNIA SAMPLER BLOWS/FT
10 20 30 40 50

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **5.00**	BORING STARTED: **Mar 12 2024**	CAVE IN DEPTH:	
WL (Completion)	BORING COMPLETED: **Mar 12 2024**	HAMMER TYPE: **Manual - Safety**	
WL (Seasonal High Water) **4.00**	EQUIPMENT: **TRACK**	LOGGED BY: **SJ5**	DRILLING METHOD:
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Titusville Resort and Destination, LLC	**56:1380-B**	**BF-04**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Mall Redevelopment	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S. Washington Avenue, Titusville, Florida, 32780**			LOSS OF CIRCULATION
LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION: **11.0**
			BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)*
0	S-1	SS	24	24	(SP) FINE SAND, light brown, moist to saturated, loose to medium dense		11	2-2-3-5 (5)
	S-2	SS	24	24				7-9-13-17 (22)
5	S-3	SS	24	24		▼	6	7-5-6-6 (11)
	S-4	SS	24	24	(SP-SM) FINE SAND WITH SILT, brown, saturated, medium dense	▽		6-7-6-9 (13)
	S-5	SS	24	24				7-7-7-9 (14)
10							1	
	S-6	SS	18	18				2-3-8 (11)
15					**END OF BORING AT 15 FT**		-4	
20							-9	
25							-14	
30							-19	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MODIFIED CALIFORNIA SAMPLER BLOWS/FT
10 20 30 40 50

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered) **6.00**	BORING STARTED: **Mar 13 2024**	CAVE IN DEPTH:	
▼ WL (Completion)	BORING COMPLETED: **Mar 13 2024**	HAMMER TYPE: **Manual - Safety**	
▼ WL (Seasonal High Water) **5.00**	EQUIPMENT: **TRACK**	LOGGED BY: **SJ5**	DRILLING METHOD:
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Titusville Resort and Destination, LLC	**56:1380-B**	**BF-05**	**1 of 1**

PROJECT NAME:	DRILLER/CONTRACTOR:
Titusville Mall Redevelopment	**Allstate Geotechnical Drilling Inc.**

SITE LOCATION: **3550 S. Washington Avenue, Titusville, Florida, 32780**

LOSS OF CIRCULATION

LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION: **11.0**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)*
0	S-1	SS	24	24	(SP) FINE SAND, brown and light brown, moist to saturated, very loose to loose		11	1-1-2-4 (3)
	S-2	SS	24	24				2-2-1-2 (3)
5	S-3	SS	24	24		▼ ▽	6	1-2-7-10 (9)
	S-4	SS	24	24	(SP-SC) FINE SAND WITH CLAY, brown, saturated, medium dense			5-7-8-7 (15)
	S-5	SS	24	24				5-7-9-11 (16)
10					**END OF BORING AT 10 FT**		1	
15							-4	
20							-9	
25							-14	
30							-19	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MODIFIED CALIFORNIA SAMPLER BLOWS/FT
10 20 30 40 50

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	**5.00**	BORING STARTED: **Mar 14 2024**	CAVE IN DEPTH:	
▼ WL (Completion)		BORING COMPLETED: **Mar 14 2024**	HAMMER TYPE: **Manual - Safety**	
▼▽ WL (Seasonal High Water)	**4.00**	EQUIPMENT: **TRACK**	LOGGED BY: **SJ5**	DRILLING METHOD:
▼▽ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Titusville Resort and Destination, LLC	**56:1380-B**	**BF-06**	**1 of 1**

PROJECT NAME:	DRILLER/CONTRACTOR:
Titusville Mall Redevelopment	**Allstate Geotechnical Drilling Inc.**

SITE LOCATION: **3550 S. Washington Avenue, Titusville, Florida, 32780**

LOSS OF CIRCULATION

LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION: **11.0**

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)*
0	S-1	SS	24	24	(SP) FINE SAND, light brown and brown, moist to saturated, loose to medium dense		11	2-1-4-8 (5)
	S-2	SS	24	24				8-12-15-16 (27)
5	S-3	SS	24	24	(SP-SM) FINE SAND WITH SILT, brown and dark brown, saturated, medium dense	▼ ▽	6	11-12-15-21 (27)
	S-4	SS	24	24				5-6-12-11 (18)
	S-5	SS	24	24	(SP) SAND, brown and dark brown, saturated, medium dense			9-12-17-19 (29)
10					**END OF BORING AT 10 FT**		1	
15							-4	
20							-9	
25							-14	
30							-19	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MODIFIED CALIFORNIA SAMPLER BLOWS/FT
10 20 30 40 50

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	**6.00**	BORING STARTED: **Mar 14 2024**		CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Mar 14 2024**		HAMMER TYPE: **Manual - Safety**
▼▽ WL (Seasonal High Water)	**5.00**	EQUIPMENT: **TRACK**	LOGGED BY: **SJ5**	DRILLING METHOD:
▽▽ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
Titusville Resort and Destination, LLC	**56:1380-B**	**BF-07**	**1 of 1**

PROJECT NAME:	DRILLER/CONTRACTOR:
Titusville Mall Redevelopment	**Allstate Geotechnical Drilling Inc.**

SITE LOCATION: **3550 S. Washington Avenue, Titusville, Florida, 32780**

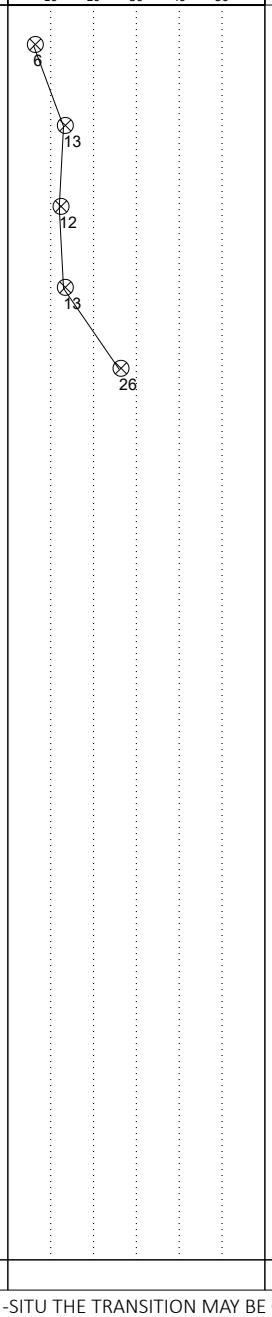
LOSS OF CIRCULATION

LATITUDE:	LONGITUDE:	STATION:	SURFACE ELEVATION: **11.0**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (N - Value)*
	S-1	SS	24	24	(SP) FINE SAND, dark brown, moist, loose			1-2-4-6 (6)
	S-2	SS	24	24	(SP) SAND, light brown and brown, moist, medium dense			6-6-7-6 (13)
5	S-3	SS	24	24	(SP-SM) SAND WITH SILT, light to dark brown, moist to saturated, medium dense	▽ ▼	6	4-4-8-11 (12)
	S-4	SS	24	24				5-6-7-11 (13)
	S-5	SS	24	24				9-13-13-17 (26)
10					**END OF BORING AT 10 FT**		1	
15							-4	
20							-9	
25							-14	
30							-19	

STANDARD PENETRATION BLOWS/FT
10 20 30 40 50
20 40 60 80 100
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
MODIFIED CALIFORNIA SAMPLER BLOWS/FT
10 20 30 40 50

LIQUID LIMIT
PLASTIC LIMIT
CALIBRATED PENETROMETER TSF
1 2 3 4 5
WATER CONTENT %
[FINES CONTENT] %
10 20 30 40 50



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	**5.00**	BORING STARTED: **Mar 14 2024**		CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Mar 14 2024**		HAMMER TYPE: **Manual - Safety**
▼ WL (Seasonal High Water)	**4.00**	EQUIPMENT: **TRACK**	LOGGED BY: **SJ5**	DRILLING METHOD:
▽ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-01**	**1 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
	S-1	BG1	24		Asphalt Thickness[1.00"] Limerock Thickness[4.00"] (SP) FINE SAND, brown and gray, moist to saturated, loose to medium dense			
	S-2	SS	24	24		▼		2-2-2-3 (4)
5	S-3	SS	24	2		▽	-5	3-2-2-2 (4)
	S-4	SS	24	24				2-2-4-9 (6)
	S-5	SS	24	24				6-6-8-8 (14)
10							-10	
	S-6	SS	18	18				4-7-8 (15)
15							-15	
	S-7	SS	18	18				9-9-10 (19)
20							-20	
	S-8	SS	18	18				8-9-10 (19)
25					(SP) FINE SAND, contains significant shell fragments, gray, saturated, medium dense		-25	
	S-9	SS	18	18				6-11-10 (21)
30							-30	

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

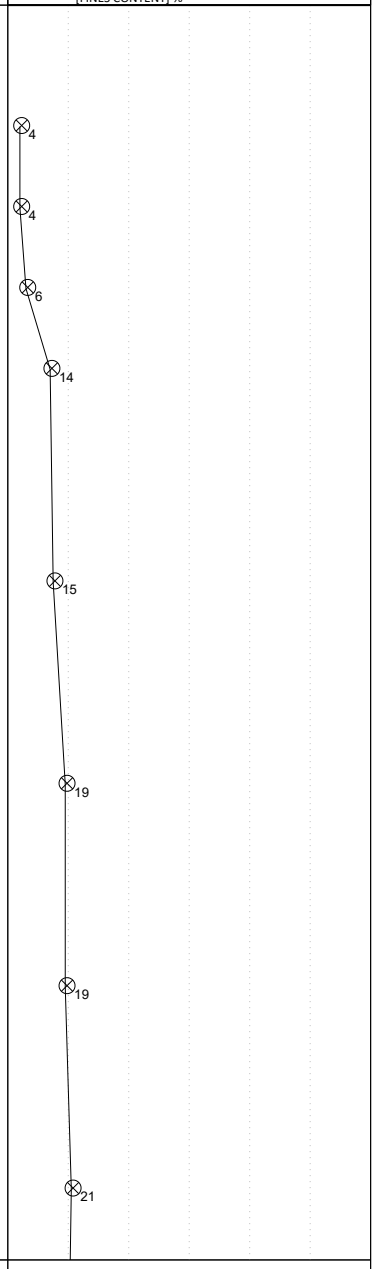
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

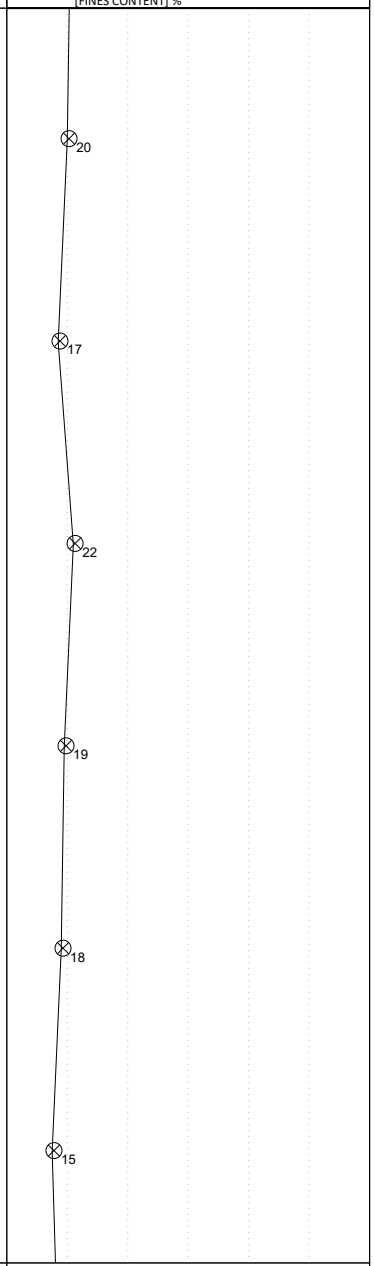
▽ WL (First Encountered) **5.00**	BORING STARTED: **Dec 01 2021**		CAVE IN DEPTH:
▼ WL (Completion)	BORING COMPLETED: **Dec 01 2021**		HAMMER TYPE: **Manual**
▼ WL (Seasonal High Water) **3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-01**	**2 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
35	S-10	SS	18	18	(SP) FINE SAND, contains significant shell fragments, gray, saturated, medium dense		-35	8-8-12 (20)
40	S-11	SS	18	18	(SP-SC) FINE SAND WITH CLAY, contains shell fragments, gray and green, saturated, medium dense		-40	9-7-10 (17)
45	S-12	SS	18	18			-45	8-10-12 (22)
50	S-13	SS	18	18			-50	4-9-10 (19)
55	S-14	SS	18	18			-55	8-6-12 (18)
60	S-15	SS	18	18			-60	7-6-9 (15)

Plastic Limit Water Content Liquid Limit
X———●———△
⊗ STANDARD PENETRATION BLOWS/FT
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
○ CALIBRATED PENETROMETER TON/SF
[FINES CONTENT] %



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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	**5.00**	BORING STARTED: **Dec 01 2021**		CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Dec 01 2021**		HAMMER TYPE: **Manual**
▼ WL (Seasonal High Water)	**3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-01**	**3 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		

SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
65	S-16	SS	18	18	(SP-SC) FINE SAND WITH CLAY, contains shell fragments, gray and green, saturated, medium dense		-65	8-7-10 (17)
					LIMESTONE, soft			
70	S-17	SS	18	18			-70	13-10-12 (22)
	S-18	SS	18	18				13-11-13 (24)
75					**END OF DRILLING AT 75.0 FT**		-75	
80							-80	
85							-85	
90							-90	

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

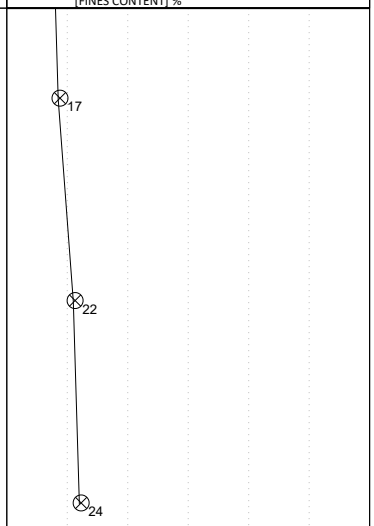
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

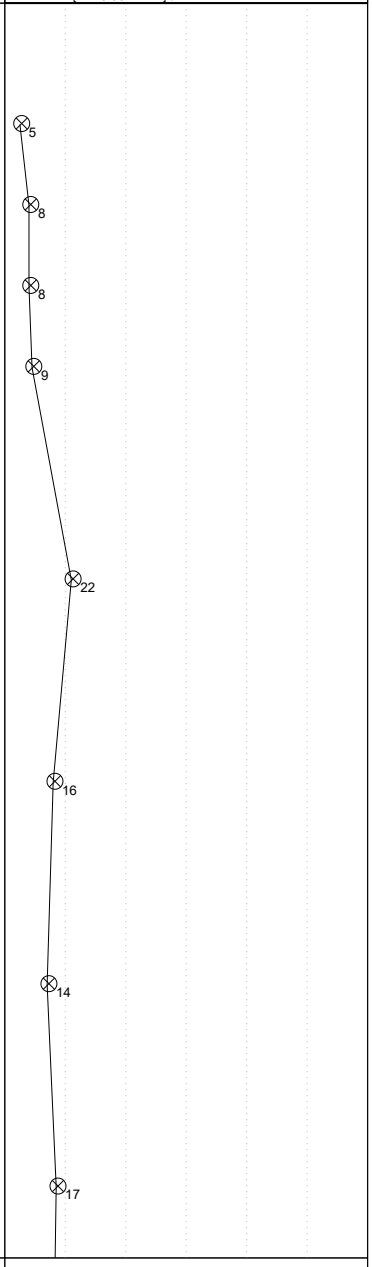
▽ WL (First Encountered)	**5.00**	BORING STARTED: **Dec 01 2021**		CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Dec 01 2021**		HAMMER TYPE: **Manual**
⧩ WL (Seasonal High Water)	**3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
⧩ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-02**	**1 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
	S-1	BG1	24		Asphalt Thickness[1.50"] Limerock Thickness[6.00"]			
	S-2	SS	24	24	(SP) FINE SAND, brown and gray, moist to saturated, loose to medium dense			2-2-3-2 (5)
5	S-3	SS	24	24			-5	2-3-5-6 (8)
	S-4	SS	24	24		▽		3-4-4-6 (8)
	S-5	SS	24	24				4-5-4-7 (9)
10							-10	
	S-6	SS	18	18				6-11-11 (22)
15							-15	
	S-7	SS	18	18				4-7-9 (16)
20							-20	
	S-8	SS	18	18				4-6-8 (14)
25					(SP) FINE SAND, contains significant shell fragments, gray, saturated, medium dense		-25	
	S-9	SS	18	18				7-7-10 (17)
30							-30	

Plastic Limit Water Content Liquid Limit
X———●———△
⊗ STANDARD PENETRATION BLOWS/FT
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
○ CALIBRATED PENETROMETER TON/SF
[FINES CONTENT] %



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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

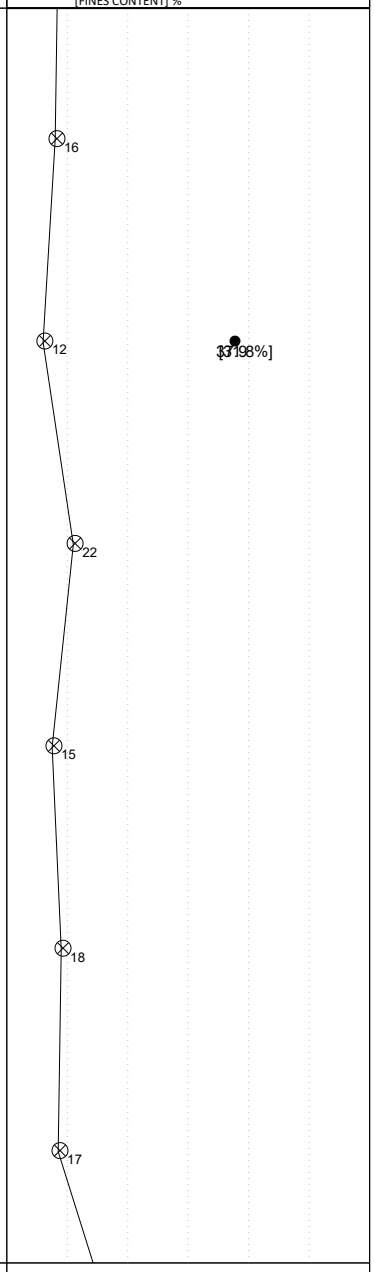
▽ WL (First Encountered) **6.00**	BORING STARTED: **Nov 30 2021**		CAVE IN DEPTH:
▼ WL (Completion)	BORING COMPLETED: **Nov 30 2021**		HAMMER TYPE: **Manual**
▼ WL (Seasonal High Water)	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-02**	**2 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					(SP) FINE SAND, contains significant shell fragments, gray, saturated, medium dense			
35	S-10	SS	18	18			-35	9-8-8 (16)
					(SC) CLAYEY FINE SAND, contains shell fragments, gray and green, saturated, medium dense			
40	S-11	SS	18	18			-40	10-7-5 (12)
45	S-12	SS	18	18			-45	8-8-14 (22)
50	S-13	SS	18	18			-50	7-9-6 (15)
55	S-14	SS	18	18			-55	5-8-10 (18)
					(SP-SC) FINE SAND WITH CLAY, contains shell fragments, gray and green, saturated, medium dense to dense			
60	S-15	SS	18	18			-60	7-10-7 (17)

Plastic Limit Water Content Liquid Limit
X———●———△
⊗ STANDARD PENETRATION BLOWS/FT
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
○ CALIBRATED PENETROMETER TON/SF
[FINES CONTENT] %



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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered) **6.00**	BORING STARTED: **Nov 30 2021**		CAVE IN DEPTH:
▼ WL (Completion)	BORING COMPLETED: **Nov 30 2021**		HAMMER TYPE: **Manual**
▼ WL (Seasonal High Water)	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-02**	**3 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
65	S-16	SS	18	18	(SP-SC) FINE SAND WITH CLAY, contains shell fragments, gray and green, saturated, medium dense to dense		-65	7-14-24 (38)
					(SC) CLAYEY FINE SAND, contains shell fragments, dark gray, saturated, medium dense			
70	S-17	SS	18	18			-70	9-12-16 (28)
					LIMESTONE, Hard			
75	S-18	SS	18	18			-75	14-20-34 (54)
					END OF DRILLING AT 75.0 FT			
80							-80	
85							-85	
90							-90	

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

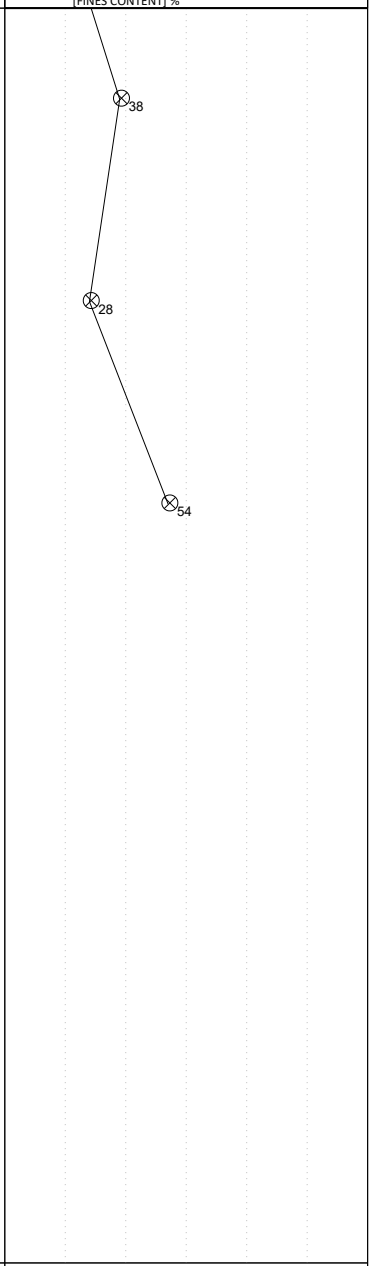
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered) **6.00**	BORING STARTED: **Nov 30 2021**		CAVE IN DEPTH:
▼ WL (Completion)	BORING COMPLETED: **Nov 30 2021**		HAMMER TYPE: **Manual**
▼ WL (Seasonal High Water)	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-03**	**1 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
	S-1	BG1	24		Asphalt Thickness[3.00"] Limerock Thickness[6.00"]			
	S-2	SS	24	24	(SP) FINE SAND, brown and gray, moist to saturated, loose to medium dense			2-2-3-2 (5)
5	S-3	SS	24	24		▼	-5	2-2-2-2 (4)
	S-4	SS	24	24		▽		2-3-4-4 (7)
	S-5	SS	24	24				5-4-3-3 (7)
10							-10	
	S-6	SS	18	18				7-7-9 (16)
15							-15	
	S-7	SS	18	18				8-10-15 (25)
20							-20	
	S-8	SS	18	18				5-7-9 (16)
25					(SP) FINE SAND, contains significant shell fragments, gray, saturated, medium dense		-25	
	S-9	SS	18	18				7-11-8 (19)
30							-30	

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

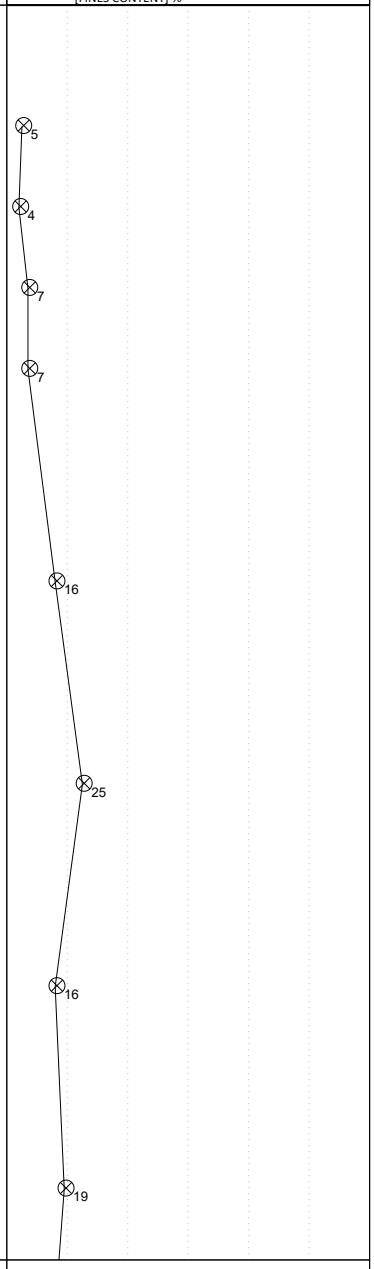
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

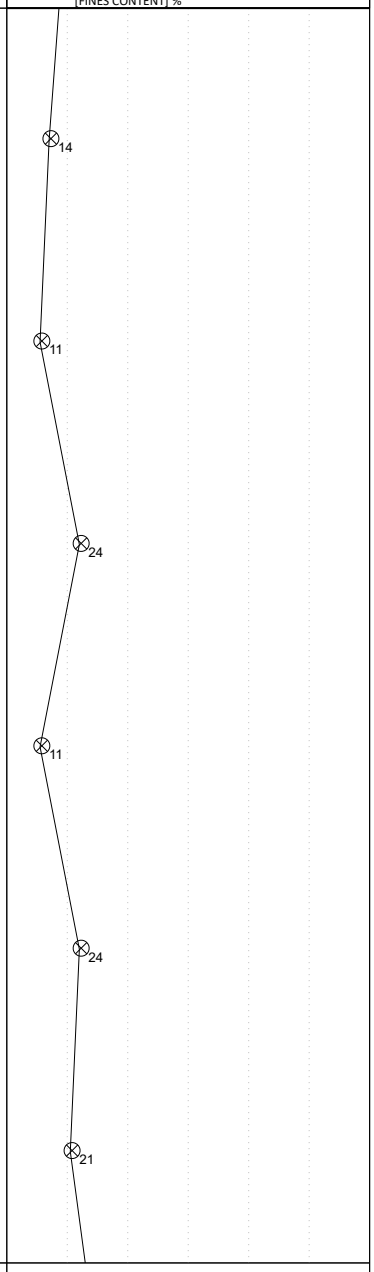
▽ WL (First Encountered) **6.00**	BORING STARTED: **Nov 30 2021**	CAVE IN DEPTH:	
▼ WL (Completion)	BORING COMPLETED: **Nov 30 2021**	HAMMER TYPE: **Manual**	
▼ WL (Seasonal High Water) **4.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-03**	**2 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
35	S-10	SS	18	18	(SP) FINE SAND, contains significant shell fragments, gray, saturated, medium dense		-35	8-7-7 (14)
40	S-11	SS	18	18			-40	4-4-7 (11)
45	S-12	SS	18	18	(SC) CLAYEY FINE SAND, contains shell fragments, gray and green, saturated, medium dense		-45	10-11-13 (24)
50	S-13	SS	18	18			-50	7-4-7 (11)
55	S-14	SS	18	18	(SP-SC) FINE SAND WITH CLAY, contains shell fragments, gray and green, saturated, medium dense		-55	4-8-16 (24)
60	S-15	SS	18	18			-60	7-10-11 (21)

Plastic Limit Water Content Liquid Limit
X———●———△
⊗ STANDARD PENETRATION BLOWS/FT
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
○ CALIBRATED PENETROMETER TON/SF
[FINES CONTENT] %



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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered) **6.00**	BORING STARTED: **Nov 30 2021**	CAVE IN DEPTH:	
▼ WL (Completion)	BORING COMPLETED: **Nov 30 2021**	HAMMER TYPE: **Manual**	
▼ WL (Seasonal High Water) **4.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-03**	**3 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		

SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
65	S-16	SS	18	18	(SP-SC) FINE SAND WITH CLAY, contains shell fragments, gray and green, saturated, medium dense		-65	10-18-12 (30)
70	S-17	SS	18	18			-70	11-12-7 (19)
					LIMESTONE, soft			
75	S-18	SS	18	18			-75	11-13-17 (30)
					END OF DRILLING AT 75.0 FT			
80							-80	
85							-85	
90							-90	

Plastic Limit Water Content Liquid Limit

X———●———△

⊗ **STANDARD PENETRATION BLOWS/FT**

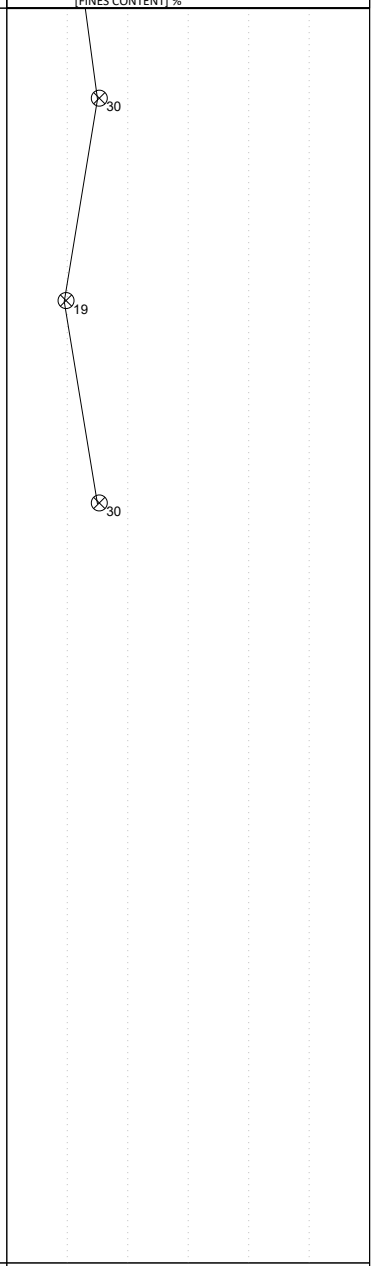
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ **CALIBRATED PENETROMETER TON/SF**

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	**6.00**	BORING STARTED: **Nov 30 2021**		CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Nov 30 2021**		HAMMER TYPE: **Manual**
▼ WL (Seasonal High Water)	**4.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-04**	**1 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
	S-1	BG1	24		Asphalt Thickness[3.00"] Limerock Thickness[6.00"] (SP) FINE SAND, brown and gray, moist to saturated, loose to medium dense			
	S-2	SS	24	24				3-4-3-3 (7)
5	S-3	SS	24	24			-5	5-4-4-4 (8)
	S-4	SS	24	24				6-4-4-3 (8)
	S-5	SS	24	24				3-3-2-4 (5)
10							-10	
	S-6	SS	18	18				6-7-16 (23)
15					(SP) FINE SAND, contains significant shell fragments, gray, saturated, medium dense		-15	
	S-7	SS	18	18				9-7-12 (19)
20							-20	
	S-8	SS	18	18				8-10-15 (25)
25							-25	
	S-9	SS	18	18				9-13-17 (30)
30							-30	

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

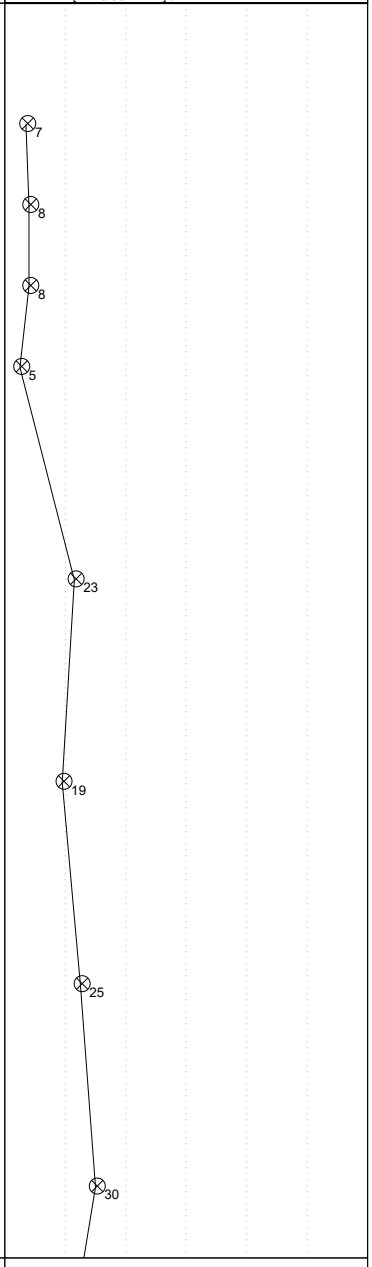
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered)	**5.00**	BORING STARTED: **Nov 30 2021**		CAVE IN DEPTH:
WL (Completion)		BORING COMPLETED: **Nov 30 2021**		HAMMER TYPE: **Manual**
WL (Seasonal High Water)	**3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-04**	**2 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
35	S-10	SS	18	18	(SP) FINE SAND, contains significant shell fragments, gray, saturated, medium dense		-35	8-9-10 (19)
40	S-11	SS	18	18	(SP-SC) FINE SAND WITH CLAY, contains shell fragments, gray and green, saturated, medium dense		-40	6-6-7 (13)
45	S-12	SS	18	18			-45	4-8-8 (16)
50	S-13	SS	18	18			-50	12-11-9 (20)
55	S-14	SS	18	18	(SC) CLAYEY FINE SAND, contains shell fragments, gray and green, saturated, medium dense		-55	7-13-12 (25)
60	S-15	SS	18	18			-60	8-5-8 (13)
					(SP-SC) FINE SAND WITH CLAY, contains shell fragments, gray and green, saturated, medium dense			

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %

19 13 16 20 25 15 13 28 25.4 [29.2%]

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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **5.00**	BORING STARTED: **Nov 30 2021**		CAVE IN DEPTH:
WL (Completion)	BORING COMPLETED: **Nov 30 2021**		HAMMER TYPE: **Manual**
WL (Seasonal High Water) **3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-04**	**3 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
65	S-16	SS	18	18	(SP-SC) FINE SAND WITH CLAY, contains shell fragments, gray and green, saturated, medium dense		-65	8-10-10 (20)
70	S-17	SS	18	18			-70	9-13-13 (26)
					LIMESTONE, soft			
75	S-18	SS	18	18			-75	7-12-32 (44)
					END OF DRILLING AT 75.0 FT			
80							-80	
85							-85	
90							-90	

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

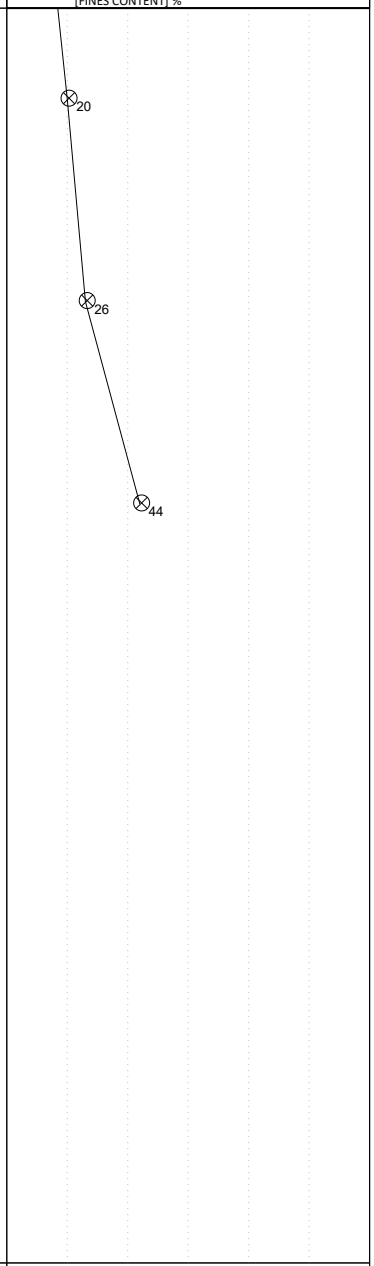
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

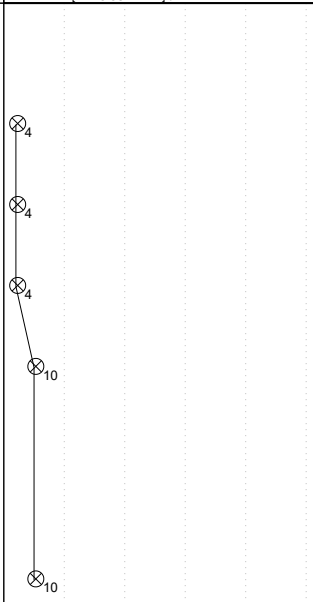
▽ WL (First Encountered)	**5.00**	BORING STARTED: **Nov 30 2021**		CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Nov 30 2021**		HAMMER TYPE: **Manual**
⧩ WL (Seasonal High Water)	**3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
⧩ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-05**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
	S-1	BG1	24		Asphalt Thickness[1.00"] Limerock Thickness[5.00"]			
	S-2	SS	24	24	(SP) FINE SAND, brown and gray, moist to saturated, loose	▼		2-2-2-2 (4)
5	S-3	SS	24	24		▽	-5	2-2-2-2 (4)
	S-4	SS	24	24				1-2-2-2 (4)
	S-5	SS	24	24				2-4-6-6 (10)
10							-10	
	S-6	SS	18	18				4-4-6 (10)
15					**END OF DRILLING AT 15.0 FT**		-15	
20							-20	
25							-25	
30							-30	

Plastic Limit Water Content Liquid Limit
X———●———△
⊗ STANDARD PENETRATION BLOWS/FT
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
○ CALIBRATED PENETROMETER TON/SF
[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

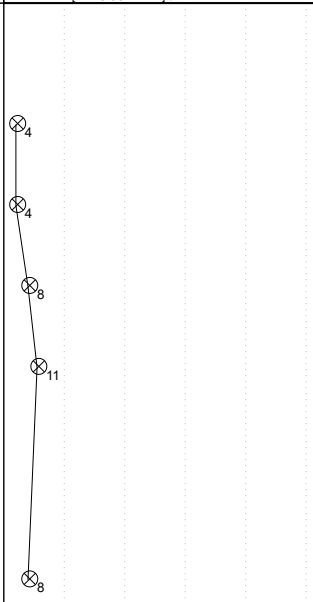
▽ WL (First Encountered)	**5.00**	BORING STARTED: **Dec 01 2021**		CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Dec 01 2021**		HAMMER TYPE: **Auto**
▼▽ WL (Seasonal High Water)	**3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
▽▽ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-06**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	BG1	24		Asphalt Thickness[1.00"] Limerock Thickness[5.00"] (SP) FINE SAND, brown and gray, moist to saturated, loose to medium dense		0	
	S-2	SS	24	24		▼		2-2-2-2 (4)
5	S-3	SS	24	24		▽	-5	2-2-2-3 (4)
	S-4	SS	24	24				2-4-4-2 (8)
	S-5	SS	24	24				6-6-5-6 (11)
10							-10	
	S-6	SS	18	18				7-4-4 (8)
15					**END OF DRILLING AT 15.0 FT**		-15	
20							-20	
25							-25	
30							-30	

Plastic Limit Water Content Liquid Limit
X——●——△
⊗ STANDARD PENETRATION BLOWS/FT
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
○ CALIBRATED PENETROMETER TON/SF
[FINES CONTENT] %



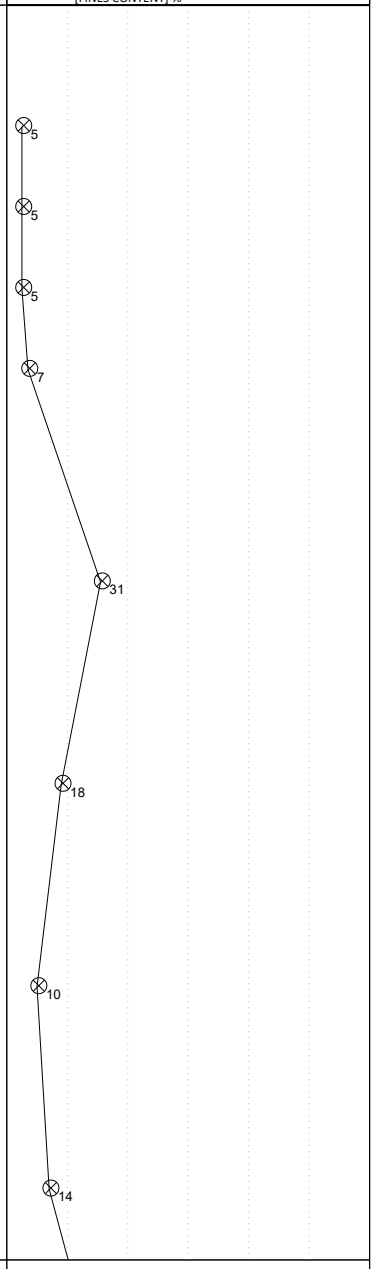
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	**5.00**	BORING STARTED: **Dec 01 2021**		CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Dec 01 2021**		HAMMER TYPE: **Manual**
▼▽ WL (Seasonal High Water)	**3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
▽▽ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-07**	**1 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
	S-1	BG1	24		Asphalt Thickness[1.00"] Limerock Thickness[4.00"] (SP) FINE SAND, brown and gray, moist to saturated, loose to medium dense			
	S-2	SS	24	2				2-3-2-2 (5)
5	S-3	SS	24	24			-5	2-2-3-1 (5)
	S-4	SS	24	24				2-2-3-3 (5)
	S-5	SS	24	24				4-4-3-2 (7)
10							-10	
	S-6	SS	18	18				8-14-17 (31)
15							-15	
	S-7	SS	18	18				8-9-9 (18)
20							-20	
	S-8	SS	18	18				4-5-5 (10)
25					(SP) FINE SAND, contains significant shell fragments, gray, saturated, medium dense to dense		-25	
	S-9	SS	18	18				5-7-7 (14)
30							-30	



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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

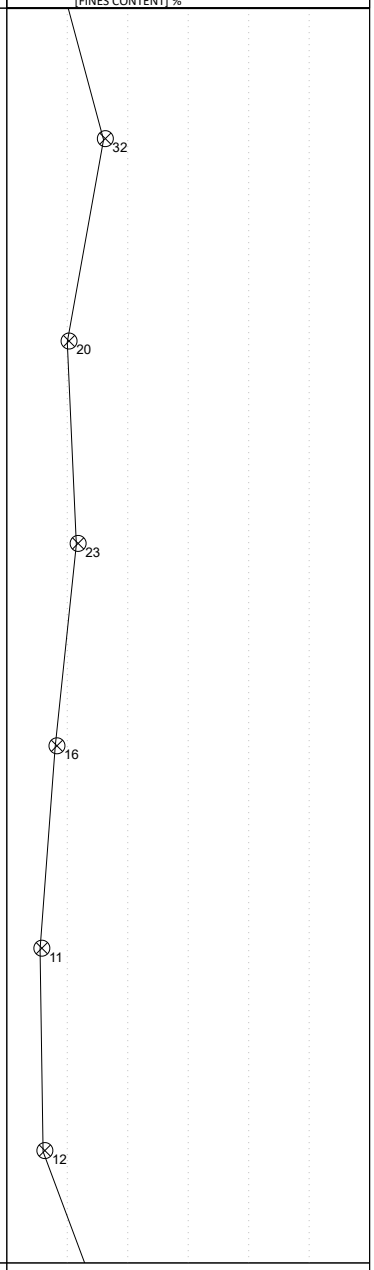
WL (First Encountered)	**5.00**	BORING STARTED: **Nov 29 2021**		CAVE IN DEPTH:
WL (Completion)		BORING COMPLETED: **Nov 29 2021**		HAMMER TYPE: **Manual**
WL (Seasonal High Water)	**3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-07**	**2 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
35	S-10	SS	18	18	(SP) FINE SAND, contains significant shell fragments, gray, saturated, medium dense to dense		-35	11-14-18 (32)
40	S-11	SS	18	18	(SC) CLAYEY FINE SAND, contains shell fragments, greenish gray, saturated, medium dense		-40	9-10-10 (20)
45	S-12	SS	18	18			-45	8-11-12 (23)
50	S-13	SS	18	18			-50	4-7-9 (16)
55	S-14	SS	18	18			-55	4-5-6 (11)
60	S-15	SS	18	18	(SP-SC) FINE SAND WITH CLAY, contains shell fragments, gray and green, saturated, dense		-60	13-6-6 (12)

Plastic Limit Water Content Liquid Limit
X———●———△
⊗ STANDARD PENETRATION BLOWS/FT
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
○ CALIBRATED PENETROMETER TON/SF
[FINES CONTENT] %



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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered) **5.00**	BORING STARTED: **Nov 29 2021**		CAVE IN DEPTH:
▼ WL (Completion)	BORING COMPLETED: **Nov 29 2021**		HAMMER TYPE: **Manual**
▼ WL (Seasonal High Water) **3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-07**	**3 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		

SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
65	S-16	SS	18	18	(SP-SC) FINE SAND WITH CLAY, contains shell fragments, gray and green, saturated, dense		-65	13-14-23 (37)
					LIMESTONE, soft			
70	S-17	SS	18	18			-70	13-12-12 (24)
75	S-18	SS	18	18			-75	12-13-16 (29)
					END OF DRILLING AT 75.0 FT			
80							-80	
85							-85	
90							-90	

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

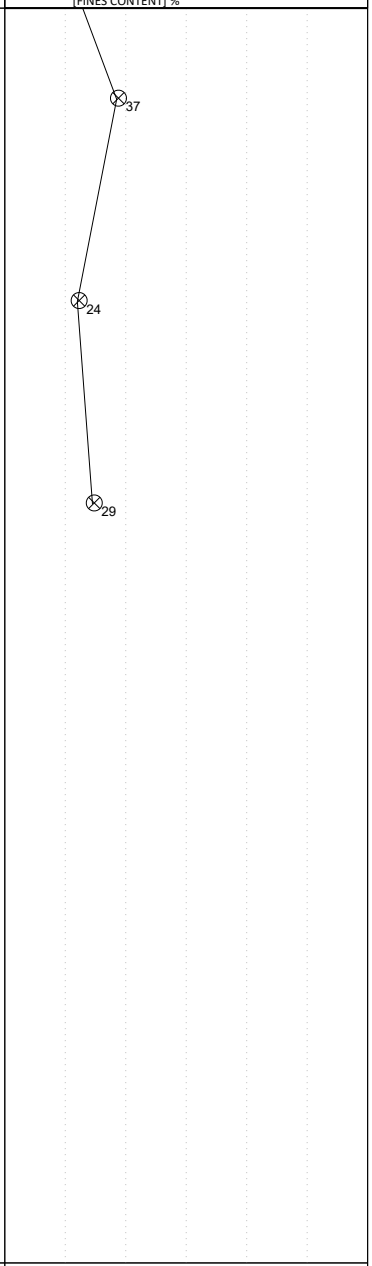
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered)	**5.00**	BORING STARTED: **Nov 29 2021**		CAVE IN DEPTH:
WL (Completion)		BORING COMPLETED: **Nov 29 2021**		HAMMER TYPE: **Manual**
WL (Seasonal High Water)	**3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-08**	**1 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
	S-1	BG1	24		Asphalt Thickness[1.00"] Limerock Thickness[4.00"] (SP) FINE SAND, brown and gray, moist to saturated, loose to medium dense			
	S-2	SS	24	24				2-3-2-2 (5)
5	S-3	SS	24	24			-5	2-2-2-2 (4)
	S-4	SS	24	24				2-3-3-4 (6)
	S-5	SS	24	24				3-4-6-6 (10)
10							-10	
	S-6	SS	18	18				5-8-10 (18)
15							-15	
	S-7	SS	18	18				10-12-12 (24)
20							-20	
	S-8	SS	18	18				5-6-8 (14)
25					(SP) FINE SAND, contains significant shell fragments, gray, saturated, medium dense to very dense		-25	
	S-9	SS	18	18				6-8-11 (19)
30							-30	

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

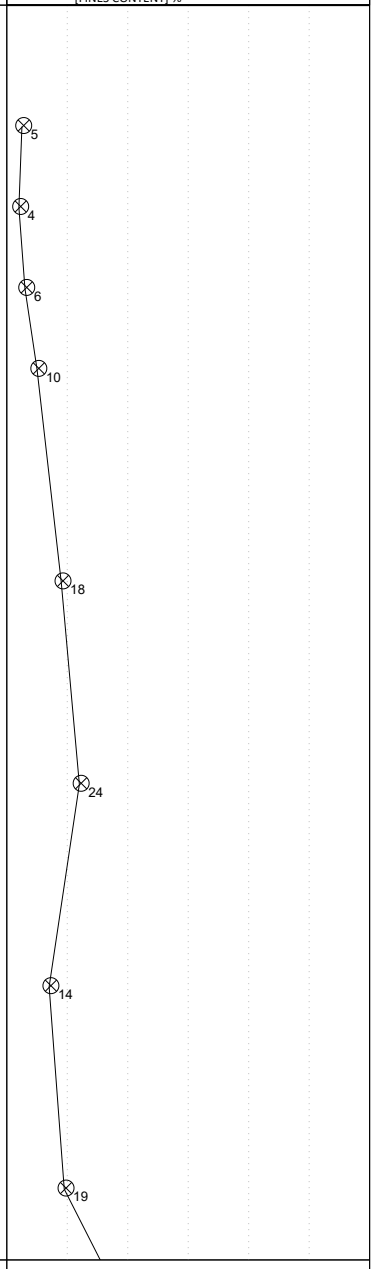
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **5.00**	BORING STARTED: **Nov 29 2021**	CAVE IN DEPTH:	
WL (Completion)	BORING COMPLETED: **Nov 29 2021**	HAMMER TYPE: **Manual**	
WL (Seasonal High Water) **3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-08**	**2 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
					(SP) FINE SAND, contains significant shell fragments, gray, saturated, medium dense to very dense			
35	S-10	SS	18	18			-35	10-27-26 (53)
					(SP-SC) FINE SAND WITH CLAY, contains shell fragments, gray and green, saturated, medium dense			
40	S-11	SS	18	18			-40	8-4-12 (16)
45	S-12	SS	18	18			-45	6-8-8 (16)
50	S-13	SS	18	18			-50	11-10-10 (20)
55	S-14	SS	18	18			-55	11-10-9 (19)
					(SC) CLAYEY FINE SAND, contains shell fragments, gray and green, saturated, medium dense			
60	S-15	SS	18	18			-60	4-5-6 (11)

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

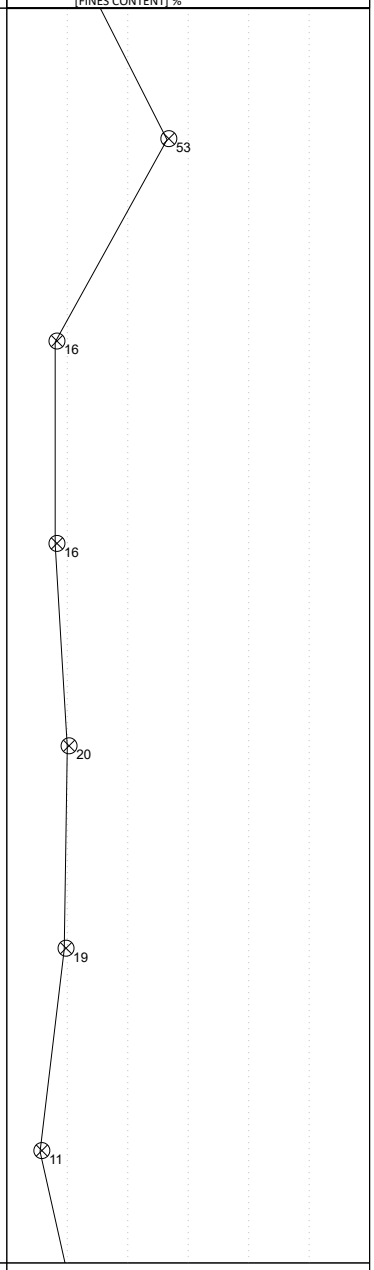
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered) **5.00**	BORING STARTED: **Nov 29 2021**		CAVE IN DEPTH:
WL (Completion)	BORING COMPLETED: **Nov 29 2021**		HAMMER TYPE: **Manual**
WL (Seasonal High Water) **3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-08**	**3 of 3**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		

SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**

LOSS OF CIRCULATION

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:

BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
65	S-16	SS	18	18	(SC) CLAYEY FINE SAND, contains shell fragments, gray and green, saturated, medium dense		-65	9-12-14 (26)
70	S-17	SS	18	18			-70	7-10-7 (17)
75	S-18	SS	18	18	LIMESTONE, soft		-75	9-18-20 (38)
					END OF DRILLING AT 75.0 FT			
80							-80	
85							-85	
90							-90	

Plastic Limit Water Content Liquid Limit

X———●———△

⊗ **STANDARD PENETRATION BLOWS/FT**

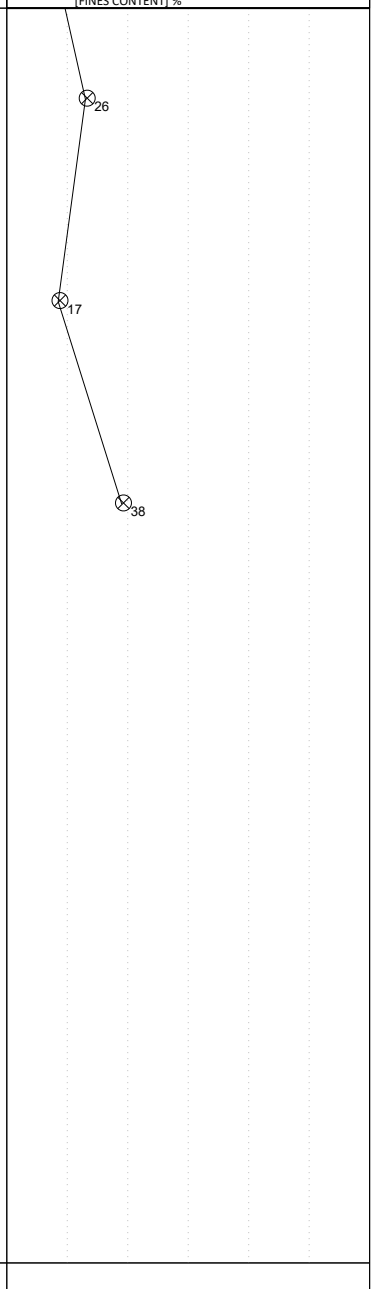
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ **CALIBRATED PENETROMETER TON/SF**

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

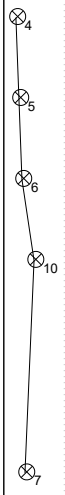
▽ WL (First Encountered)	**5.00**	BORING STARTED: **Nov 29 2021**		CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Nov 29 2021**		HAMMER TYPE: **Manual**
▼ WL (Seasonal High Water)	**3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**B-09**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	BG1	24		Asphalt Thickness[1.00"] Limerock Thickness[4.00"]		0	
	S-2	SS	24	24	(SP) FINE SAND, contains slight rock fragments, brown, moist	▼		2-2-2-2 (4)
5	S-3	SS	24	24	(SP) FINE SAND, brown and gray, moist to saturated, loose	▽	-5	2-2-3-4 (5)
	S-4	SS	24	24				2-3-3-3 (6)
	S-5	SS	24	24				4-4-6-5 (10)
10							-10	
	S-6	SS	18	18				4-4-3 (7)
15					**END OF DRILLING AT 15.0 FT**		-15	
20							-20	
25							-25	
30							-30	

Plastic Limit Water Content Liquid Limit
X——●——△
⊗ STANDARD PENETRATION BLOWS/FT
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
○ CALIBRATED PENETROMETER TON/SF
[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

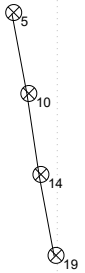
▽ WL (First Encountered)	**5.00**	BORING STARTED: **Nov 29 2021**		CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Dec 02 2021**		HAMMER TYPE: **Manual**
▼ WL (Seasonal High Water)	**3.50**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**P-01**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Resort & Destination	**Allstate Geotechnical Drilling Inc.**		
SITE LOCATION: **3550 S Washington Avenue, Titusville, Florida 32780**			LOSS OF CIRCULATION
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	BG1	24		Asphalt Thickness[1.00"] Limerock Thickness[5.00"]		0	
	S-2	SS	24	24	(SP) FINE SAND, brown and gray, moist, loose	▼		2-2-3-2 (5)
5	S-3	SS	24	24	(SP-SM) FINE SAND WITH SILT, contains slight roots, dark brown, saturated, loose to medium dense	▽	-5	2-4-6-6 (10)
	S-4	SS	24	24				6-6-8-9 (14)
	S-5	SS	24	24				8-10-9-9 (19)
10					**END OF DRILLING AT 10.0 FT**		-10	
15							-15	
20							-20	
25							-25	
30							-30	

Plastic Limit Water Content Liquid Limit
X——●——△
⊗ STANDARD PENETRATION BLOWS/FT
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
○ CALIBRATED PENETROMETER TON/SF
[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	**4.50**	BORING STARTED: **Dec 01 2021**		CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Dec 01 2021**		HAMMER TYPE: **Manual**
▼▽ WL (Seasonal High Water)	**3.00**	EQUIPMENT: **Track**	LOGGED BY: **VA1**	DRILLING METHOD: **Mud-Rotary**
▽▽ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**1 of 1**
PROJECT NAME:	HAND AUGER NO.:	SURFACE ELEVATION:
Titusville Resort & Destination	**R-01**	
SITE LOCATION:		STATION:
3550 S Washington Avenue, Titusville, Florida 32780		
NORTHING:	EASTING:	

DEPTH (FT)	WATER LEVELS	ELEVATION (FT)	DESCRIPTION OF MATERIAL	EXCAVATION EFFORT	DCP	SAMPLE NUMBER	FINES CONTENT (%)	MOISTURE CONTENT (%)
			Asphalt Thickness[1.50"]					
			Limerock Thickness[6.00"]					
			(SP) FINE SAND, brown and gray, moist to saturated	E		S-1		
						S-2		
	▽			E				
						S-3		
5	▽	-5		E				
			END OF DRILLING AT 6.0 FT					
10		-10						
15								

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDRY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

EXCAVATION EFFORT: E - EASY M - MEDIUM D - DIFFICULT VD - VERY DIFFICULT

▽ WL (First Encountered) **4.50**	▼ WL (Seasonal High) **3.00**	ECS REP:	DATE COMPLETED:	UNITS:	CAVE-IN-DEPTH:
▼ WL (Completion)			**Dec 01 2021**	**English**	

HAND AUGER LOG

CLIENT:	PROJECT NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**1 of 1**
PROJECT NAME:	HAND AUGER NO.:	SURFACE ELEVATION:
Titusville Resort & Destination	**R-02**	
SITE LOCATION:		STATION:
3550 S Washington Avenue, Titusville, Florida 32780		
NORTHING:	EASTING:	

DEPTH (FT)	WATER LEVELS	ELEVATION (FT)	DESCRIPTION OF MATERIAL	EXCAVATION EFFORT	DCP	SAMPLE NUMBER	FINES CONTENT (%)	MOISTURE CONTENT (%)
			Asphalt Thickness[1.50"]					
			Limerock Thickness[4.00"]					
			(SP) FINE SAND, brown and gray, moist to saturated	E		S-1		
						S-2		
				E				
						S-3		
5	▽	-5		E				
			END OF DRILLING AT 6.0 FT					
10		-10						
15								

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDRY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

EXCAVATION EFFORT: E - EASY M - MEDIUM D - DIFFICULT VD - VERY DIFFICULT

▽ WL (First Encountered) **5.00**	▼ WL (Seasonal High) **3.50**	ECS REP:	DATE COMPLETED:	UNITS:	CAVE-IN-DEPTH:
▼ WL (Completion)			**Dec 02 2021**	**English**	

HAND AUGER LOG

CLIENT:	PROJECT NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**1 of 1**
PROJECT NAME:	HAND AUGER NO.:	SURFACE ELEVATION:
Titusville Resort & Destination	**R-03**	
SITE LOCATION:		STATION:
3550 S Washington Avenue, Titusville, Florida 32780		
NORTHING:	EASTING:	

DEPTH (FT)	WATER LEVELS	ELEVATION (FT)	DESCRIPTION OF MATERIAL	EXCAVATION EFFORT	DCP	SAMPLE NUMBER	FINES CONTENT (%)	MOISTURE CONTENT (%)
			Asphalt Thickness[1.50"]					
			Limerock Thickness[6.00"]	E		S-1		
			(SP) FINE SAND, brown and gray, moist to saturated			S-2		
	▼			E				
						S-3		
5	▽	-5		E				
			END OF DRILLING AT 6.0 FT					
10		-10						
15								

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDRY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

EXCAVATION EFFORT: E - EASY M - MEDIUM D - DIFFICULT VD - VERY DIFFICULT

▽ WL (First Encountered) **5.00**	▼ WL (Seasonal High) **3.50**	ECS REP:	DATE COMPLETED:	UNITS:	CAVE-IN-DEPTH:
▼ WL (Completion)			**Dec 02 2021**	**English**	

HAND AUGER LOG

CLIENT:	PROJECT NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**1 of 1**
PROJECT NAME:	HAND AUGER NO.:	SURFACE ELEVATION:
Titusville Resort & Destination	**R-04**	
SITE LOCATION:		STATION:
3550 S Washington Avenue, Titusville, Florida 32780		
NORTHING:	EASTING:	

DEPTH (FT)	WATER LEVELS	ELEVATION (FT)	DESCRIPTION OF MATERIAL	EXCAVATION EFFORT	DCP	SAMPLE NUMBER	FINES CONTENT (%)	MOISTURE CONTENT (%)
			Asphalt Thickness[1.00"]	E		S-1		
			Limerock Thickness[5.00"]					
			(SP) FINE SAND, brown and gray, moist to saturated			S-2		
	▽			E				
5	▽	-5		E		S-3		
			END OF DRILLING AT 6.0 FT					
10		-10						
15								

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDRY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

EXCAVATION EFFORT: E - EASY M - MEDIUM D - DIFFICULT VD - VERY DIFFICULT

▽ WL (First Encountered) **5.00**	▼ WL (Seasonal High) **3.50**	ECS REP:	DATE COMPLETED:	UNITS:	CAVE-IN-DEPTH:
▼ WL (Completion)			**Dec 02 2021**	**English**	

HAND AUGER LOG

CLIENT:	PROJECT NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**1 of 1**
PROJECT NAME:	HAND AUGER NO.:	SURFACE ELEVATION:
Titusville Resort & Destination	**R-05**	
SITE LOCATION:		STATION:
3550 S Washington Avenue, Titusville, Florida 32780		
NORTHING:	EASTING:	

DEPTH (FT)	WATER LEVELS	ELEVATION (FT)	DESCRIPTION OF MATERIAL	EXCAVATION EFFORT	DCP	SAMPLE NUMBER	FINES CONTENT (%)	MOISTURE CONTENT (%)
			Asphalt Thickness[1.50"]			S-1		
			Limerock Thickness[7.00"]	E				
			(SP) FINE SAND, brown and gray, moist to saturated			S-2		
				E				
	▼					S-3		
	▽			E				
5		-5						
			END OF DRILLING AT 6.0 FT					
10		-10						
15								

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDRY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

EXCAVATION EFFORT: E - EASY M - MEDIUM D - DIFFICULT VD - VERY DIFFICULT

▽ WL (First Encountered) **4.50**	▼ WL (Seasonal High) **3.00**	ECS REP:	DATE COMPLETED:	UNITS:	CAVE-IN-DEPTH:
▼ WL (Completion)			**Dec 02 2021**	**English**	

HAND AUGER LOG

CLIENT:	PROJECT NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**1 of 1**
PROJECT NAME:	HAND AUGER NO.:	SURFACE ELEVATION:
Titusville Resort & Destination	**R-06**	
SITE LOCATION:		STATION:
3550 S Washington Avenue, Titusville, Florida 32780		
NORTHING:	EASTING:	

DEPTH (FT)	WATER LEVELS	ELEVATION (FT)	DESCRIPTION OF MATERIAL	EXCAVATION EFFORT	DCP	SAMPLE NUMBER	FINES CONTENT (%)	MOISTURE CONTENT (%)
			Asphalt Thickness[1.00"]			S-1		
			Limerock Thickness[4.00"]					
			(SP) FINE SAND, brown and gray, moist to saturated	E				
						S-2		
				E				
	▼					S-3		
5	▽	-5		E				
			END OF DRILLING AT 6.0 FT					
10		-10						
15								

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDRY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

EXCAVATION EFFORT: E - EASY M - MEDIUM D - DIFFICULT VD - VERY DIFFICULT

▽ WL (First Encountered) **5.00**	▼ WL (Seasonal High) **3.50**	ECS REP:	DATE COMPLETED:	UNITS:	CAVE-IN-DEPTH:
▼ WL (Completion)			**Dec 02 2021**	**English**	

HAND AUGER LOG

CLIENT:	PROJECT NO.:	SHEET:
California Retail Properties Corp.	**56:1380-A**	**1 of 1**
PROJECT NAME:	HAND AUGER NO.:	SURFACE ELEVATION:
Titusville Resort & Destination	**R-07**	
SITE LOCATION:		STATION:
3550 S Washington Avenue, Titusville, Florida 32780		
NORTHING:	EASTING:	

DEPTH (FT)	WATER LEVELS	ELEVATION (FT)	DESCRIPTION OF MATERIAL	EXCAVATION EFFORT	DCP	SAMPLE NUMBER	FINES CONTENT (%)	MOISTURE CONTENT (%)
			Asphalt Thickness[1.00"]					
			Limerock Thickness[6.00"]	E		S-1		
			(SP) FINE SAND, brown and gray, moist to saturated			S-2		
	▽			E				
	▼					S-3		
5		-5		E				
			END OF DRILLING AT 6.0 FT					
10		-10						
15								

REMARKS:

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDRY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

EXCAVATION EFFORT: E - EASY M - MEDIUM D - DIFFICULT VD - VERY DIFFICULT

▽ WL (First Encountered) **4.50**	▼ WL (Seasonal High) **3.00**	ECS REP:	DATE COMPLETED:	UNITS:	CAVE-IN-DEPTH:
▼ WL (Completion)			**Dec 02 2021**	**English**	

HAND AUGER LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380**	**PB-01**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Mall Redevelopment	**ECS**		
SITE LOCATION:			LOSS OF CIRCULATION
3550 S. Washington Avenue, Titusville, Florida 32780			
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
1542235.7	**720101.6**		**10.0**

BOTTOM OF CASING

Plastic Limit Water Content Liquid Limit

STANDARD PENETRATION BLOWS/FT

ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
	S-1	SS	24	24	Asphalt Thickness[1.00"] Lime rock Thickness[4.00"] (SP) SAND, brown, moist, medium dense			7-5-8-9 (13)
	S-2	SS	24	24	(SP-SM) SAND WITH SILT, dark brown, moist, medium dense	▼		5-7-10-8 (17)
5	S-3	SS	24	24	(SP) SAND, brown and gray, saturated, loose to medium dense	▽	5	4-5-6-9 (11)
	S-4	SS	24	24				5-8-9-15 (17)
	S-5	SS	24	24				5-8-9-12 (17)
10							0	
	S-6	SS	18	18				5-5-8 (13)
15							-5	
	S-7	SS	18	18				6-3-3 (6)
20					(SP) SAND, contains significant shell fragments, gray, saturated, medium dense		-10	
	S-8	SS	18	18				7-8-8 (16)
25					**END OF DRILLING AT 25.0 FT**		-15	
30							-20	

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered) **4.25**	BORING STARTED: **Mar 05 2021**	CAVE IN DEPTH:	
▼ WL (Completion)	BORING COMPLETED: **Mar 05 2021**	HAMMER TYPE: **Auto**	
▼ WL (Seasonal High Water) **3.00**	EQUIPMENT: **Truck**	LOGGED BY:	DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380**	**PB-02**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Mall Redevelopment	**ECS**		
SITE LOCATION:			LOSS OF CIRCULATION
3550 S. Washington Avenue, Titusville, Florida 32780			
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
1542117.9	**719846.9**		**10.0**

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Asphalt Thickness[3.00"] Lime rock Thickness[6.00"]		10	24-9-7-12 (16)
	S-2	SS	24	24	(SP) SAND, brown, moist to saturated, loose to medium dense			9-8-10-9 (18)
5	S-3	SS	24	24		▼ ▽	5	5-5-4-3 (9)
	S-4	SS	24	24	(SP) SAND, contains slight roots, brown, saturated, medium dense			3-5-5-10 (10)
	S-5	SS	24	24	(SP) SAND, brown and gray, saturated, loose to medium dense		0	3-6-10-15 (16)
10								
	S-6	SS	18	18			-5	4-5-8 (13)
15								
	S-7	SS	18	18				5-4-3 (7)
20					(SP) SAND, brown, saturated, very loose		-10	
	S-8	SS	18	18				1-1-3 (4)
25					(SP) SAND, contains significant shell fragments, gray, saturated, medium dense		-15	
	S-9	SS	18	18				6-5-7 (12)
30					**END OF DRILLING AT 30.0 FT**		-20	

Plastic Limit Water Content Liquid Limit

⊗ STANDARD PENETRATION BLOWS/FT

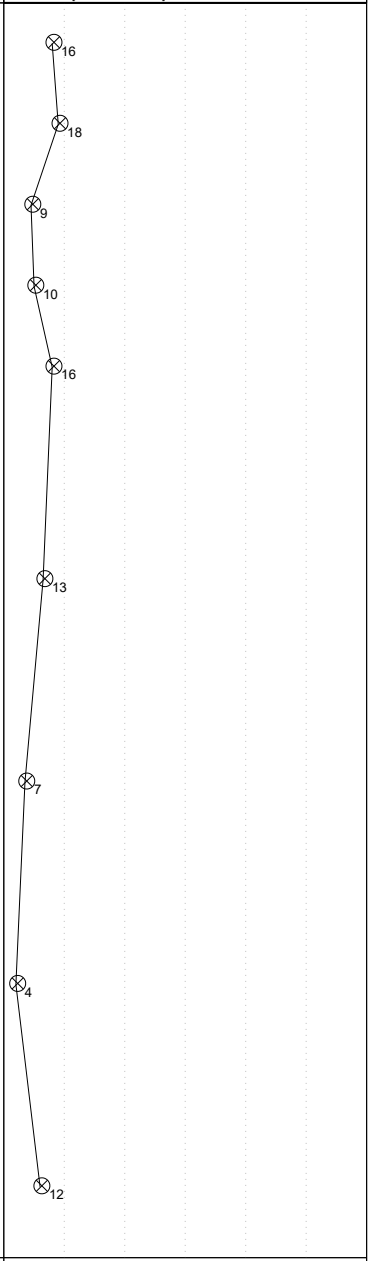
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	**5.00**	BORING STARTED: **Mar 05 2021**	CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Mar 05 2021**	HAMMER TYPE: **Auto**
▼ WL (Seasonal High Water)	**4.00**	EQUIPMENT: **Truck**	LOGGED BY: DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380**	**PB-03**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Mall Redevelopment	**ECS**		
SITE LOCATION:			LOSS OF CIRCULATION
3550 S. Washington Avenue, Titusville, Florida 32780			
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
1542296.4	**719509.2**		**10.0**

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Lime rock thickness[7.00']		10	26-13-8-10 (21)
	S-2	SS	24	24	(SP) SAND, brown and gray, moist to saturated, loose to medium dense	▼ ▽		7-8-9-11 (17)
5	S-3	SS	24	24			5	5-7-8-11 (15)
	S-4	SS	24	24				3-4-10-14 (14)
	S-5	SS	24	24			0	7-6-6-6 (12)
10								
	S-6	SS	18	18			-5	7-9-13 (22)
15								
	S-7	SS	18	18			-10	5-4-5 (9)
20					(SP) SAND, contains significant shell fragments, gray, saturated, medium dense			
	S-8	SS	18	18			-15	7-8-11 (19)
25					**END OF DRILLING AT 25.0 FT**			
30							-20	

Plastic Limit Water Content Liquid Limit
X———●———△

⊗ STANDARD PENETRATION BLOWS/FT

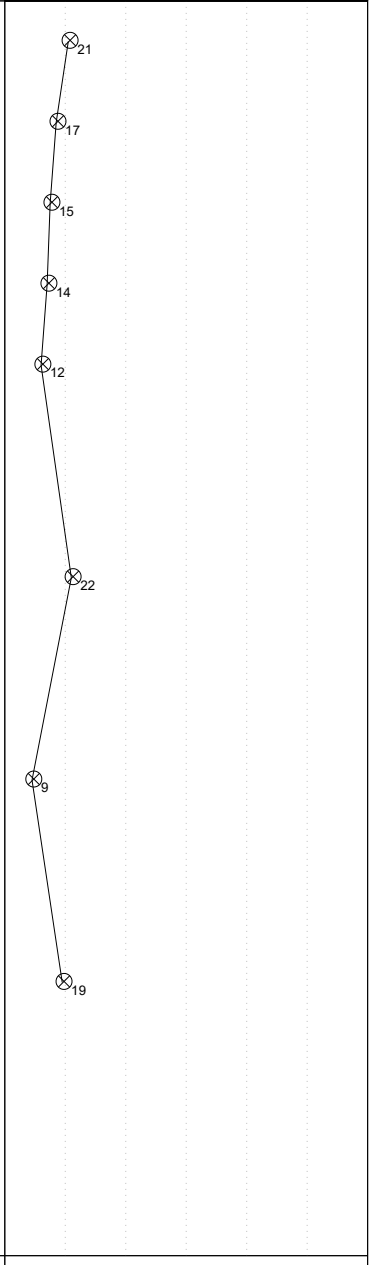
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	**4.25**	BORING STARTED: **Mar 05 2021**		CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Mar 05 2021**		HAMMER TYPE: **Auto**
▼ WL (Seasonal High Water)	**3.00**	EQUIPMENT: **Truck**	LOGGED BY:	DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380**	**PB-04**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Mall Redevelopment	**ECS**		
SITE LOCATION:			LOSS OF CIRCULATION
3550 S. Washington Avenue, Titusville, Florida 32780			
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
1542018.3	**719172.2**		**10.0**

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Lime rock Thickness[6.00]		10	20-6-6-7 (12)
	S-2	SS	24	24	(SP) SAND, brown and gray, moist to saturated, loose to medium dense	▼ ▽		4-3-4-6 (7)
5	S-3	SS	24	24			5	4-6-6-8 (12)
	S-4	SS	24	24				4-4-7-7 (11)
	S-5	SS	24	24				6-6-9-9 (15)
10							0	
	S-6	SS	18	18				4-4-4 (8)
15					(SP) SAND, contains significant shell fragments, gray, saturated, medium dense		-5	
	S-7	SS	18	18				7-8-10 (18)
20							-10	
	S-8	SS	18	18				5-8-7 (15)
25					**END OF DRILLING AT 25.0 FT**		-15	
30							-20	

Plastic Limit Water Content Liquid Limit
X———●———△

⊗ STANDARD PENETRATION BLOWS/FT

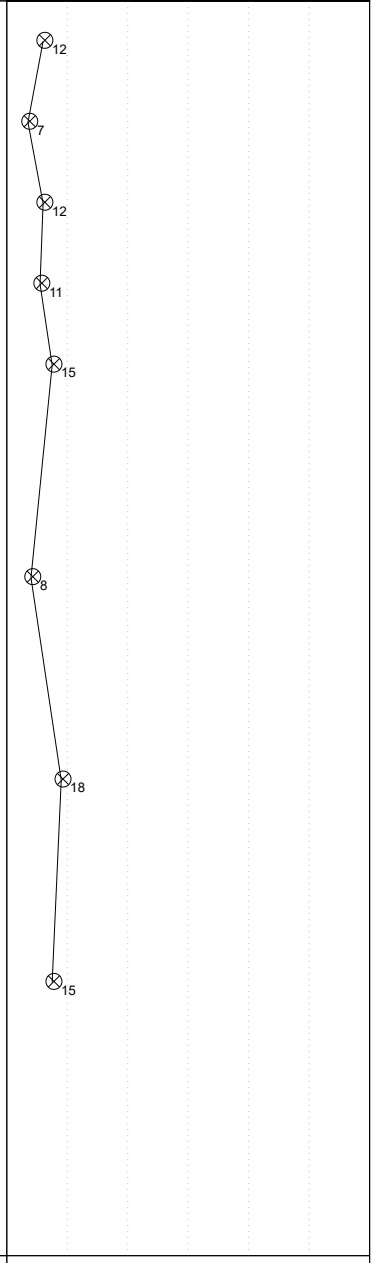
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	**3.50**	BORING STARTED: **Mar 05 2021**	CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Mar 05 2021**	HAMMER TYPE: **Auto**
▼▽ WL (Seasonal High Water)	**2.50**	EQUIPMENT: **Truck** / LOGGED BY:	DRILLING METHOD: **Mud-Rotary**
▽▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380**	**PB-05**	**1 of 1**

PROJECT NAME:	DRILLER/CONTRACTOR:
Titusville Mall Redevelopment	**ECS**

SITE LOCATION: **3550 S. Washington Avenue, Titusville, Florida 32780**

LOSS OF CIRCULATION

BOTTOM OF CASING

NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
1541761.9	**719455.0**		**10.0**

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Lime rock Thickness[6.00]		10	18-8-10-10 (18)
	S-2	SS	24	24	(SP) SAND, brown and gray, moist to saturated, loose to medium dense	▼ ▽		6-7-6-8 (13)
5	S-3	SS	24	24			5	3-5-6-8 (11)
	S-4	SS	24	24				4-7-8-11 (15)
	S-5	SS	24	24			0	8-6-6-10 (12)
10								
15	S-6	SS	18	18			-5	4-7-10 (17)
	S-7	SS	18	18				4-2-3 (5)
20					(SP) SAND, contains significant shell fragments, gray, saturated, medium dense		-10	
	S-8	SS	18	18				10-10-12 (22)
25					**END OF DRILLING AT 25.0 FT**		-15	
30							-20	

Plastic Limit Water Content Liquid Limit
X———●———△

⊗ STANDARD PENETRATION BLOWS/FT

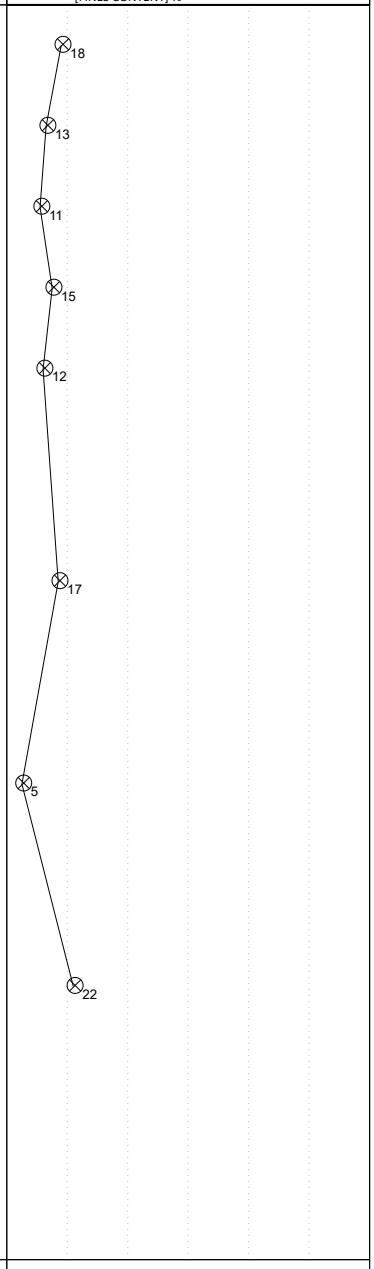
ROCK QUALITY DESIGNATION & RECOVERY

RQD

REC

○ CALIBRATED PENETROMETER TON/SF

[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

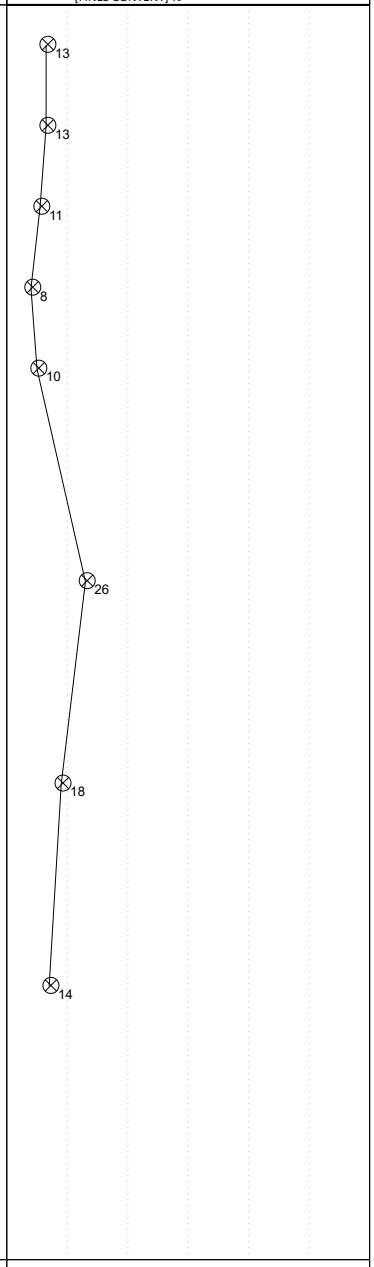
▽ WL (First Encountered)	**3.50**	BORING STARTED: **Mar 05 2021**	CAVE IN DEPTH:
▼ WL (Completion)		BORING COMPLETED: **Mar 05 2021**	HAMMER TYPE: **Auto**
▼▽ WL (Seasonal High Water)	**2.50**	EQUIPMENT: **Truck**	LOGGED BY: DRILLING METHOD: **Mud-Rotary**
▽▽ WL (Stabilized)			

GEOTECHNICAL BOREHOLE LOG

CLIENT:	PROJECT NO.:	BORING NO.:	SHEET:
California Retail Properties Corp.	**56:1380**	**PB-06**	**1 of 1**
PROJECT NAME:	DRILLER/CONTRACTOR:		
Titusville Mall Redevelopment	**ECS**		
SITE LOCATION:			LOSS OF CIRCULATION
3550 S. Washington Avenue, Titusville, Florida 32780			
NORTHING:	EASTING:	STATION:	SURFACE ELEVATION:
1541855.7	**720257.1**		**10.0**

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	WATER LEVELS	ELEVATION (FT)	BLOWS/6"
0	S-1	SS	24	24	Asphalt Thickness[1.50"] Lime rock Thickness[4.00"] (SP) SAND, brown and gray, moist to saturated, loose to medium dense		10	19-4-9-9 (13)
	S-2	SS	24	24				6-6-7-9 (13)
5	S-3	SS	24	24		▼ ▽	5	5-5-6-6 (11)
	S-4	SS	24	24				3-3-5-6 (8)
	S-5	SS	24	24				3-5-5-6 (10)
10							0	
	S-6	SS	18	18				8-11-15 (26)
15							-5	
	S-7	SS	18	18				9-9-9 (18)
20					(SP) SAND, contains significant shell fragments, gray, saturated, medium dense		-10	
	S-8	SS	18	18				5-7-7 (14)
25					**END OF DRILLING AT 25.0 FT**		-15	
30							-20	

Plastic Limit Water Content Liquid Limit
X———●———△
⊗ STANDARD PENETRATION BLOWS/FT
ROCK QUALITY DESIGNATION & RECOVERY
RQD
REC
○ CALIBRATED PENETROMETER TON/SF
[FINES CONTENT] %



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered)	**5.25**	BORING STARTED: **Mar 05 2021**	CAVE IN DEPTH:	
▼ WL (Completion)		BORING COMPLETED: **Mar 05 2021**	HAMMER TYPE: **Auto**	
▼ WL (Seasonal High Water)	**4.00**	EQUIPMENT: **Truck**	LOGGED BY:	DRILLING METHOD: **Mud-Rotary**
▽ WL (Stabilized)				

GEOTECHNICAL BOREHOLE LOG

APPENDIX C – Laboratory Testing

Laboratory Test Results Summary

Laboratory Testing Summary

Sample Source	Sample Number	Start Depth (feet)	End Depth (feet)	Sample Distance (feet)	MC[1] (%)	Soil Type[2]	Atterberg Limits[3]			Percent Passing No. 200 Sieve[4]	Moisture - Density (Corr.)[5]		CBR Value[6]	Organic Content
							LL	PL	PI		Maximum Density (pcf)	Optimum Moisture (%)		
B-02	S-11	38.5	40.0	1.5	37.9	SC				31.8				
B-04	S-15	58.5	60.0	1.5	25.4	SC	28	15	13	29.2				

Notes: 1. ASTM D 2216, 2. ASTM D 2487, 3. ASTM D 4318, 4. ASTM D 1140, 5. See test reports for test method, 6. See test reports for test method

Definitions: MC: Moisture Content, Soil Type: USCS (Unified Soil Classification System), LL: Liquid Limit, PL: Plastic Limit, PI: Plasticity Index, CBR: California Bearing Ration, OC: Organic Content (ASTM D 2974)

Project No. 56:1380-A
Project Name: Titusville Resort & Destination
PM: Vinay Kumar Arebelli
PE: David Spangler
Printed On: January 12, 2022

ECS Florida, LLC - Daytona Beach
2330 South Nova Road, Suite A
South Daytona, FL 32119
Phone: 386-944-9588
Fax: 386-944-9589 fax

Laboratory Testing Summary

Sample Location	Sample Number	Depth (feet)	^MC (%)	Soil Type	Atterberg Limits			**Percent Passing No. 200 Sieve	Moisture - Density		@ LBR (%)	#Organic Content (%)
					LL	PL	PI		<Maximum Density (pcf)	<Optimum Moisture (%)		
B-01	S-6	13.5-15	29.7					7.2				
B-02	S-14	53.5-55	27.6					24.9				
B-03	S-11	38.5-40	19.3					4.8				
B-03	S-3	4-6	33.0					20.1				2.4

Notes: See test reports for test method, ^ASTM D2216-19, *ASTM D2488, **ASTM D1140-17, @FM 5-515, #ASTM D2974-20e1 < See test report for D4718 corrected values

Definitions: MC: Moisture Content, Soil Type: USCS (Unified Soil Classification System), LL: Liquid Limit, PL: Plastic Limit, PI: Plasticity Index, CBR: California Bearing Ratio, OC: Organic Content

Project: Titusville Mall Redevelopment
Client: California Retail Properties Corp.

Project No.: 56:1380-B
Date Reported: 3/27/2024

Office / Lab	Address	Office Number / Fax
ECS Florida LLC - Daytona Beach	2330 South Nova Road Suite A South Daytona, FL 32119	(386)944-9588 (386)944-9589

Tested by	Checked by	Approved by	Date Received
RRawson	kleimer	kleimer	3/15/2024

Summary of Results of Moisture, Ash and Organic Content Tests

Location	Sample				Soil Description	Test Method	Moisture Content	Ignition			Remarks
	Ref	Top (ft)	Base (ft)	Type				Temp oC	Ash %	Organic %	
B-03	S-3	4.00	6.00	SS					97.6	2.4	

Notes
Tests performed in accordance: AASHTO T-267

Project: Titusville Mall Redevelopment
Client: California Retail Properties Corp.

Project No.: 56:1380-B
Date Reported: 3/27/2024

Office / Lab	Address	Office Number / Fax
ECS Florida LLC - Daytona Beach	2330 South Nova Road Suite A South Daytona, FL	(386)944-9588 (386)944-9589

Tested by	Checked by	Approved by	Date Received
RRawson	kleimer	kleimer	3/15/2024

APPENDIX D – Pressuremeter Test Results

Engineering Consulting Services
Tampa, Florida
Automated Pressuremeter Summary

Date: 4/15/2024

Project Number: 56-1380-B

Project Name: Titusville Resort

Project Engineer: TLG

Principal Engineer: DWS

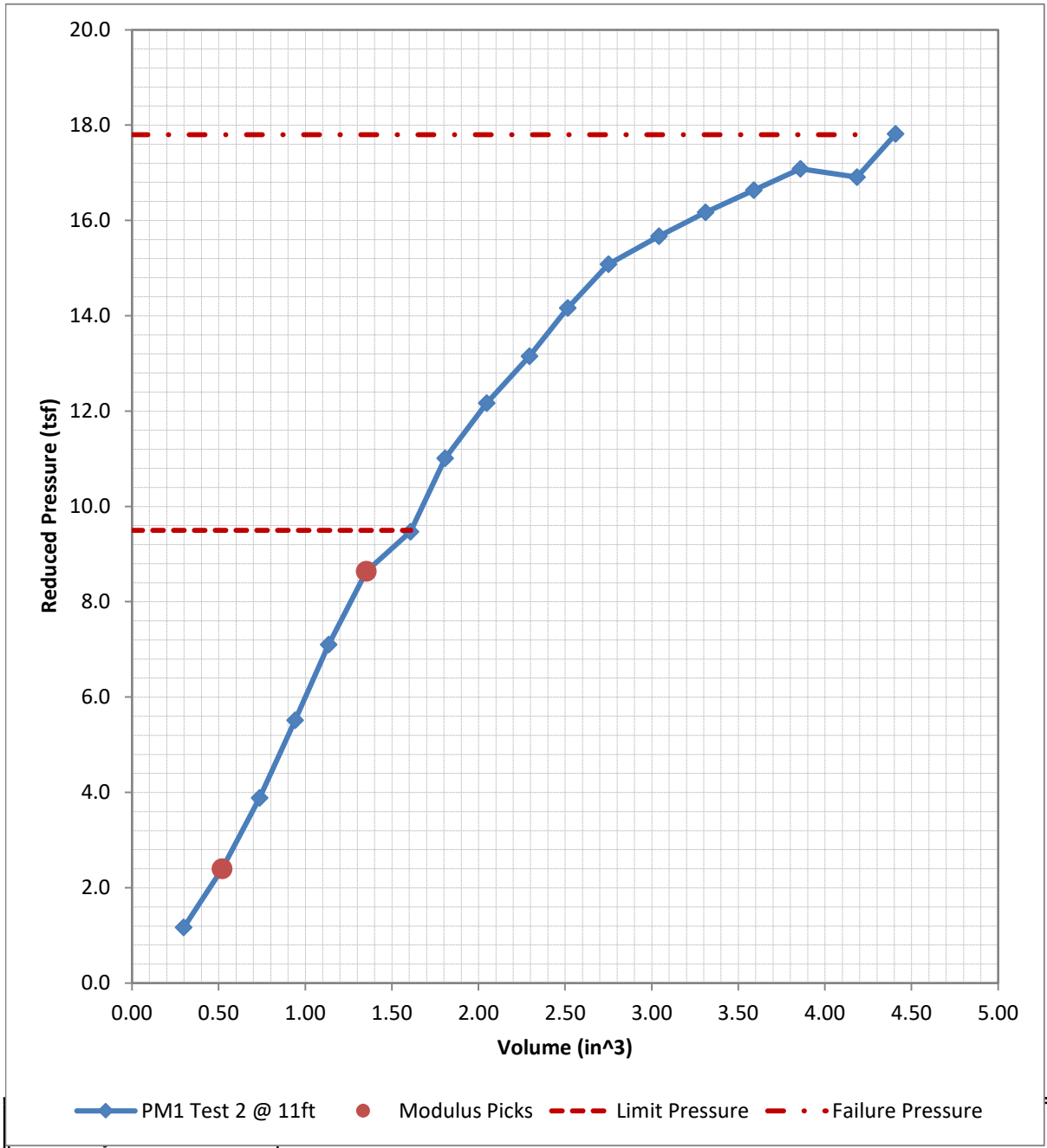
Location	Test	Depth (ft)	Test EL. (ft)	USCS	Pf (tsf)	Pl (tsf)	Ep (tsf)	Er	N-SPT	Ep/Pl	Ep/N	Pl/Pf
PM1	2	11	-1	SP	17.80	9.50	219.00	-	7	23.05	31.29	0.53
PM1	3	24	-14	SP	6.60	4.40	57.96	-	10	13.17	5.80	0.67
PM3	2	14	-4	SP	19.50	13.60	299.57	-	4	22.03	74.89	0.70
PM3	3	29	-19	SP	15.30	10.20	192.64	-	10	18.89	19.26	0.67

ECS

Automated Pressuremeter Report

Membrane Calibration		Volume Calibration	
Pressure (kPa)	**Volume (cm^3)**	**Pressure (kPa)**	**Volume (cm^3)**
0.378046	5.189072	1466.43088	59.945402
12.853483	10.016717	1706.866569	62.036521
28.353268	15.283238	1880.388552	63.4306
37.048269	20.188331	2079.995539	65.521719
46.121314	25.196689		
56.706533	30.308313		
63.133273	35.265039		
68.803926	40.247581		
77.120884	45.307571		
80.145232	50.264297		
83.925667	55.091941		
90.730451	60.384279		
92.620669	65.366821		
97.157191	70.29773		
100.559583	75.564251		
102.449801	80.236998		
106.230236	85.271173		
111.900889	90.408612		

ECS
Automated Pressuremeter Report



Boring #:	PM1	Test EL (ft):	-1
		Test Depth (ft):	11
Date:	4/15/2024	Project Number:	56-1380-B
Modulus (tsf):	219.00	Limit Pressure (tsf):	9.5
Failure Pressure (tsf):	17.8	N_spt	7
Notes:			

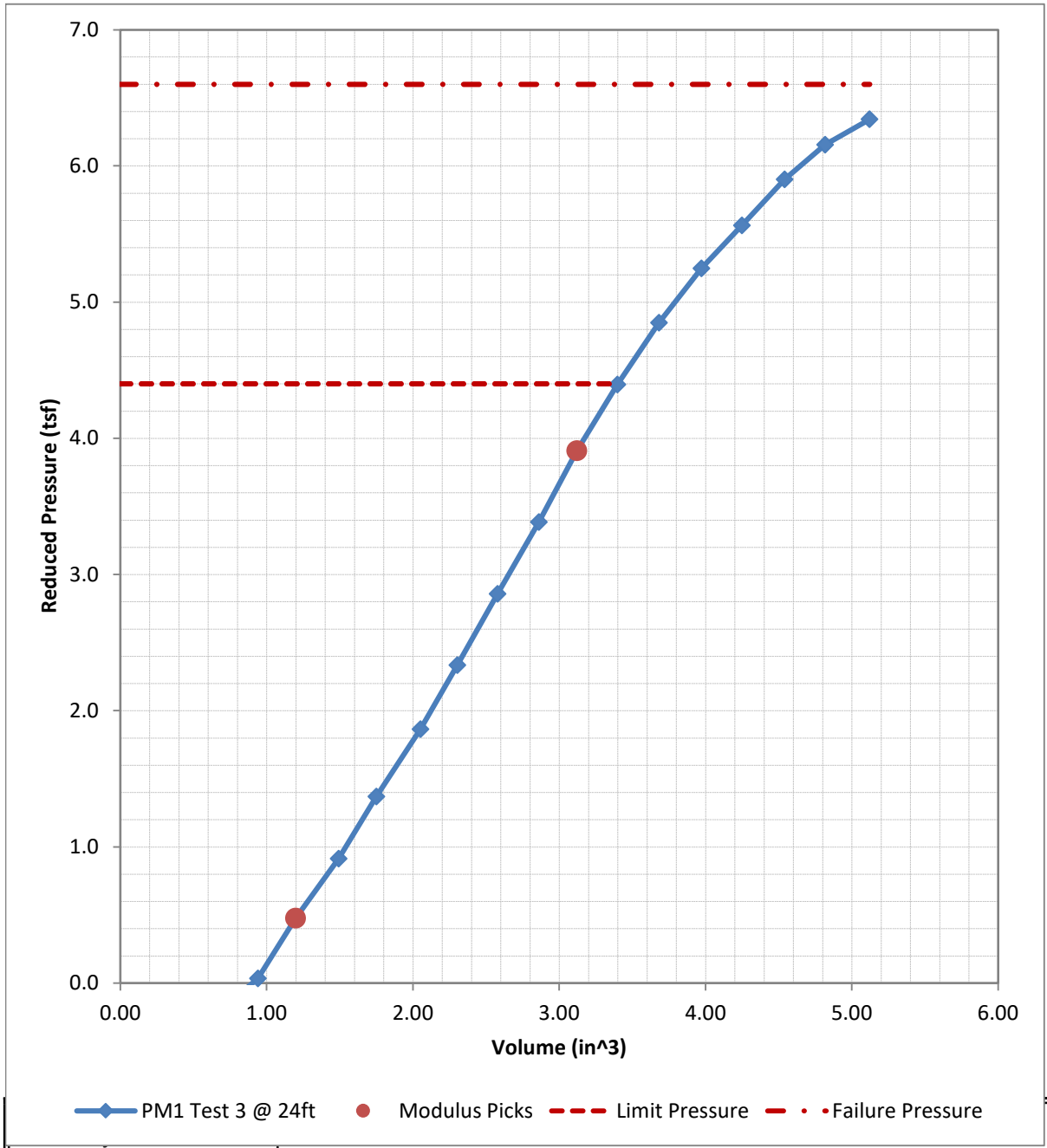
ECS

Automated Pressuremeter Report

Pressure (tsf)	Volume (in^3)
1.168	0.298
2.395	0.520
3.882	0.737
5.513	0.942
7.100	1.135
8.639	1.353
9.468	1.608
11.007	1.808
12.167	2.047
13.147	2.294
14.160	2.516
15.078	2.751
15.670	3.042
16.166	3.311
16.632	3.590
17.081	3.858
16.908	4.186
17.813	4.408

Poisson Ratio	0.333
Pressure 1	2.395
Pressure 2	8.639
Volume 1	0.520
Volume 2	1.353
E_p (tsf)	219.001
Limit Pressure (tsf)	9.50
Failure Pressure (tsf)	17.80
N_SPT	7

ECS
Automated Pressuremeter Report



Boring #:	PM1	Test EL (ft):	-14
		Test Depth (ft):	24
Date:	4/15/2024	Project Number:	56-1380-B
Modulus (tsf):	57.96	Limit Pressure (tsf):	4.4
Failure Pressure (tsf):	6.6	N_spt	10
Notes:			

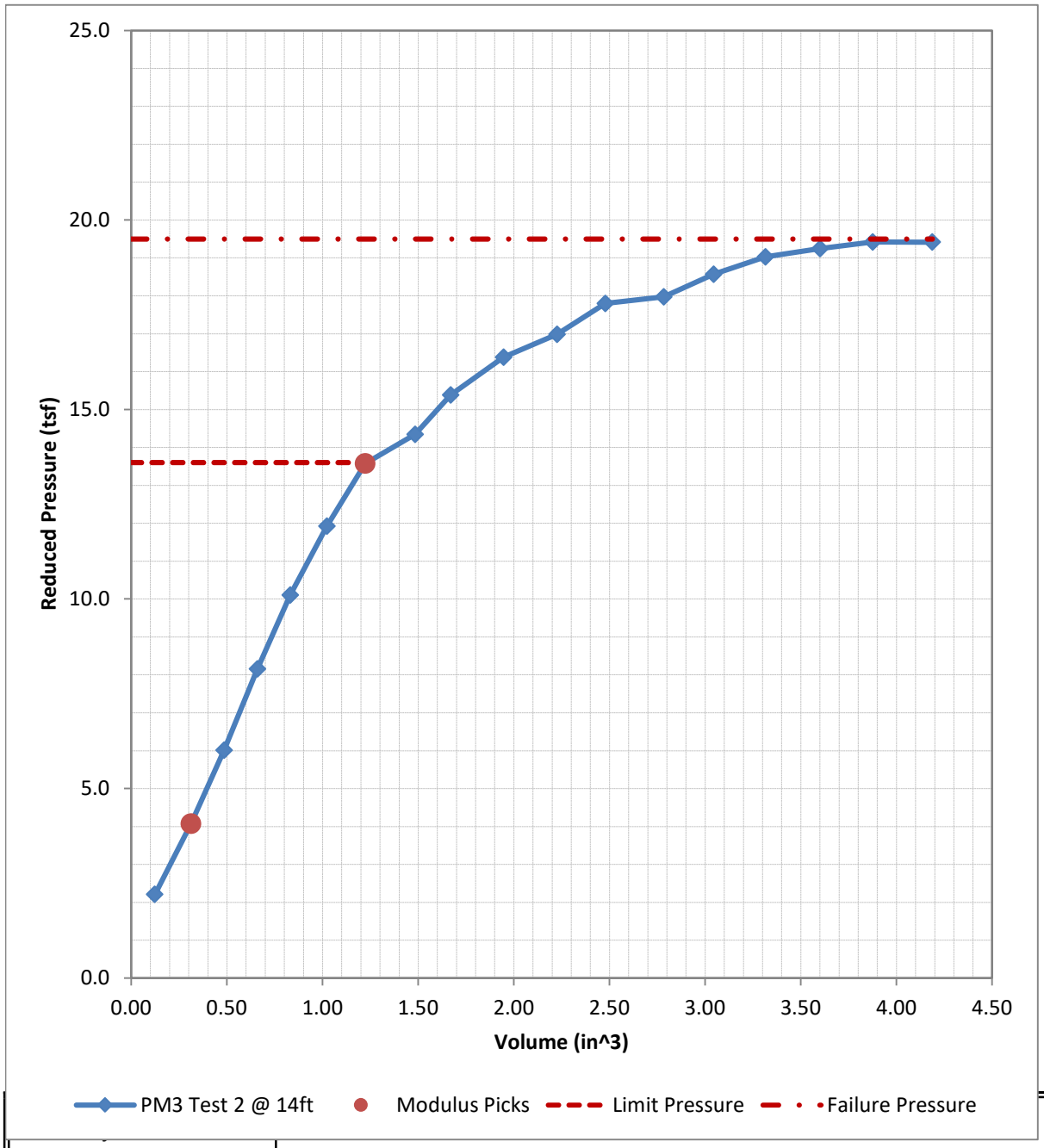
ECS

Automated Pressuremeter Report

Pressure (tsf)	Volume (in^3)
-0.382	0.357
-0.222	0.664
0.035	0.940
0.476	1.199
0.914	1.492
1.370	1.750
1.865	2.052
2.335	2.305
2.858	2.580
3.384	2.862
3.909	3.122
4.396	3.398
4.848	3.683
5.248	3.972
5.564	4.249
5.901	4.540
6.156	4.818
6.343	5.121

Poisson Ratio	0.333
Pressure 1	0.476
Pressure 2	3.909
Volume 1	1.199
Volume 2	3.122
E_p (tsf)	57.955
Limit Pressure (tsf)	4.40
Failure Pressure (tsf)	6.60
N_SPT	10

ECS
Automated Pressuremeter Report



Boring #:	PM3	Test EL (ft):	-4
		Test Depth (ft):	14
Date:	4/15/2024	Project Number:	56-1380-B
Modulus (tsf):	299.57	Limit Pressure (tsf):	13.6
Failure Pressure (tsf):	19.5	N_spt	4
Notes:			

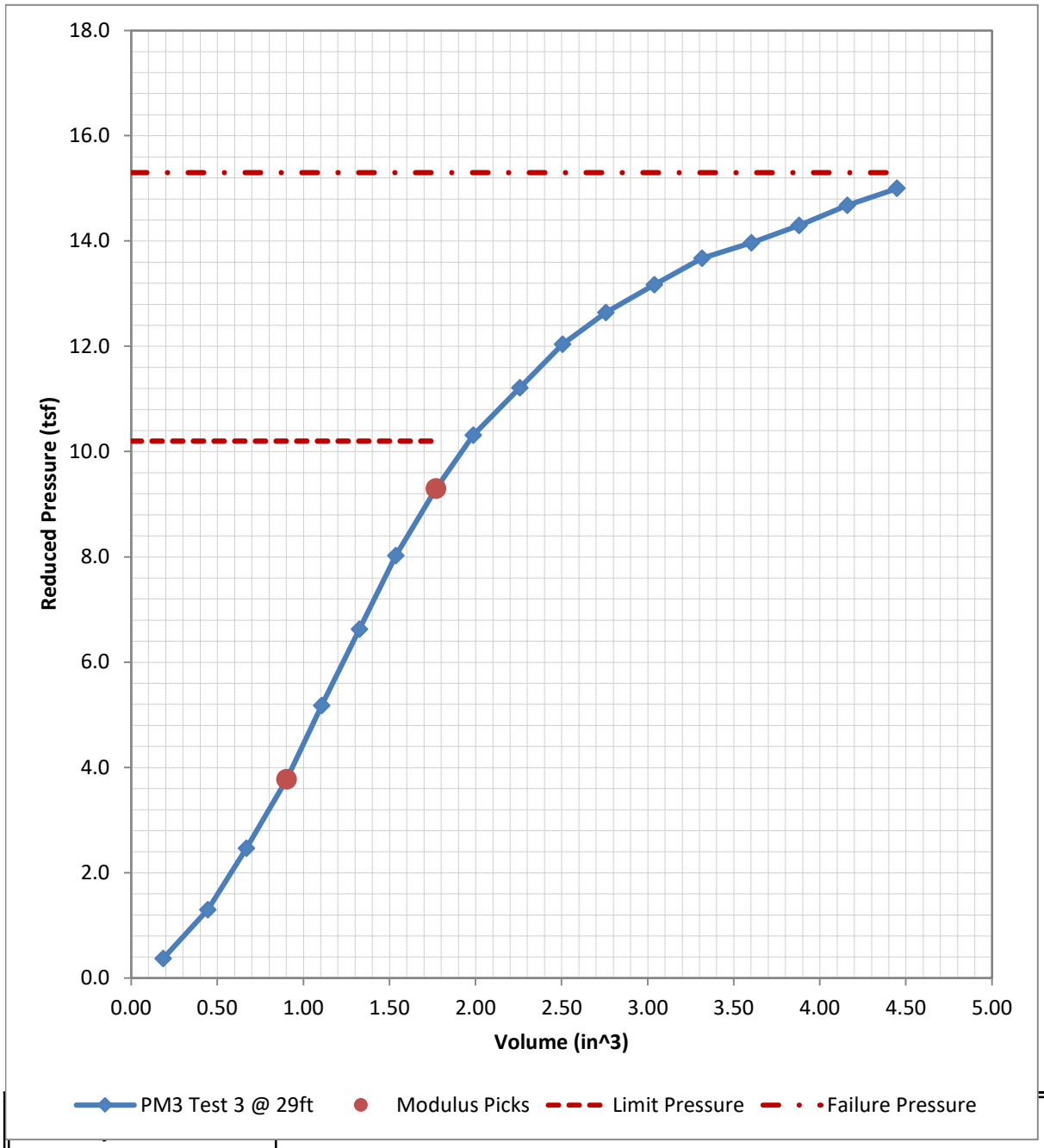
ECS

Automated Pressuremeter Report

Pressure (tsf)	Volume (in^3)
2.206	0.123
4.074	0.312
6.009	0.485
8.156	0.659
10.105	0.832
11.921	1.023
13.570	1.223
14.341	1.484
15.379	1.670
16.379	1.947
16.986	2.226
17.798	2.478
17.970	2.784
18.570	3.045
19.028	3.316
19.246	3.601
19.417	3.876
19.417	4.188

Poisson Ratio	0.333
Pressure 1	4.074
Pressure 2	13.570
Volume 1	0.312
Volume 2	1.223
E_p (tsf)	299.575
Limit Pressure (tsf)	13.60
Failure Pressure (tsf)	19.50
N_SPT	4

ECS
Automated Pressuremeter Report



Boring #:	PM3	Test EL (ft):	-19
		Test Depth (ft):	29
Date:	4/15/2024	Project Number:	56-1380-B
Modulus (tsf):	192.64	Limit Pressure (tsf):	10.2
Failure Pressure (tsf):	15.3	N_spt	10
Notes:			

ECS

Automated Pressuremeter Report

Pressure (tsf)	Volume (in^3)
0.371	0.185
1.297	0.446
2.463	0.669
3.772	0.904
5.177	1.107
6.629	1.326
8.023	1.537
9.298	1.772
10.310	1.987
11.210	2.258
12.040	2.506
12.641	2.757
13.170	3.039
13.674	3.316
13.968	3.603
14.295	3.879
14.678	4.159
14.999	4.448

Poisson Ratio	0.333
Pressure 1	3.772
Pressure 2	9.298
Volume 1	0.904
Volume 2	1.772
E_p (tsf)	192.635
Limit Pressure (tsf)	10.20
Failure Pressure (tsf)	15.30
N_SPT	10