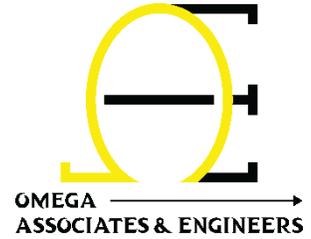


# GEOTECHNICAL INVESTIGATION REPORT



**Zarzamora Development**  
NE Corner of West Chavaneaux Rd. And Stretch Ave.  
San Antonio, Texas



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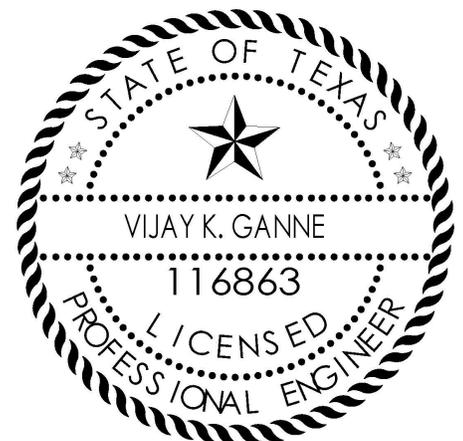
**ATTN: Nick Dhanani, CEO**



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**Omega AE Report No. 20024-035**



**December 13, 2024**

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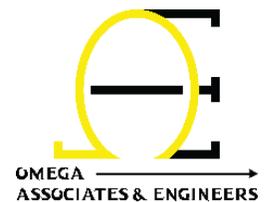
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**Plate Number**

Plate 1  
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**Description**

Project Location Map  
 Plan of Borings  
 Boring Logs  
 Boring Logs Legend



## 1.0 PROJECT INFORMATION

### 1.1 Project Authorization

Omega AE has completed a geotechnical investigation report for the proposed Zarzamora development to be located at the northeast intersection of West Chavaneaux Rd. And Stretch Ave. in San Antonio, Texas. Our services were authorized by Mr. Nick Dhanani, CEO of Dhanani Private Equity Group on October 11, 2024, by signing our proposal number 10024-041 dated October 07, 2024.

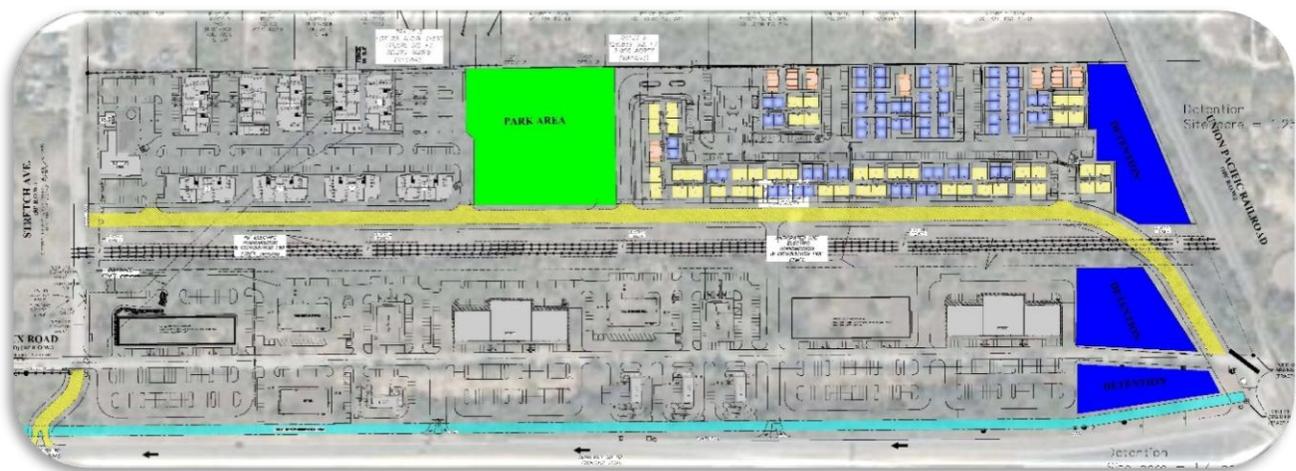
### 1.2 Project Description

Ahmed Amer with Dhanani Private Equity group provided the project information to us through an email dated October 01, 2024. The email included the following documents as attachments.

- Preliminary Site Plan and
- Topographic Survey of the project site
- Preliminary Civil plans

Reviewing the provided information, we understand that Dhanani group is planning to develop multiple retail buildings, two story multifamily, three to four story apartment buildings at the northeast intersection of West Chavaneaux Road and Stretch Avenue in San Antonio, Texas. We understand the total area of the proposed development is about 56.44 acres. Most of the site is covered with heavy brush and trees during our field investigation. Clearing trails to provide access for the drill rig was performed prior to mobilizing a drill rig.

We understand that the site plan provided is preliminary in nature and the location of the buildings along with the planned square footage of the buildings are subject to change. Figure 1 shows the preliminary site plan for this project. Table 1 below shows the type of planned buildings at the time of this report preparation. The project will also include a public roadway (highlighted yellow in Figure 1) between the commercial and residential development.



**Figure 1 Preliminary Site Plan**

**Table 1: Zarzamora Development**

<b>Building Type</b>	<b>Number of Buildings</b>
Two Story Multifamily	132
Three-Four Story Apartments	9
Retail (Single Story)	13

We expect that the final grades will be within  $\pm 5$  feet of the existing grades. Our recommendations are based on the available project information, planned location of the structures at the time of this report and soil conditions discussed in this report. If any of the noted information is known to have changed, please inform us in writing so that we may amend the recommendations presented in this report if appropriate and acceptable to the client.

**1.3 Purpose and Scope of Services**

The purpose of our exploration for this project was to obtain an overview of the subsurface conditions to develop generalized soil information and formulate geotechnical engineering recommendations for the design of foundations and pavements. The exploration included the following tasks and work efforts:

1. Mobilization and demobilization of a truck-mounted drill rig.
2. Drilling and sampling of fifty-three (53) borings to depths ranging from 6 to 20 feet below the existing ground surface.
3. Laboratory testing of selected soil samples obtained from the field exploration as an aid in classifying the materials and evaluating their engineering properties.
4. Analyses of the field and laboratory data to formulate geotechnical engineering recommendations for the design of foundations, site grading, and pavements for the project.
5. Preparation of this report summarizing our work on the project and presenting findings and recommendations.
6. Coordination of our overall work by our project team and principal engineer.

Our scope of services did not include an environmental assessment for determining the presence or absence of wetlands or hazardous or toxic materials in the soil, surface water, groundwater, or air on or below, or around this site. Any statements in this report or on the boring logs regarding odors, colors, and unusual or suspicious items or conditions are strictly for informational purposes.

A geologic fault study to evaluate the possibility of surface faulting at this site was beyond the scope of this investigation.

## 2.0 SITE AND SUBSURFACE CONDITIONS

### 2.1 Site Location and Description

As noted above, the project site is located at the northeast intersection of northeast intersection of West Chavaneaux Rd. And Stretch Ave.in San Antonio, Texas. The property is bound by undeveloped land to the north, I-410 Frontage Road to the south, Union Pacific Railroad tracks to the east and Stretch Avenue to the west of the project site. The project location and general site vicinity are shown on the Project Location Map, Plate 1.

The project site is mostly covered with tall brush, grass and relatively flat. There is an existing electric transmission tower corridor that runs east west direction about 300 feet north of West Chavaneaux Road. Based on a review of google earth imagery, majority of the site appears to be undeveloped in the last 25 years.

### 2.2 Subsurface Materials

The subsurface conditions at the site were explored with fifty-three (53) exploratory borings as shown in Table 2 below. For the approximate exploration locations, see the “Plan of Borings” presented in Plate 2. The borings were advanced using a subcontracted truck mounted drill rig to depths ranging from 6 to 20 below the ground surface (Bgs). Upon completion, the borings were backfilled with soil cuttings to restore the site to near pre-existing conditions.

**Table 2: Summary of Borings Performed**

<b>Location of Borings</b>	<b>Number of Borings</b>	<b>Boring Depth (feet)</b>
Two Story Multifamily	8	20
Three-Four Story Apartments	11	20
Retail (Single Story)	26	20
Public Roadway	5	6
Parking Lots	3	6
<b>Subtotal</b>	<b>53</b>	<b>948</b>

The boring locations were selected and located in the field using a recreational-grade GPS system. Elevations of the ground surface at the boring locations were not provided. The references to elevations of various subsurface strata are based on depths below the existing grade at the time of drilling.

Samples were generally obtained at 2-foot intervals within the upper 10 feet, then at 5-foot intervals to the boring termination depth. Each sample was marked and identified by the date sampled, project number, boring number, and sample depth. The samples were transported to our laboratory for visual identification and laboratory testing and will be retained for at least 60 days from the date of this report.

Select soil samples were tested in the laboratory to determine material properties for our evaluation. Table 3 represents the laboratory testing program.

**Table 3: Laboratory Testing Program**

Laboratory Test	Procedure Specification
Visual Classification	ASTM D2488
Moisture Content	ASTM D2216
Atterberg Limits	ASTM D4318
Material Finer than No. 200 Sieve	ASTM D1140
Unconfined Compression Strength	ASTM D2166

The results of the field and laboratory investigation have been used to generalize a subsurface profile at the project site. The subsurface descriptions mentioned in Table 4 provide a highlighted generalization of the major subsurface stratification features and material characteristics. The boring logs included in the Appendix should be reviewed for specific information at individual boring locations. The boring logs include soil descriptions, stratifications, locations of the samples, and field and laboratory test data. The descriptions provided on the log only represent the conditions at that actual boring location; the stratifications represent the approximate boundaries between subsurface materials.

**Table 4: Generalized Soil Profile**

Stratum	Top (ft)	Bottom (ft)	Soil Description	LL Range	PI Range	Percent Passing #200 Sieve
1	0	13	Sandy Lean Clay (CL), Lean Clay with Sand (CL), Fat Clay (CH), Very Stiff	32-52	18-34	61-89
2	13	20	Lean Clay (CL), Hard	-	-	90-93

Where: LL = Liquid limit; PI = Plasticity Index.

**2.3 Groundwater Information**

Groundwater was not encountered during drilling in the borings drilled at this site. It should be noted that groundwater levels may vary significantly depending on seasonal rainfall, time of year, and other factors.

## 3.0 EVALUATION AND RECOMMENDATIONS

### **3.1 Geotechnical Discussion**

The type and depth of foundation suitable for a given structure primarily depends on several factors including the subsurface conditions, the function of the structure, the load it may carry, the cost of the foundations and the criteria set by the design engineer with respect to vertical and differential movement that the structure can withstand without damage.

Foundation recommendations have been provided based on conceptual drawings and structure locations and it is expected that structure locations and grading may change. If final structure loads, structure locations or cut and fill requirements change, final foundation design recommendations will need to be reviewed and potentially revised.

Based on subsurface exploration and our analysis, the proposed structures can be supported on shallow foundations and post tension slabs. The details of the proposed foundation types for various structures and design are discussed in the following sections of this report.

### **3.2 Regional Geology**

The project site is situated on the Balcones Escarpment, a geological fault line that separates the Texas Hill Country from the Gulf Coastal Plains. The region features diverse soil types, including deep, well-drained, slowly permeable soils formed in ancient alluvial sediments. These soils, such as the San Antonio series, consist of clay loam and clay with a solum thickness ranging from 40 to 60 inches. The upper layers are typically dark brown clay loam, transitioning to reddish-brown clay at greater depths, with varying degrees of calcium carbonate accumulation. The area's karst topography, characterized by sinkholes, caves, and underground streams, contributes to its unique geological and hydrological features.

### **3.3 Soil Shrink-Swell Potential**

The results of laboratory plasticity tests indicate that the natural sandy soils at this site have low shrink-swell potential within the active depth. The soils tend to swell when soil moisture increases and shrink when the soil moisture decreases. The amount of potential movement to shrink and swell with soil moisture variations is represented or indicated by Potential Vertical Rise (PVR). In designing the floor slab or foundation system, the structural engineer should take the potential for shrink/swell movement into account. The active depth in this area is assumed to be about twenty (20) feet.

A PVR value of 2<sup>1</sup>/<sub>2</sub> inches was estimated for this site using the Texas Department of Transportation (TxDOT) TEX-124-E method with a slab load of 1.0 pound per square inch (psi) of surcharge load. This method uses the uniform percent swell through the entire active depth. This method is considered appropriate for extreme soil moisture variations such as extreme rainfall variations in this area.

To reduce the PVR to one (1) inch or less, it is recommended that at least three (3) feet of low plasticity structural fill be placed between the natural soils and floor slab. The structural fill should

be placed within the plan area of the structure and to a distance of at least five (5) feet beyond the perimeter of the structure. Plasticity requirements for the new fill are provided in the “Structural Fill” section of this report.

Onsite soils free of organics and other deleterious materials can be stockpiled and tested for use as Structural fill material during earthwork operations. The contractor should get confirmation from the geotechnical engineer prior to using the onsite soils as structural fill within the building pad areas.

Poor drainage and water infiltration to the foundation soils for an extended period of time can be detrimental to the floor slab and foundation. Excessive wetting of soil (due to accumulation of water), or excessive drying (due to presence large trees, etc.) could possibly result in greater PVR values than those estimated herein as the moisture variations could occur down to depths deeper than seven feet; or the moisture variations can be greater than those inherently assumed by the methods mentioned above. We recommend that the moisture-related problems be corrected immediately as they can be detrimental to the foundation and floor slab.

### **3.4 Site Preparation**

Prior to initiating any site grading, the site should be properly prepared. We recommend that any existing fill material, roots, organic material, and other miscellaneous debris be removed from the site. Tree trunks, tree roots, root balls/root mat should be entirely removed during the clearing and grubbing. These areas should be backfilled with structural fill soils. The depth of removal can be as much as 6 to 8 inches in some areas due to large trees. We recommend that the stripping depth be evaluated at the time of construction by a geotechnical professional.

Good site drainage should be maintained during earthwork operations, which would help to maintain the integrity of the soil. The surface of the site should be kept properly graded to enhance drainage of the surface water away from the proposed foundation areas during the construction phase. We recommend that an attempt be made to enhance the natural drainage without interrupting its pattern.

Prior to placement of new fill, subgrades should be scarified to a minimum depth of 6 inches, moisture conditioned and compacted to at least 95% of Maximum Dry Density as obtained by the Standard Proctor Method (ASTM D 698) moisture conditioned within  $\pm 2\%$  of optimum value. Soil moisture levels should be preserved (by various methods that can include covering with plastic, watering, etc.) until new fill, pavements are placed. Fill soils should be placed in no more than 8-inch loose lifts for mass grading operations and no more than 4 inches for trench type excavations where walk behind or “jumping jack” compaction equipment is used. The moisture content and the degree of compaction of the structural fill soils should be maintained until the construction of the structures within the area.

Onsite soils free of organics and other deleterious materials can be stockpiled and tested for use as Structural fill material during earthwork operations. The contractor should get confirmation from the geotechnical engineer prior to using the onsite soils as structural fill within the building pad areas.

### **3.5 Structural Fill Requirements**

Any structural fill or onsite soils to be placed should be free of organics or other deleterious materials, have a maximum particle size less than 3 inches, be relatively well graded, and have a liquid limit less than 35 and plasticity index less than 20 and a plasticity index between 8 and 20.

Fill should be placed in relatively uniform horizontal lifts on the prepared subgrade. Each loose lift should be 8 inches or less in thickness moisture conditioned and compacted to at least 95% of Maximum Dry Density as obtained by the Standard Proctor Method (ASTM D 698) moisture conditioned within 0 to +2% of optimum value. The type of compaction equipment used will ultimately determine the maximum lift thickness.

Each lift of compacted engineered fill should be tested by a representative of the Geotechnical Engineer prior to placement of subsequent lifts. As a guide, test every 2,500 square feet per lift in the foundation areas (two tests minimum per lift). Certain jurisdictional requirements may require testing in addition to that noted previously. Therefore, these specifications should be reviewed, and the more stringent specifications should be followed.

Onsite soils free of organics and other deleterious materials can be stockpiled and tested for use as Structural fill material during earthwork operations. The contractor should get confirmation from the geotechnical engineer prior to using the onsite soils as structural fill within the building pad areas.

### **3.6 Shallow Foundation Recommendations – Commercial Buildings**

After the site preparation recommendations are followed and movements associated with shrinking and swelling soils are considered, the planned buildings can be supported on a conventional spread footings bearing on the properly compacted structural fill or natural soils. The natural soils at the location of the spread footings consisted of sandy lean clay and lean clay with sand soils with very stiff consistency. The shallow foundations can be designed using the allowable pressures shown in Table 5 below.

**Table 5: Shallow Foundation Bearing Pressures**

<b>Minimum Bearing Depth (feet)</b>	<b>Allowable Bearing Pressure (Dead Load + Live Load)</b>	<b>Allowable Bearing Pressure (Dead Load + Sustained Live Load)</b>
3	3,000	2,000

The shallow foundations should be sized based on the above provided allowable bearing pressures whichever results in a larger bearing area. For foundations placed at least three (3) feet below the finished grade with at least three feet of low plasticity structural fill between the natural soils and the floor-slab, the movements associated with shrinking and swelling soils

should be less than one inch.

We estimate that the separate isolated footing with width no larger than eight feet, designed as discussed above, should experience a total settlement of less than one inch. If a cluster of closely spaced footings (i.e., if the center to center spacing of the footings is less than two times the width of the footing) are planned, additional settlements could occur, and the geotechnical engineer should be contacted.

The base adhesion/frictional resistance and the passive soil resistance will resist the horizontal loads on shallow foundations. For a footing cast against natural clay soil or compacted soil, the adhesion/frictional resistance, and the passive soil resistance values for both transient and sustained loading conditions are given herein.

For transient loading conditions, an ultimate base adhesion resistance of 400 psf and an ultimate passive resistance of 1,500 psf can be used. For sustained loading conditions, a frictional coefficient of 0.57 and an ultimate passive resistance of 600 psf per foot depth is recommended. A factor of safety of 2.0 is recommended to arrive at the allowable values. Passive resistance from the upper two feet of soil should be neglected. Also, the passive resistance of any un-compacted fill material should be neglected.

The uplift resistance of a shallow foundation formed in an open excavation will be limited to the weight of the foundation concrete and the soil above it. For design purposes, the ultimate uplift resistance should be based on effective unit weights of 115 and 150 pcf for soil and concrete, respectively. This value should then be reduced by an appropriate factor of safety to arrive at the allowable uplift load. If there is a chance of submergence, the buoyant unit weights should be used.

Prior to any new engineered fill placement, the soils at the base of excavations should be observed and tested by a qualified special inspections firm prior to engineered fill placement to assess that the foundation materials can support the design loads and are consistent with the materials discussed in this report. If unsuitable soils are encountered at a foundation excavation, a soil correction will be required. This excavation should be extended to competent soils that meet field strength testing requirements.

During excavations, soils should be protected from changes in moisture content. The addition of water into soil subgrades can negatively impact the shear strength of the soil and material workability. Subgrade soils should be protected from site runoff by maintaining proper site drainage from prepared site subgrades to non-structural areas of the site. Wet soils should be properly moisture conditioned prior to the placement of new engineered fill soils. Foundations should be placed as quickly as possible to minimize degradation of the subgrade surface due to wetting and drying.

**3.7 Subgrade Preparation – Residential Buildings**

The residential site preparation guidelines outlined in this section are based on the HUD-FHA Circular 79g controlled earthwork specifications and local practices. According to HUD-FHA Circular 79g (June 19, 1973), it is required that (1) field density tests be conducted by the Geotechnical Engineer for each layer of fill, and (2) continuous supervision of the grading operations be provided by the Geotechnical Engineer (Sections 10L and 10M). For detailed site preparation specifications, please refer to the actual HUD guidelines. The requirements for subgrade preparation and fill placement prior to slab construction are given below.

Subgrade preparation involves removing the top 4 to 6 inches to eliminate existing vegetation and topsoil. Any tree stumps should be completely grubbed out. Areas within the building footprint should be proof rolled to identify and remove soft or wet materials. This proof-rolling should be conducted using a heavy rubber-tire vehicle, such as a pneumatic-tire roller or a loaded dump truck. If soft or wet soils are found, they should be excavated and replaced with compacted backfill. It is crucial to prevent excessive drying and desiccation of the subgrade to minimize swelling after construction. Throughout the construction process, the ground surface should be graded to prevent water ponding and ensure proper drainage.

If residential lots require fill soils, they should be cohesive and placed in lifts no greater than 8 inches in loose measure. The fill soils should comply with the characteristics provided in Section 3.3 and should be compacted to 95% of the maximum dry density, with moisture content within three percentage points of the optimum (ASTM D 698). Any fill placement exceeding 6 inches should be tested and documented by the Geotechnical Engineer or their representative

**3.8 Post Tensioned Slab on Grade Design – Residential Buildings**

The design parameters for post-tensioned slabs are provided in the Post-Tensioning Institute’s (PTI) publication, Design and Construction of Post-Tensioned Slabs-on-Ground, 7th Edition. These parameters are determined based on factors such as the predominant soil type, estimated clay mineral content, type of clay minerals present, the soil’s suction potential within the active zone, and the depth to constant suction for the specific area.

Design parameters are given below for the condition when a post-tensioned slab-on-grade is to be placed on the natural soil or a thin layer of structural fill.

**Table 6: Post-Tensioned Slab Design Parameters**

Description	Design Parameters
Depth of Seasonal Moisture Variation	Approximately 15 feet
Effective Plasticity Index	15 percent
Perimeter of Grade Beam Depth	Minimum 12 inches below the existing grade
Net Allowable Bearing Capacity	1,500 psf

Our analysis did not consider vegetative influences, such as trees, flower beds, and residential

landscaping, which can significantly affect foundation performance. The actual performance of slab-on-grade foundations is largely dependent on soil moisture conditions immediately prior to slab construction, construction techniques, site preparation, as well as post-construction landscaping and drainage. Allowing the subgrade to become excessively wet or dry before foundation construction, followed by further drying or wetting after construction, could result in greater differential soil movements than estimated. Additionally, sources of water, such as plumbing leaks within the residence, will significantly impact foundation movement. Also, the construction of post-tensioned slabs requires close attention to detail during construction. Only contractors experienced in post-tensioned slab construction should be used on this project.

### **3.9 Floor Slab Design**

The building floor slab is anticipated to be supported upon properly compacted fill soils. Both the subgrade and any fill soils should be tested as noted in the "Site Preparation" section of this report. A modulus of subgrade reaction,  $k$ , of 125 pci could be obtained for slab design when the fill or natural soils are compacted to at least 95 percent of the standard Proctor maximum dry density determined by ASTM D698. It is estimated that a total soil settlement of about one inch and a differential settlement of about  $\frac{1}{2}$  inch could take place under the slab designed as stated in this section.

### **3.10 Preliminary Detention Pond Recommendations**

The dimensions of the detention ponds are not provided to us at the time of this report. It is anticipated that the proposed detention pond berms will be earthen embankments of about 6 to 8 feet in height and with 3H to 1V side slopes.

Based on field investigation and laboratory testing, natural near surface soils comprise mostly medium plasticity clays which exhibit a very low permeability that makes them suitable for use as fill for the proposed detention pond berms. Therefore, the embankments can be constructed using onsite soils provided the subgrade preparation recommendations presented in this report are followed.

It is recommended that the berms subgrade is prepared following the recommendations for shallow foundation areas, including the removal of all existing undocumented fills. After undercutting and proof-rolling have been completed, any necessary berm fill placement may begin. The first layer of berm fill should be placed in a relatively uniform horizontal lift by scarifying the stripped subgrade and then re-compacting the scarified materials with the berm fill.

Soils used for constructing the berms should be clay soils free of organic or other deleterious materials, have a maximum clay lump size of less than three (3) inches, and have a plasticity index not less than 10. The soils should also be compacted to at least 95% percent of the standard Proctor maximum dry density as determined by ASTM D698.

Berm fill should be placed in maximum lifts of eight (8) inches of loose material and should be compacted within the range of negative one to three percentage (-1% to +3%) points above the

optimum moisture content value. If water must be added, it should be uniformly applied and thoroughly mixed into the soil by disking or scarifying. Each lift of berm fill should be tested by a representative of the geotechnical engineer prior to placement of subsequent lifts. Care should be taken to apply compactive effort throughout the berm fill and berm fill scope areas. The moisture content and the degree of compaction of the berm fill soils should be maintained until the construction of the structures within the area.

Because of the relatively low height and flat slopes, global stability issues should not be a concern for the berms constructed as per the above recommendations. However, onsite clay soils used for the berms have a potential to shrink/swell due to moisture changes. It has been our local experience that slopes made with medium to high plasticity clay could undergo some shallow slope failures. Some identified causes of such failures include loss of soil strength in the surficial soils due to shrink-swell cycles (i.e., within the active zone or weathered zone), surface water infiltration through shrinkage cracks and downhill creep. Therefore, it should be realized that slopes in medium plasticity lean to fat clays may experience some shallow sloughing failures and periodic maintenance may be required.

The berm side slopes should be protected from erosion due to rainfall or surface run-off. Any erosion or minor sloughing on the slopes should be repaired immediately.

### **3.11 Pavement Design Recommendations**

#### **3.11.1 Pavement Design Recommendations – Dhanani Way (Public Road)**

Based on the information provided to us, we understand that a public road is being planned between commercial and residential development. We understand that this public road has to be designed based on *City of San Antonio (COSA) Transportation & Capital Improvements Design Guidance Manual dated October 2017* and AASTO guidelines. This method of design considers pavement performance, traffic, subgrade soils, pavement materials, environment, drainage and reliability. Each of these items is incorporated into the design methodology.

We understand that rigid pavement is being considered for the proposed public road. For traffic values, as per Section 10 Table 10A-1 from COSA Design Guide manual for Local Type B roadway 3,000,000 18-kip Equivalent Single Axle Loads (ESALs) over a 30-year design analysis period was utilized. The reliability factor, standard deviation, serviceability. Modulus of Rupture (Mr), Concrete Elastic modulus, Load transfer Coefficient, Drainage coefficient values are selected based on rigid pavement section given in the design manual.

Listed in Table 7 below are pavement component thicknesses for rigid pavement based on the above discussed parameters.

**Table 7: Rigid Pavement System – Public Road**

Traffic	Estimated Rigid Pavement Material Thickness (inches)	
	Reinforced Concrete	Lime Treated Subgrade
3 million ESALs	8	6

Given below are our recommended material requirements for the various pavement section components based on COSA design manual.

Reinforced Concrete – The materials and properties of concrete should meet applicable requirements in the ACI Manual of Concrete Practice of TxDOT Standards. The concrete should have a minimum 28-day strength of 4,000 psi. The steel reinforcement, expansion and control joint spacing should meet the TxDOT 2003 Specifications, Sheet No. CRCP (1) – 03.

Lime Treated Subgrade – The on-site high plasticity clay soils should be treated with lime in accordance with the TXDOT 2004 Standard Specifications Item 260. The amount of lime should be determined for subgrade soils by conducting laboratory tests just prior to construction. Based on the classification test results, we recommend that about 4 to 6 percent lime by dry weight be used for estimating and planning. The pulverization, mixing and curing of the lime treated subgrade is of particular importance in these clays. The subgrade should be compacted to a minimum of 95 percent of the Standard Effort (ASTM D 698) maximum dry density at a moisture content between optimum and 3 percent wet of the optimum moisture content. Preferably, traffic should be kept off the treated subgrade for about 7 days to facilitate curing of the soil - chemical mixture; in addition, the subgrade is not suitable for heavy construction traffic prior to paving.

Reinforcement Details: The choice of steel reinforcement is influenced by factors such as joint spacing and slab thickness, which are elaborated in publications by the Portland Cement Association. and ACI documentation. It is recommended that the joint spacing do not exceed 15 feet in either longitudinal or transverse direction.

**3.11.2 Pavement Design Recommendations – Parking Lots and Driveways**

Our scope of services included evaluating the near-surface soils for the specific purpose of providing pavement section thickness recommendations. The recommended thicknesses presented below are considered typical and minimum for the derived parameters.

Pavement Subgrade Preparation: After the pavement areas have been stripped and prepared in accordance with “Site Preparation” section of this report, the exposed subgrade should be proof rolled with a loaded, rubber tire dump truck or water truck. Areas found to be soft or yielding under the weight of the truck should be over-exacted as recommended by the Geotechnical Engineer’s representative and replaced with properly compacted structural fill.

Using AASHTO design methodology, the pavement design thickness considers pavement performance, traffic, subgrade soils, pavement materials, environment, drainage and reliability. Traffic includes several types of vehicles with various magnitudes of axle loads that may be subjected to the pavement during its service life. The design involves a traffic analysis that converts various types of vehicles with various magnitudes axle loads to a number of 18-kip equivalent single axle load (ESAL) repetitions. The design engineer should perform traffic analyses to compute the number of ESALs repetitions that would be subjected to the pavement during its service life or design life. Based on the computed ESALs, an economical and appropriate pavement can be designed accordingly.

To design a pavement, the subgrade soil conditions, and anticipated levels of traffic must be known. The subgrade soils are evaluated based on our limited testing. The anticipated traffic on the proposed pavement is not known at this time. Based on our previous experience with similar facilities, the traffic for the proposed pavement could include lightly loaded cars/pick-up trucks, delivery vans or trucks, dump trucks and occasional 18-wheeler truck traffic.

Based on AASHTO design methodology and our experience with similar projects in the local area we have provided pavement thickness for both flexible pavement and rigid pavement systems in Tables 8 and 9 below.

**Table 8: Asphaltic Concrete Recommended Minimum Thicknesses**

Pavement Materials	Car Parking Areas (inches)	Driveway & Heavy Truck Load Areas (inches)
Hot Mix Asphalt	2	3
Crushed Aggregate Base Course	6	8

**Table 9: Concrete Recommended Minimum Thicknesses**

Pavement Materials	Car Parking Areas (inches)	Driveway & Heavy Truck Load Areas (inches)
Concrete	5	6
Subgrade or Subbase	6	6

The project Civil Engineer should review our traffic loading assumptions to confirm they are appropriate. Water should not be allowed to pond behind curbs and saturate the base course. In down grade areas base course should extend through the slope to allow any water entering the base course a path to exit.

Concrete pavement should incorporate deformed steel rebar for reinforcement. The determination of the pavement's thickness takes into account the flexural strength of the concrete, the soil's modulus, and the anticipated traffic load. The choice of steel reinforcement is influenced by factors such as joint spacing and slab thickness, which are elaborated in publications by the Portland Cement Association. and ACI documentation.

Proper finishing of concrete pavement requires the use of appropriate construction joints to reduce the potential for cracking. Construction joints should be designed in accordance with the current Portland Cement Association and the American Concrete Institute guidelines. Joints should be sealed to reduce the potential for water infiltration into pavement joints and subsequent infiltration into the supporting soils. Load transfer devices at the pavement joints should be designed in accordance with accepted codes. The concrete should have a minimum compressive strength of 4,000 psi at 28 days. The concrete should also be designed with 5±1 percent entrained air to improve workability and durability. Normal periodic maintenance will be required.

**3.12 Utility Trench Recommendations**

We anticipate that the proposed utility lines will be installed within the upper 8 feet below the existing grade. The recommendations in this report are preliminary, based on an evaluation of subsurface conditions observed at widely spaced borings. Excavation retention and construction dewatering are the contractor’s responsibility. The contractor should obtain additional subsurface information as needed to confirm the representativeness of the conditions described herein.

Bedding and backfill for water lines, sanitary sewers, and storm sewers should be constructed using the City of San Antonio Engineering Standards and Construction Specifications for Wastewater Collection Systems, Water Lines, Storm Drainage, and Street Paving.

General Backfill Placement: Backfill placement should be in accordance with the City of San Antonio Standard Construction Specifications. Excavation and Backfill for Utilities are summarized in Table 10 below.

**Table 10: Utility Backfill Recommendations**

Soil Type	Maximum Lift Thickness (compacted)	Minimum Compacted Density (ASTM D 698)	Compacted Moisture Content (ASTM D 698)
Bank Run Sand	9 inches	95%	±3 points
Cement-Stabilized Sand	12 inches	95% (*)	Less than optimum (*)
Select Fill	6 inches	95%	±2 points
General Fill (**)	9 inches (clay) 12 inches (sand)	90%	None

(\*) As determined by ASTM D 558

(\*\*) General fill is to be used outside pavement areas.

We recommend a minimum of 95% relative compaction for general fill. Backfill material specifications for bank run sand, select backfill, and random backfill are provided in the Specification Section. The City of San Antonio Standard Construction Specifications preclude the use of silt, organic clay, and peat as utility backfill materials.

## **4.0 CONSTRUCTION CONSIDERATIONS**

Omega AE should be retained to provide observation and testing of construction activities involved in the floor slab repair, earthwork, and related activities of this project. Omega AE cannot accept any responsibility for any conditions that deviate from those described in this report, nor for the performance of the foundations if not engaged to also provide construction observation for this project.

### **4.1 Moisture Sensitive Soils/Weather Related Concerns**

The upper soils encountered at this site may be sensitive to disturbances caused by construction traffic and to changes in moisture content. During wet weather periods, increases in the moisture content of the soil can cause significant reduction in the soil strength and support capabilities. In addition, soils that become wet may be slow to dry and thus significantly retard the progress of grading and compaction activities. It will, therefore, be advantageous to perform earthwork and foundation construction activities during dry weather.

### **4.2 Drainage and Groundwater Considerations**

Water should not be allowed to collect in the foundation excavations or on prepared subgrades for the floor slab during construction. Positive site drainage should be maintained throughout construction activities. Undercut or excavated areas should be sloped toward one corner to facilitate removal of any collected rainwater, groundwater, or surface runoff.

The site grading plan should be developed to provide rapid drainage of surface water away from the building areas and to inhibit percolation of surface water around the perimeter of the building and beneath the floor slab. The grades should be sloped away from the building areas. Roof and pavement runoff should be piped (tightlined) to the City's storm sewer.

### **4.3 Excavations**

In Federal Register, Volume 54, No. 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) amended its "Construction Standards for Excavations, 29 CFR, part 1926, Subpart P". This document and subsequent updates were issued to better ensure the safety of workmen entering trenches or excavations. It is mandated by this federal regulation that excavations, whether they be utility trenches, basement excavations or footing excavations, be constructed in accordance with the new OSHA guidelines. It is our understanding that these regulations are being strictly enforced and if they are not closely followed, the owner and the contractor could be liable for substantial penalties.

The contractor is solely responsible for engineering and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations 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. We are providing this information solely as a service to our client. Omega AE does not assume responsibility for construction site safety or the contractor's compliance with local, state, and federal safety or other regulations.

## 5.0 REPORT LIMITATIONS

As is standard practice in the geotechnical industry, the conclusions contained in our report are considered preliminary because they are based on assumptions made about the soil, and groundwater conditions exposed at the site during our subsurface investigation. A more complete extent of the actual subsurface conditions can only be identified when they are exposed during construction. Therefore, Omega AE should be retained as your consultant during construction to observe the actual conditions and to provide our final conclusions. If a different geotechnical consultant is retained to perform geotechnical inspection during construction, then they should be relied upon to provide final design conclusions and recommendations and should assume the role of geotechnical engineer of record.

The geotechnical recommendations presented in this report are based on the available project information, and the subsurface materials described in this report. If any of the noted information is incorrect, please inform Omega AE in writing so that we may amend the recommendations presented in this report if appropriate and if desired by the client. Omega AE will not be responsible for the implementation of its recommendations when it is not notified of changes in the project.

Once construction plans are finalized, Omega AE should be retained to review those plans and modify our existing recommendations related to the proposed construction, if determined to be necessary.

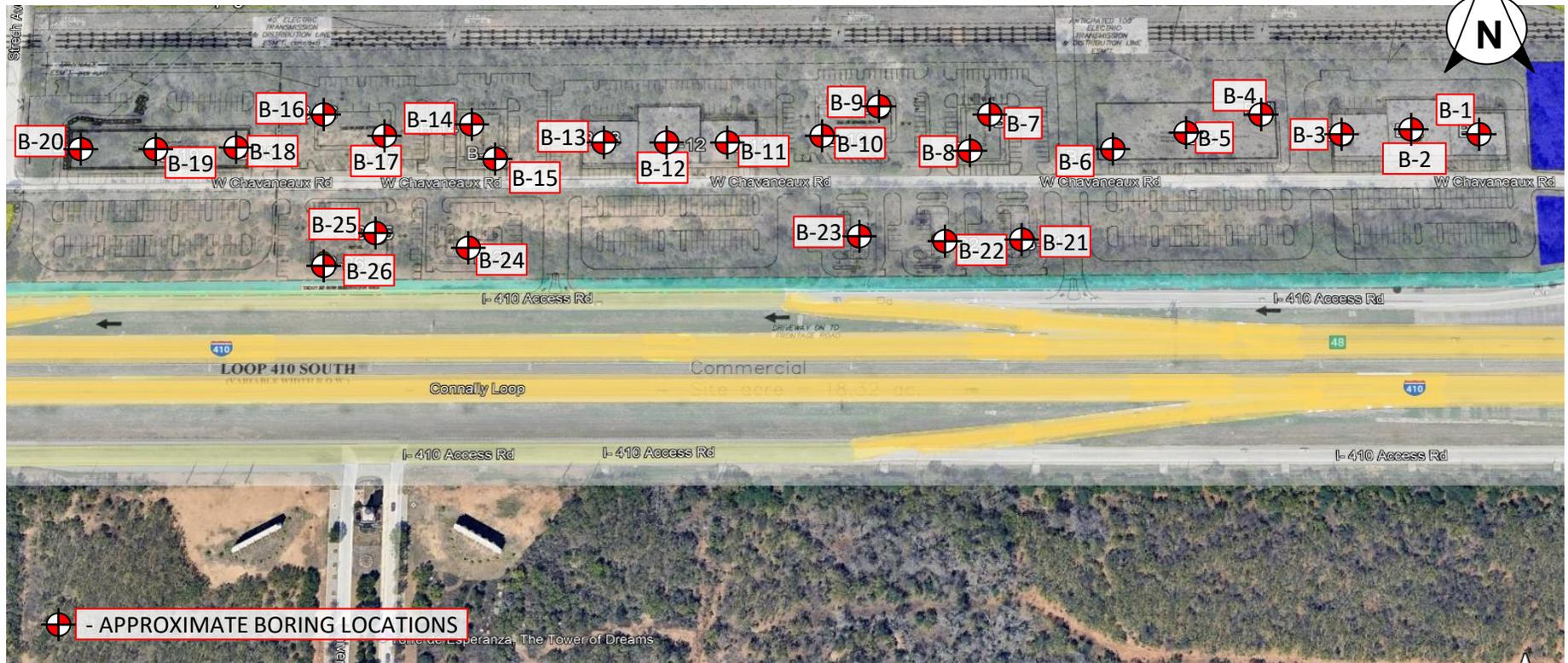
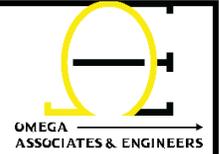
The Geotechnical Engineer warrants that the findings, recommendations, specifications, or professional advice contained herein have been made in accordance with generally accepted professional geotechnical engineering practices in the local area. No other warranties are implied or expressed.

This report has been prepared for the exclusive use of Dhanani Private Equity Group for the specific application to the proposed Zarzamora development project at the northeast intersection of West Chavaneaux Rd. And Stretch Ave. in San Antonio, Texas. Omega AE does not authorize the use of the advice herein nor the reliance upon the report by third parties without prior written authorization by us.

## APPENDIX



# PLAN OF BORINGS - I

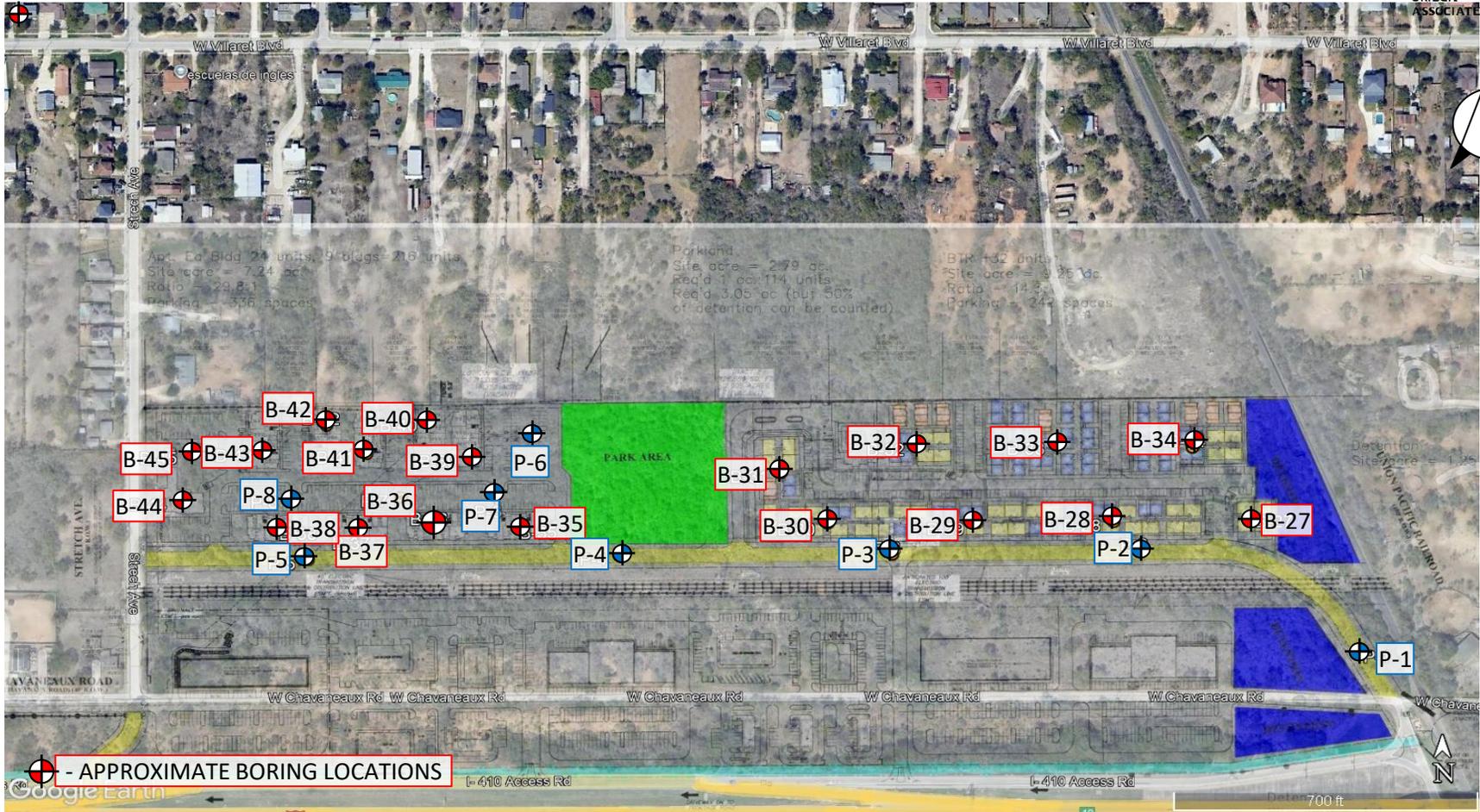
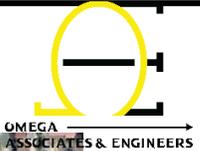


Zarzamora Development

NE Corner of West Chavaneaux Road and  
Stretch Avenue, San Antonio, Texas

OMEGA AE Project No:  
20024-035

# PLAN OF BORINGS - II



Zarzamora Development

NE Corner of West Chavaneaux Road and Stretch Avenue, San Antonio, Texas

OMEGA AE Project No: 20024-035



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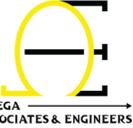
# BORING NUMBER B-1

PAGE 1 OF 1

**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/06/2024 **COMPLETED** 11/06/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
		Lean Clay(CL), Very Stiff to Hard, Dark Gray to Light Gray	ST	4.50				20					
			ST	4.50				21	48	18	30	87	
5			ST	4.50		7.71	119	11					
			ST	4.50				11					
		- with Sand, 8 to 10 feet	SS		10-13-17 30			18				85	
10													
			SS		13-18-23 41			17					
15													
		- no recovery, 18 to 20 feet	PA										
20													
Boring Termination Depth 20 feet													



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# BORING NUMBER B-2

PAGE 1 OF 1

**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/06/2024 **COMPLETED** 11/06/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
		Lean Clay(CL), Very Stiff to Hard, Dark Gray to Light Gray	ST	4.50				22					
			ST	4.50		11.17	111	23					
5			ST	4.50				12	50	18	32	87	
			ST	4.5				12					
10			SS			11-14-18 32		19					
15			SS		12-16-22 38		18				96		
		- no recovery, 18 to 20 feet											
20			PA										
Boring Termination Depth 20 feet													



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# BORING NUMBER B-3

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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/06/2024 **COMPLETED** 11/06/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
5		Lean Clay(CL), Very Stiff to Hard, Dark Gray to Light Gray	ST	4.50				20						
			ST	4.50					22					
			ST	4.50					11					
			ST						12	48	18	30	89	
10			SS			10-14-18 32			18					
15			SS			11-15-20 35			17					
20		- no recovery, 18 to 20 feet	PA											
Boring Termination Depth 20 feet														



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# BORING NUMBER B-4

PAGE 1 OF 1

**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/06/2024 **COMPLETED** 11/06/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
		Lean Clay(CL), Very Stiff to Hard, Dark Gray to Light Gray	ST	4.50				20	46	16	30	88	
			ST	4.50				23					
5			ST	4.50			8.21	120	11				
			ST	4.50					12				
10			ST			10-13-16 29			18				
			SS			12-14-17 31			18				
15													
			SS		13-16-26 42			16					
20		Boring Termination Depth 20 feet											



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# BORING NUMBER B-5

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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/06/2024 **COMPLETED** 11/06/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
		Lean Clay(CL), Very Stiff to Hard, Dark Gray to Light Gray	ST	4.50				22					
			ST	4.50		10.68	114	22					
5			ST	4.50				11	49	17	32	88	
			ST	4.50				11					
10			SS			13-16-19 35		20					
			SS			14-17-23 40		19					
15													
			SS		16-19-28 47		16						
20		Boring Termination Depth 20 feet											



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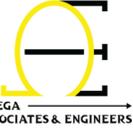
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PAGE 1 OF 1

**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/06/2024 **COMPLETED** 11/06/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
		Lean Clay(CL), Very Stiff to Hard, Dark Gray to Light Gray	ST	4.50				11					
			ST	4.50				12	52	18	34	87	
5			ST	4.50				14					
			ST	4.50				12					
10			SS			11-15-21 36		10					
			SS			16-21-27 48		16					
15													
		- no recovery, 18 to 20 feet											
20			PA										
Boring Termination Depth 20 feet													



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# BORING NUMBER B-7

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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/06/2024 **COMPLETED** 11/06/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Sandy Lean Clay(CL), Very Stiff, Dark Gray	ST	4.50				13					
			ST	4.50				12					
			ST	4.50				15	34	16	18	69	
			ST	4.5				13					
10		Lean Clay(CL), Hard, Light Gray and Tan	SS		12-16-22 38			11				91	
15			SS		14-20-26 46			17					
20		- no recovery, 18 to 20 feet	PA										
Boring Termination Depth 20 feet													



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# BORING NUMBER B-8

**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/06/2024 **COMPLETED** 11/06/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
5		Lean Clay (CL), Very Stiff to Hard, Dark Gray to Light Gray	ST	4.50		5.34	114	12						
			ST	4.50					12	48	17	31	86	
			ST	4.50						14				
			ST	4.50						13				
			SS		12-16-21 37				10					
15		Lean Clay (CL), Very Stiff to Hard, Dark Gray to Light Gray	SS		14-18-24 42			16						
			SS		17-24-31 55			14				95		
20		Boring Termination Depth 20 feet												



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# BORING NUMBER B-9

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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/06/2024 **COMPLETED** 11/06/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Sandy Lean Clay(CL), Very Stiff, Dark Gray	ST	4.5				10				64	
			ST	4.5				9					
			ST	4.5				14					
			ST	4.5				12					
10		Lean Clay(CL), Hard, Light Gray	SS		11-17-26 43			10				90	
15			SS		14-19-25 44			16					
20			SS		19-25-30 55			15					
		Boring Termination Depth 20 feet											



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/08/2024 **COMPLETED** 11/08/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
☹ **AT TIME OF DRILLING** \_\_\_\_\_ NOT ENCOUNTERED  
☹ **AT END OF DRILLING** \_\_\_\_\_ NOT ENCOUNTERED  
☹ **24hrs AFTER DRILLING** \_\_\_\_\_ N/A

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
		Lean Clay With Sand(CL), Very Stiff to Hard, Reddish Brown	ST	4.50				11					
			ST	4.50		8.61	119	10					
5			ST	4.50				10	40	15	25	76	
			ST	4.50				10					
10			SS			11-15-21 36		11					
			SS			13-20-25 45		13					
15													
		- no recovery, 18 to 20 feet											
20			PA										
Boring Termination Depth 20 feet													



11211 Richmond Ave. B-100  
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Ph No. (832) 745-7912

**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/09/2024 **COMPLETED** 11/09/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
☹ **AT TIME OF DRILLING** NOT ENCOUNTERED  
☹ **AT END OF DRILLING** NOT ENCOUNTERED  
☹ **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
5		Lean Clay with Sand(CL), Very Stiff, Brown	ST	4.50				9						
			ST	4.50				10	41	16	25	78		
			ST	4.50			8.77	120	8					
			ST	4.50					11					
10		Lean Clay(CL), Very Stiff to Hard, Light Brown	SS		7-12-15 27			10				94		
			SS		9-12-19 31			16						
15														
20		- no recovery, 18 To 20 feet	PA											
Boring Termination Depth 20 feet														



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/09/2024 **COMPLETED** 11/09/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
5		Lean Clay with Sand(CL), Very Stiff, Brown	ST	4.50				10						
			ST	4.50		8.60	120	10						
			ST	4.50					9					
			ST	4.50					11	42	15	27	78	
10			SS			6-10-14 24			10					
15		Lean Clay(CL), Hard, Light Gray and Yellowish Brown	SS		8-12-18 30			15						
			PA											
20		- no recovery, 18 to 20 feet												
Boring Termination Depth 20 feet														



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/12/2024 **COMPLETED** 11/12/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
		Lean Clay(CL), Very Stiff to Hard, Brown	ST	4.50				9					
			ST	4.50				10					
5			ST	4.50				10	44	17	27	78	
			ST	4.50				11					
10			SS			5-11-13 24			11				
			SS			8-12-19 31			14				
15													
		- no recovery, 18 to 20 feet											
20			PA										
Boring Termination Depth 20 feet													



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/11/2024 **COMPLETED** 11/11/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Lean Clay with Sand (CL), Very Stiff, Light Gray	ST	4.50				13					
			ST	4.50				10					
			ST	4.50		5.54	114	9					
			ST	4.50				14	47	17	30	82	
10			SS				7-11-13 24		11				
15		Lean Clay (CL), Hard, Light Brown	SS			9-13-20 33		10				94	
20		- no recovery, 18 to 20 feet	PA										
Boring Termination Depth 20 feet													



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/09/2024 **COMPLETED** 11/09/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Lean Clay with Sand (CL), Stiff, Dark Gray	ST					15	42	16	26	81	
			ST	4.50				11					
			ST					9					
			SS		12-17-22 39			13					
10		Lean Clay (CL), Hard, Light Brown	SS		12-18-32 50			11					
15			SS		14-20-34 54			11					
20		- no recovery, 18 to 20 feet	PA										
Boring Termination Depth 20 feet													



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/12/2024 **COMPLETED** 11/12/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Lean Clay with Sand (CL), Very Stiff, Dark Brown	ST	4.50				9					
			ST	4.50				8	44	17	27	75	
			ST	4.50			4.47	111	6				
			SS			6-11-17 28			11				
			SS			8-15-18 33			16				
10		Lean Clay (CL), Hard, Yellowish Brown											
			SS		10-16-19 35			15				97	
			SS		16-22-33 55			11					
15													
20													
Boring Termination Depth 20 feet													



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/12/2024 **COMPLETED** 11/12/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Lean Clay with Sand (CL), Veery Stiff, Brown	ST	4.50				16					
			ST	4.50				12					
			ST	4.50				11					
			SS		6-11-15 26			12	47	17	30	82	
			SS		10-13-18 31			11					
10		Lean Clay (CL), Hard, Brown											
			SS		11-14-19 33			10					
15		Lean Clay (CL), Hard, Brown											
			SS		15-21-31 52			12					
20		Boring Termination Depth 20 feet											



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/11/2024 **COMPLETED** 11/11/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
5		Lean Clay with Sand (CL), Very Stiff, Dark Brown	ST	4.50				10						
			ST	4.50				10	45	18	27	76		
			ST	4.50				5						
			SS		8-13-20 33			11						
10		Lean Clay (CL), Hard, Yellowish Brown	SS		10-14-20 34			15						
			SS		11-16-19 35			14						
15														
			SS		13-21-31 52			11						
20		Boring Termination Depth 20 feet												



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/19/2024 **COMPLETED** 11/19/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
☹ **AT TIME OF DRILLING** NOT ENCOUNTERED  
☹ **AT END OF DRILLING** NOT ENCOUNTERED  
☹ **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
		Lean Clay(CL), Very Stiff to Hard, Yellowish Brown	ST	4.50				9					
			ST	4.50		5.96	117	9					
5			ST	4.50				5	43	17	26	87	
			SS			7-12-18 30			11				
10			SS			10-14-19 33			15				
			SS			10-15-18 33			15			96	
15													
20													
		Boring Termination Depth 20 feet											



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/11/2024 **COMPLETED** 11/11/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
5		Lean Clay (CL), Very Stiff to Hard, Dark Brown	ST	4.50				9						
			ST	4.50					10					
			ST	4.50					6					
			ST	4.50					10			90		
10			SS			6-10-14 24			16					
15			SS			11-14-17 31			15					
20			SS		13-20-29 49		12							
Boring Termination Depth 20 feet														



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/22/2024 **COMPLETED** 11/22/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
☹ **AT TIME OF DRILLING** NOT ENCOUNTERED  
☹ **AT END OF DRILLING** NOT ENCOUNTERED  
☹ **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Lean Clay with Sand(CL), Very Stiff, Brown	ST	4.50				10					
			ST	4.50				9	43	16	27	79	
			ST	4.50				12					
			ST	4.50			6.07	122	10				
10		Lean Clay(CL), Hard, Light Gray and Yellowish Brown	SS		10-16-18 34			16					
			SS		6-9-20 29			16					
			SS		8-13-20 33			10					
20	Boring Termination Depth 20 feet												



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/09/2024 **COMPLETED** 11/09/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
5		Lean Clay with Sand (CL), Very Stiff, Brown	ST					11						
			ST	4.50				12	47	18	29	77		
			ST	4.50			7.77	116	13					
			ST	4.50					11					
10				Lean Clay (CL), Medium Dense, Light Gray and Yellowish Brown	SS		9-11-18 29			17				
15		SS			10-15-22 37			16						
20		SS			12-18-30 48			11				97		
Boring Termination Depth 20 feet														



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/09/2024 **COMPLETED** 11/09/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** \_\_\_\_\_ **NOT ENCOUNTERED**  
 **AT END OF DRILLING** \_\_\_\_\_ **NOT ENCOUNTERED**  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
		Lean Clay (CL), Very Stiff to Hard, Light Gray and Brown	ST	4.50				11					
			ST	4.50				11					
5			ST	4.50				12	48	18	30	93	
			ST	4.50			6.06	122	11				
10			SS			9-17-19 36			17				
			SS			8-13-22 35			15				
15													
			SS		9-14-23 37			10					
20		Boring Termination Depth 20 feet											



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/08/2024 **COMPLETED** 11/08/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
☹ **AT TIME OF DRILLING** NOT ENCOUNTERED  
☹ **AT END OF DRILLING** NOT ENCOUNTERED  
☹ **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
		Sandy Lean Clay (CL), Stiff, Yellowish Brown and Dark Gray	ST					12	32	16	16	68		
			ST	2.50					4					
5			SS		7-9-12 21				7					
			SS		11-16-22 38				8					
10			SS		7-14-19 33				15					
			SS		12-14-17 31				20					
15														
20			SS		9-14-19 33			18						
		Boring Termination Depth 20 feet												



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/08/2024 **COMPLETED** 11/08/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
☒ **AT TIME OF DRILLING** NOT ENCOUNTERED  
☒ **AT END OF DRILLING** NOT ENCOUNTERED  
☒ **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
5		Sand Lean Clay (CL), Very Stiff, Brown	ST	4.50				8						
			ST	4.50				11	36	12	24	62		
			ST	4.50		3.85	109	11						
			ST	4.50				12						
10		Lean Clay with Sand (CL), Hard, Tan	SS		11-18-19 37			8				83		
			SS		7-10-22 32			19						
15			SS		9-14-19 33			14						
20		Boring Termination Depth 20 feet												



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/12/2024 **COMPLETED** 11/12/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Lean Clay with Sand (CL), Very Stiff, Yellowish Brown	ST	4.50				10					
			ST	4.50				10					
			ST	4.50				8					
			ST	4.50				10	40	16	24	81	
10			SS			10-15-17 32			12				
15		Lean Clay (CL), Hard, Yellowish Brown	SS					17					
20			SS			9-15-20 35			16				
Boring Termination Depth 20 feet													



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/08/2024 **COMPLETED** 11/08/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
5		Sandy Lean Clay (CL), Very Stiff, Brown and Gray	ST	4.50				7						
			ST	4.50				11	32	14	18	61		
			ST	4.50			7.60	117	14					
			SS			13-17-20 37			11					
10		Lean Clay (CL), Hard, Gray	SS		15-18-21 39			11				91		
			SS		16-20-24 44			12						
15			PA											
20		- no recovery, 18 to 20 feet												
Boring Termination Depth 20 feet														



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**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
5		Lean Clay with Sand (CL), Very Stiff, Dark Brown	ST	4.50				6						
			ST	4.50		5.49	119	10						
			ST	4.50					16					
			ST	4.50					10	46	17	29	78	
10			SS		10-14-18 32			12						
15		Lean Clay(CL), Hard, Red	SS		12-15-17 32			13			90			
20			SS		14-18-21 39			14						
Boring Termination Depth 20 feet														



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**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
☹ **AT TIME OF DRILLING** NOT ENCOUNTERED  
☹ **AT END OF DRILLING** NOT ENCOUNTERED  
☹ **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Sandy Lean Clay(CL), Very Stiff, Brown	ST	4.50				6					
			ST	4.50				10					
			ST	4.50				17	47	23	24	63	
			ST	4.50			5.54	120	11				
10		Lean Clay(CL), Hard, Red	SS		8-12-17 29			12					
			SS		11-16-20 36			13					
15			SS		13-17-21 38			15					
20		Boring Termination Depth 20 feet											



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**CLIENT** Dhanani Private Equity Group  
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**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
☹ **AT TIME OF DRILLING** NOT ENCOUNTERED  
☹ **AT END OF DRILLING** NOT ENCOUNTERED  
☹ **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Sandy Lean Clay(CL), Very Stiff, Gray	ST	4.50				10					
			ST	4.50				10					
			ST	4.50				12	39	15	24	63	
			ST	4.50				14					
10			SS			10-14-17 31		16					
15		Lean Clay(CL), Hard, Yellowish Brown	SS		12-16-20 36		16				90		
20			SS		14-18-24 42		14						
Boring Termination Depth 20 feet													



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**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
☹ **AT TIME OF DRILLING** NOT ENCOUNTERED  
☹ **AT END OF DRILLING** NOT ENCOUNTERED  
☹ **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Sandy Lean Clay(CL), Very Stiff, Dark Gray	ST	4.50				10					
			ST	4.50				10	42	16	26	66	
			ST	4.50				16					
			ST	4.50				12					
10		Lean Clay(CL), Hard, Light Gray	SS		10-14-16 30			13				94	
			SS		13-17-22 39			15					
15			SS		15-19-24 43			18					
20		Boring Termination Depth 20 feet											



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**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
		Lean Clay (CL), Very Stiff, Dark Gray and Brown	ST	4.50				8	43	18	25	86		
			ST	4.50		6.04	115	10						
5			ST	4.50				17						
			ST	4.50				11						
10			SS			9-12-16 28		11					91	
			SS			12-15-19 34		15						
15														
			SS		14-18-26 44		19							
20		Boring Termination Depth 20 feet												



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**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Sandy Lean Clay(CL), Very Stiff, Yellowish Brown and Gray	ST	4.50				9					
			ST	4.50				10					
			ST	4.50				16	38	15	23	63	
			ST	4.50				12					
10			SS			11-14-18 32			12				
15		Lean Clay(CL), Hard, Brown	SS		12-16-22 38			15					
20			SS		15-18-26 44			18					
Boring Termination Depth 20 feet													



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**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** N/A

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
5		Lean Clay with Sand (CL), Very Stiff, Dark Brown	ST	4.50				9						
			ST	4.50		5.98	113	10						
			ST	4.50					17					
			ST	4.50					12	38	17	21	78	
10			SS			12-14-18 32			13					
15		Lean Clay (CL), Hard, Brown	SS		14-16-20 36			15						
20			SS		16-19-26 45				17				95	
		Boring Termination Depth 20 feet												



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**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** \_\_\_\_\_ **NOT ENCOUNTERED**  
 **AT END OF DRILLING** \_\_\_\_\_ **NOT ENCOUNTERED**  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Sandy Lean Clay(CL), Very Stiff, Dark Brown	ST	4.50				7					
			ST	4.50				10	34	13	21	64	
			ST	4.50				15					
			ST	4.50			5.68	120	11				
10				Lean Clay(CL), Hard, Dark Brown	ST	4.50				13			
15	SS				10-14-21 35			15					
20	SS				11-15-23 38			16					
Boring Termination Depth 20 feet													



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**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
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**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** \_\_\_\_\_ **NOT ENCOUNTERED**  
 **AT END OF DRILLING** \_\_\_\_\_ **NOT ENCOUNTERED**  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Lean Clay with Sand (CL), Hard, Dark Brown	ST	4.50				9					
			ST	4.50		5.06	111	11					
			ST	4.50					18				
			ST	4.50					10	48	18	30	76
			ST	4.50					12				
15		Lean Clay (CL), Hard, Red	SS		12-16-23 39			12				92	
			SS		10-15-24 39			16					
20		Boring Termination Depth 20 feet											



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**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
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**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Sandy Lean Clay (CL), Very Stiff, Dark Brown	ST					8					
			ST	4.50				10					
			ST	4.50				16	45	21	24	61	
			ST	4.50			5.85	128	11				
10				Lean Clay (CL), Hard, Red	ST		12-18-23 41			12			
15		- no recovery, 18 to 20 feet			SS		16-18-26 44			13			
20					PA								
		Boring Termination Depth 20 feet											



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**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
5		Sandy Lean Clay (CL), Very Stiff, Dark Gray	ST	4.5				11						
			ST	4.50				12	40	17	23	66		
			ST	4.5			5.11	109	13					
			ST	4.5					13					
10					SS		11-16-22 38		11					
15				Lean Clay (CL), Hard, Yellowish Brown and Gray	SS		15-19-24 43		10					
20					SS		19-22-30 52		10					
Boring Termination Depth 20 feet														



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**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Sandy Lean Clay(CL), Very Stiff, Dark Brown	ST	4.50				8					
			ST	4.50				11					
			ST	4.50				18	36	15	21	63	
			ST	4.50				12					
10			ST	4.50				13					
15		Lean Clay with Sand (CL), Hard, Reddish Brown	SS		14-16-22 38			14				74	
			SS		11-16-26 42			18					
20		Boring Termination Depth 20 feet											



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Ph No. (832) 745-7912

**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/14/2024 **COMPLETED** 11/14/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
5		Sandy Lean Clay(CL), Very Stiff, Brown	ST	4.50				18						
			ST	4.50		6.69	118	8						
			ST	4.50					10					
			ST	4.50					11	40	15	25	63	
			ST	4.50					10					
15		Lean Clay with Sand (CL), Hard, Reddish Brown	SS		13-17-21 38			12						
			SS		10-15-25 40			11						
20		Boring Termination Depth 20 feet												



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/14/2024 **COMPLETED** 11/14/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
		Sandy Lean Clay (CL), Very Stiff to Hard, Light Brown and Yellowish Brown	ST			3.39	109	11					
			ST	4.50					9				
5			ST	4.50					10				
			ST	4.50					10	36	15	21	65
10			SS			13-21-26 47			9				
15			SS			14-25-28 53			11				
		- no recovery, 18 to 20 feet	PA										
20		Boring Termination Depth 20 feet											



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/14/2024 **COMPLETED** 11/14/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Sandy Lean Clay(CL), Very Stiff, Dark Brown	ST					22					
			ST	4.50				7	37	14	23	64	
			ST	4.50				11					
			ST	4.50				11					
10				Lean Clay(CL), Hard, Yellowish Brown and Reddish Brown	SS		14-20-24 44			9			
15	SS				12-17-24 41			11			92		
20	PA												
		- No recovery, 18 to 20 feet											
Boring Termination Depth 20 feet													



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/14/2024 **COMPLETED** 11/14/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)	
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX			
5		Sandy Lean Clay (CL), Very Stiff to Hard, Dark Gray	ST	4.50				10						
			ST	4.50		11.22	120	12						
			ST	4.50					12	38	16	22	67	
			ST	4.50					11					
10			SS			16-23-34 57			11					
15		Lean Clay (CL), Hard, Yellowish Brown	SS		16-22-34 56			10						
20			ST		25-34-41 75			10						
Boring Termination Depth 20 feet														



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/14/2024 **COMPLETED** 11/14/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Sandy Lean Clay (CL), Very Stiff, Dark Gray	ST	4.50				11					
			ST	4.50				13	39	16	23	64	
			ST	4.50				13					
			ST	4.50			11.17	118	12				
10			SS			16-18-22 40			11				
15		Lean Clay with Sand (CL), Hard, Light Gray and Yellowish Brown	SS		18-21-36 57			9				76	
			SS		28-38-43 81			9					
20			Boring Termination Depth 20 feet										



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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/14/2024 **COMPLETED** 11/14/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
		Sandy Lean Clay (CL), Very Stiff to Hard, Yellowish Brown and Gray	ST	4.50				11					
			ST	4.50		10.66	119	12					
5			ST	4.50				13					
			ST	4.50				11	37	15	22	66	
10			SS			17-22-35 57		11					
			SS			19-23-36 59		10					
15													
20					26-35-42 77		10						
Boring Termination Depth 20 feet													



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# BORING NUMBER P-1

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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/12/2024 **COMPLETED** 11/12/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Lean Clay with Sand(CL), Very Stiff, Dark Brown	ST	4.50				11					
			ST	4.50				12	41	17	24	76	
			ST	4.50				12					
10		Boring Termination Depth 6 feet											
15													
20													



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# BORING NUMBER P-2

PAGE 1 OF 1

**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/12/2024 **COMPLETED** 11/12/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** \_\_\_\_\_ **NOT ENCOUNTERED**  
 **AT END OF DRILLING** \_\_\_\_\_ **NOT ENCOUNTERED**  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Lean Clay(CL), Very Stiff, Brown	ST	4.50				10					
			ST	4.50		4.62	114	11					
			ST	4.50				11	49	17	32	94	
		Boring Termination Depth 6 feet											
10													
15													
20													

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# BORING NUMBER P-3

**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/12/2024 **COMPLETED** 11/12/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Lean Clay with Sand(CL), Very Stiff, Brown	ST	4.50				10					
			ST	4.50				10	42	17	25		
			ST	4.50				8					
		Boring Termination Depth 6 feet											
10													
15													
20													



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# BORING NUMBER P-4

PAGE 1 OF 1

**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 1 **COMPLETED** 11/12/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Lean Clay with Sand(CL), Very Stiff, Dark Gray	ST	4.50				10	42	17	25	73	
			ST	4.50				10					
			ST	4.50				6					
		Boring Termination Depth 6 feet											
10													
15													
20													



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# BORING NUMBER P-5

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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/12/2024 **COMPLETED** 11/12/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Lean Clay with Sand(CL), Very Stiff, Brown	ST	4.50				12					
			ST	4.50				8	48	18	30		
			ST	4.50				10					
		Boring Termination Depth 6 feet											
10													
15													
20													



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# BORING NUMBER P-6

**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 1 **COMPLETED** 11/11/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
**AT TIME OF DRILLING** NOT ENCOUNTERED  
**AT END OF DRILLING** NOT ENCOUNTERED  
**24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Lean Clay (CL), Hard, Brown	ST	4.50				15					
			ST	4.50		5.06	116	7					
			ST	4.50				10					
		Boring Termination Depth 6 feet											
10													
15													
20													



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# BORING NUMBER P-7

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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** \_\_\_\_\_ **COMPLETED** 11/11/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** \_\_\_\_\_ NOT ENCOUNTERED  
 **AT END OF DRILLING** \_\_\_\_\_ NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Sandy Lean Clay(CL), Very Stiff, Dark Gray	ST	4.50				13					
			ST	4.50				7	37	16	21	63	
			ST	4.50				10					
		Boring Termination Depth 6 feet											
10													
15													
20													



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# BORING NUMBER P-8

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**CLIENT** Dhanani Private Equity Group  
**PROJECT NUMBER** 20024-035  
**DATE STARTED** 11/11/2024 **COMPLETED** 11/11/2024  
**DRILLING CONTRACTOR** Atlas Soil Drilling LLC  
**DRILLING METHOD** Continuous Flight **HOLE SIZE** 4.25"  
**LOGGED BY** AS **CHECKED BY** VG  
**NOTES** \_\_\_\_\_

**PROJECT NAME** Zarzamora  
**PROJECT LOCATION** San Antonio, Texas  
**GROUND ELEVATION** \_\_\_\_\_ **NORTH** \_\_\_\_\_  
**GROUNDWATER LEVELS** **EAST** \_\_\_\_\_  
 **AT TIME OF DRILLING** NOT ENCOUNTERED  
 **AT END OF DRILLING** NOT ENCOUNTERED  
 **24hrs AFTER DRILLING** \_\_\_\_\_

DEPTH (ft.)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE	POCKET PEN. (tsf)	BLOW COUNTS (NVALUE)	UNCONFINED COMP. STRENGTH SOIL or ROCK (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)	ELEVATION (ft.)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
5		Lean Clay with Sand(CL), Very Stiff, Gray	ST	4.50				10					
			ST	4.50				13					
			ST	4.50				12	36	15	21		
		Boring Termination Depth 6 feet											
10													
15													
20													

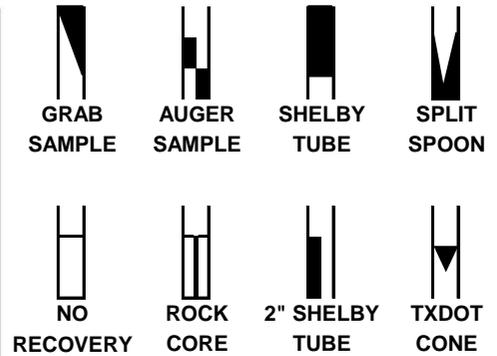
# **BORING LOGS LEGEND**

## **UNIFIED SOIL CLASSIFICATION SYSTEM - ASTM D 2487**

MAJOR DIVISIONS		USCS	TYPICAL DESCRIPTIONS	
COARSE-GRAINED SOILS	GRAVELS	CLEAN GRAVELS	GW WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
		LESS THAN 5% FINES	GP POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES	GM SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	
		MORE THAN 12% FINES	GC CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES	
	SANDS	CLEAN SANDS	SW WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
		LESS THAN 5% FINES	SP POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
SANDS WITH FINES		SM SILTY SANDS, SAND-SILT MIXTURES		
FINE-GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50	ML INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	
		CL	CL INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
		OL	OL ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
	SILTS AND CLAYS	LIQUID LIMIT 50 OR MORE	MH	MH INORGANIC SILT, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
		CH	CH INORGANIC CLAYS OF HIGH PLASTICITY	
		OH	OH ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	
HIGHLY ORGANIC SOILS		PT	PT PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

## **SAMPLER TYPE**



## **CONSISTENCY OF COHESIVE SOILS**

CONSISTENCY	SHEAR STRENGTH IN TONS/FT <sup>2</sup>
VERY SOFT	0 TO 0.125
SOFT	0.125 TO 0.25
FIRM	0.25 TO 0.5
STIFF	0.5 TO 1.0
VERY STIFF	1.0 TO 2.0
HARD	> 2.0 OR 2.0+

## **RELATIVE DENSITY - GRANULAR SOILS**

CONSISTENCY	N-VALUE (BLOWS/FOOT)
VERY LOOSE	0 TO 4
LOOSE	5 TO 10
MEDIUM DENSE	11 TO 30
DENSE	31 TO 50
VERY DENSE	> 50 OR 50+

## **DEGREE OF PLASTICITY OF COHESIVE SOILS**

DEGREE OF PLASTICITY	PLASTICITY INDEX	SWELL POTENTIAL
NONE OR SLIGHT	0 TO 4	NONE
LOW	4 TO 20	LOW
MEDIUM	20 TO 30	MEDIUM
HIGH	30 TO 40	HIGH
VERY HIGH	> 40	VERY HIGH

## **MOISTURE CONDITION COHESIVE SOILS**

DESCRIPTION	CONDITION
Absence of moisture, dusty, dry to touch	DRY
Damp but no visible water	MOIST
Visible free water	WET

## **CONSISTENCY OF COHESIVE SOILS AFTER TERZAGHI (1948)**

CONSISTENCY	N-VALUE (BLOWS/FOOT)
VERY SOFT	< 2
SOFT	2 TO 4
FIRM	4 TO 8
STIFF	8 TO 15
VERY STIFF	15 TO 30
HARD	> 30

