



Preliminary Geotechnical Exploration Report
Aura Development
Chapel Hill, North Carolina
S&ME Project No. 1305-20-031

PREPARED FOR:

Trinsic Residential Group
8235 Douglas Avenue, Suite 950
Dallas, Texas 75225

PREPARED BY:

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

March 27, 2020



March 27, 2020

Trinsic Residential Group
8235 Douglas Avenue, Suite 950
Dallas, Texas 75225

Attention: Mr. Ryan Stewart

Reference: **Preliminary Geotechnical Exploration Report
Aura Development**
North Estes Drive and MLK Jr. Blvd
Chapel Hill, North Carolina
S&ME Project No. 1305-20-031
NC PE Firm License No. F-0176

Dear Mr. Stewart:

S&ME, Inc. (S&ME) is pleased to submit this preliminary geotechnical exploration report for the referenced project site. The work was completed in general accordance with our proposal number 13-2000103 dated March 4, 2020. This report presents a brief summary of our understanding of the project, descriptions of our field exploration, a discussion of encountered subsurface conditions, and preliminary conclusions and recommendations.

S&ME appreciates the opportunity to provide our services on this project. Please contact us if you have any questions regarding this report or if we may be of further assistance.

Sincerely,

S&ME, Inc.

A handwritten signature in blue ink, appearing to read 'J. Adam Browning'.

J. Adam Browning, P.E.
Senior Engineer



A handwritten signature in blue ink, appearing to read 'Kevin Nadeau'.

Kevin Nadeau, P.E.
Senior Geotechnical Engineer
Registration No. 34358



Table of Contents

1.0	Project Information.....	1
2.0	Site Description.....	2
3.0	Area Geology	2
4.0	Field Exploration.....	2
5.0	Subsurface Conditions.....	3
5.1	Surface Materials	3
5.2	Residual Soils.....	3
5.3	Partially Weathered Rock and Auger Refusal.....	3
5.4	Groundwater.....	4
6.0	Preliminary Conclusions and Recommendations	4
6.1	General Discussion.....	4
6.2	Earthwork.....	5
6.2.1	<i>General</i>	<i>5</i>
6.2.2	<i>Site Preparation.....</i>	<i>5</i>
6.2.3	<i>Possible Spring.....</i>	<i>6</i>
6.2.4	<i>High Plasticity Soils.....</i>	<i>6</i>
6.2.5	<i>Excavations</i>	<i>6</i>
6.2.6	<i>Reuse of On-Site Soils as Structural Fill</i>	<i>6</i>
6.2.7	<i>Subgrade Repair and Improvement Methods.....</i>	<i>7</i>
6.3	Preliminary Foundation Recommendations.....	7
7.0	Additional Geotechnical Exploration	7
8.0	Qualifications of Report	7

Preliminary Geotechnical Exploration Report

Aura Development

Chapel Hill, North Carolina

S&ME Project No. 1305-20-031



Appendices

Appendix I – Figures

Appendix II – Boring Logs

Appendix III – Laboratory Results



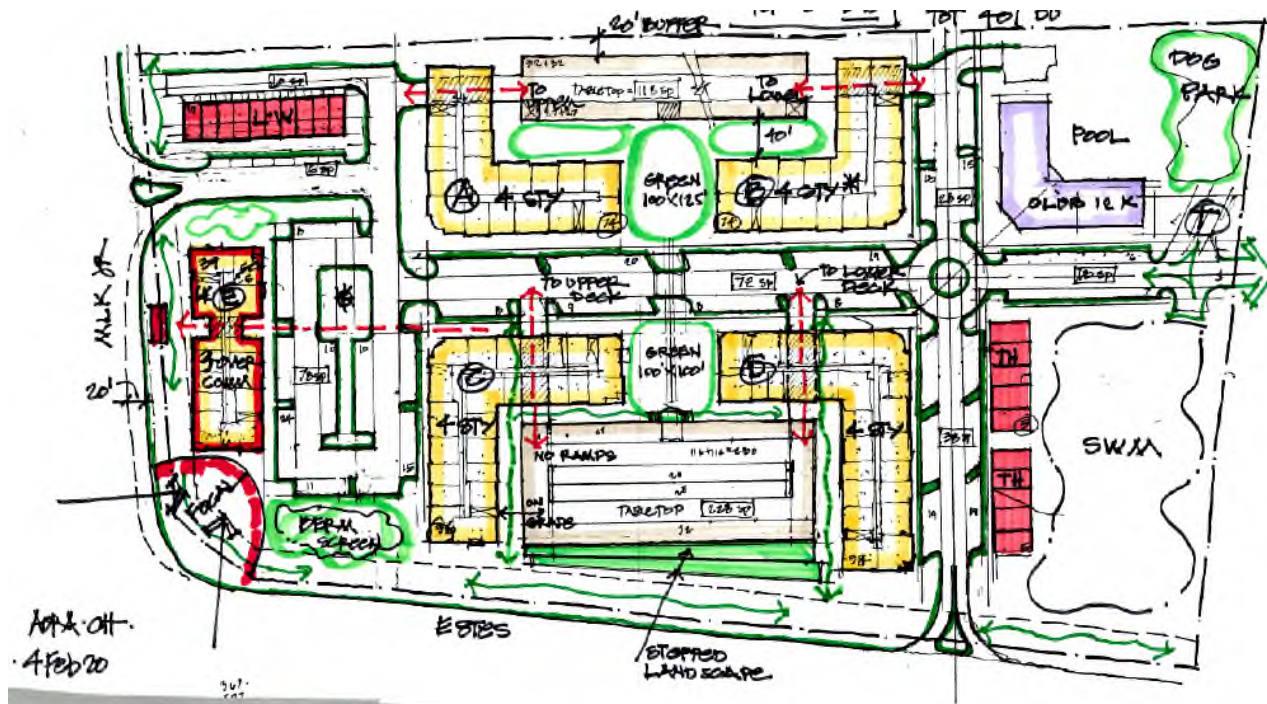
1.0 Project Information

Project information has been developed based on the following information:

- ◆ Email/telephone correspondence between Mr. Ryan Stewart (TRG), Ms. Claudia Irvin (S&ME) and Mr. Kevin Nadeau (S&ME) between February 27 and March 2, 2020.
- ◆ ALTA/NSPS Land Title Survey prepared by Riley Surveying, P.A. dated October 8, 2018.
- ◆ Conceptual Site Plan prepared by Coulter Jewell Thames dated January 14, 2020.
- ◆ Reconfigured Site Concept dated February 4, 2020

We understand Trinsic Residential Group (TRG) plans to develop an approximate 14.7-acre parcel in the northeast quadrant of the intersection of North Estes Drive and MLK Jr. Boulevard in Chapel Hill, North Carolina. Currently, the subject site is comprised of one 14.71± acre parcel identified with Orange County Parcel ID 9789-35-9617, owned by Cant Hook Properties LLC.

Conceptually, we understand development will include two tabletop (one elevated level) parking decks, commercial, multifamily townhomes, and clubhouse buildings that will be 3- to 4-stories. We understand retaining structures may be necessary to provide grade separation. Development will also include paved roadways with on-street parking, green spaces, swimming pool, a stormwater management structure, and dog park. A conceptual site layout (dated February 4, 2020) is shown below for reference.



Reconfigured Site Concept provided by the client.

Preliminary Geotechnical Exploration Report

Aura Development

Chapel Hill, North Carolina

S&ME Project No. 1305-20-031



Information pertaining to structural loads was not provided to us at the time of this proposal. To aid in our evaluation, we have assumed maximum building column, wall, and slab loads of 500 kips, 5 kips per linear foot, and 125 pounds per square foot, respectively. Site grading was also not provided at the time of this report. We have assumed maximum site grading (cuts and fills) within the planned development will be on the order of about 10 feet.

2.0 Site Description

The site is bound by North Estes Drive to the south, MLK Jr. Boulevard to the west, a transmission line to the east, and a residential neighborhood to the north. At the time of our exploration, the site was a vacant parcel that had been logged sometime prior to October 2018 (as noted on the ALTA survey). The ground surface was covered with tall grasses and underbrush as well as several piles of branches and small pieces of timber, presumably leftover from logging operations. Several rock outcrops were observed in the eastern central portion of the site. These outcrops are also identified on the ALTA survey. The ground surface generally slopes downgradient from west to east with ground surface elevations ranging from about 475 feet (western portion) to about 430 feet (southeastern portion). The survey also identifies a possible spring and possible wetlands area in the southeastern portion of the site. S&ME did not perform wetland delineation services as part of our scope, therefore we cannot confirm these are wetlands.

3.0 Area Geology

From the Geologic Map of North Carolina (1985), the site is within the Carolina Slate Belt region of the Piedmont Physiographic Province of North Carolina. Rock formations of the Carolina Slate Belt generally consist of felsic and mafic metavolcanic rocks and felsic igneous intrusions (intrusive rocks). Intrusive rocks range in composition from granites, quartz monzonites, granodiorites, quartz diorites, and diorites to gabbros. The intrusive rocks in this area generally weather to produce a relatively thin residual soil overburden consisting primarily of silts and possibly boulders. Below the soil overburden, the soil transitions rather abruptly to soft weathered rock and then to hard bedrock. The volcanic rocks are more deeply weathered resulting in a thicker soil overburden, which generally does not contain boulders. In many locations, the transitional zone between soil and rock is not well defined. Locally, the transitional zone is termed partially weathered rock (PWR). For engineering purposes, partially weathered rock is considered as residual material in which standard penetration test N-values exceed 50 blows per six inches of penetration (100 blows per foot).

4.0 Field Exploration

Thirteen boring locations were established in the field by S&ME using hand-held GPS equipment and should be considered approximate. Approximate test boring locations are shown in Figure 2 in Appendix I. Borings were advanced to depths of approximately 13 to 20 feet below the existing ground surface. Borings were advanced using hollow-stem auger procedures with a Diedrich D-50 drill rig mounted on an all-terrain vehicle. Within each boring, samples of subsurface soils were taken at 2.5-foot intervals above a depth of 10 feet, and at 5-foot intervals below 10 feet using a split-spoon sampler. Standard penetration testing was performed in conjunction with split-spoon sampling in general accordance with ASTM D 1586.



Test Boring Records and a Generalized Subsurface Conditions profile (Figure 3), showing specific subsurface information from each boring, are included in the Appendices. Stratification lines shown on Test Boring Records and the Subsurface Profiles are intended to represent approximate depths of changes in soil types. Transitional changes in soil types are often gradual and cannot be defined at a particular depth. Ground surface elevations shown on the Test Boring Records and profiles were estimated from the title survey and should be considered approximate.

5.0 Subsurface Conditions

5.1 Surface Materials

A surficial layer of topsoil, approximately 6 inches in thickness, was encountered at all boring locations. Given the site was previously logged, topsoil thicknesses may be more erratic, being thicker in some areas due to disturbance from logging equipment and mixing with underlying soils. Topsoil depths greater than 6 inches should be expected in some areas. Topsoil is typically a dark-colored soil material containing roots, fibrous matter, and/or other organic components, and is unsuitable for engineering purposes. The topsoil depths provided in this report are based on measurements made during drilling and should be considered approximate. The transition from topsoil to underlying natural soils may be gradual.

5.2 Residual Soils

Residual soils were encountered beneath topsoil in all borings. Residual soils were generally comprised of near-surface firm to stiff clays (CL and CH) underlain by stiff to very stiff sandy silts (ML) and loose to very dense silty and clayey sands (USCS classifications SM and SC). SPT N-values recorded in residual soils ranged from 5 to 67 blows per foot (bpf) and generally increased with depth. Lower consistency near-surface soils (N-values of 5 to 7 bpf) were encountered in over half of the borings. The residual soils were visually observed to be relatively dry to moist. Lower consistency and wet near surface soils should be expected in the lower elevations of the site and in/around the possible wetland areas. High plasticity soils (CH) were encountered near the ground surface in borings B-1, B-3, B-4, B-6, B-8, B-9, and B-10. Borings B-1, B-2, and B-3 were terminated in residual soils at their predetermined depths.

5.3 Partially Weathered Rock and Auger Refusal

Partially weathered rock (PWR) was encountered below residual soils in borings B-4 through B-10. PWR was first encountered at depths ranging from approximately 5½ to 22 feet below existing ground surface. PWR is defined as having SPT N-values in excess of 50 blows per 6 inches (100 blows per foot) of split-spoon penetration. The PWR encountered exhibited SPT N-values ranging from 50 blows per 6 inches (50/.5) to 50 blows with no apparent penetration (50/0). Partially weathered rock materials were generally sampled as silty sands, clayey sands, and sands with gravel. Auger refusal was encountered in borings B-6, B-7, B-11, B-12, and B-13 at depths ranging from approximately 13 to 17 feet below the ground surface. Note that residual soils transitioned abruptly to auger refusal material in borings B-11, B-12, and B-13. Auger refusal can represent the top of slightly weathered rock, mass rock, or boulders.

The approximate PWR and auger refusal depths/elevations are shown in Table 5-1 below.



Table 5-1 – Approximate PWR and Auger Refusal Elevations

Boring	Approx Ground Surface Elev (ft)	Approx Depth to PWR (ft)	Approx Top of PWR Elev (ft)	Approx Depth to Auger Refusal (ft)	Approx Auger Refusal Elev (ft)
B-4	466	17	449	N/E	N/E
B-5	458	5.5	452.5	N/E	N/E
B-6	455	8	447	16.4	438.6
B-7	456	12	444	14.2	441.8
B-8	459	12	447	N/E	N/E
B-9	465	12	453	N/E	N/E
B-10	460	17	443	N/E	N/E
B-11	458	N/E	N/E	17.2	440.8
B-12	455	N/E	N/E	13.3	441.7
B-13	456	N/E	N/E	12.8	443.2

5.4 Groundwater

Groundwater measurements were attempted in all borings at termination of drilling and after a period of about 24 hours in select borings. Borings B-1 through B-7 and B-9 were observed to be dry above their cave depths. Groundwater was encountered at approximate depths ranging from 7 to 11.4 feet below the ground surface in borings B-9 and B-10 through B-13.

Groundwater elevations can be expected to fluctuate due to seasonal variations in rainfall, evaporation, and other factors. Additionally, perched water conditions may exist during the typically wetter winter months above less permeable fine-grained soils and at the interface between overburden soils and partially weathered rock.

6.0 Preliminary Conclusions and Recommendations

The following preliminary conclusions and recommendations are based upon review of the exploration data, our understanding of the proposed construction, our engineering analyses, and past experience with similar projects and subsurface conditions.

6.1 General Discussion

Based on our understanding of project development plans and geotechnical analyses of field and laboratory testing data, it is our opinion that this site is adaptable for the planned development provided that site preparation recommendations presented herein are implemented during construction.

The brief summary presented below should not be used for design or construction purposes without reviewing more detailed information in this report. Geotechnical considerations for this site include the following:

Preliminary Geotechnical Exploration Report

Aura Development

Chapel Hill, North Carolina

S&ME Project No. 1305-20-031



- **High Plasticity Soils** – Near-surface high plasticity soils (CH) were encountered in several borings. We recommend these soils not be present within 2 feet of final subgrade elevations in pavement areas or within 3 feet of final subgrade elevations in planned building areas.
- **Difficult Subgrade Preparation** – Relatively low consistency, fine-grained soils were encountered at the ground surface. These soils will likely require repair. The fine-grained soils encountered are very susceptible to degradation due wet conditions and construction equipment.
- **Difficult Excavations** – Rock outcroppings and near-surface PWR material were encountered at this site. These materials will require additional effort to facilitate removal.
- **Possible Spring** - We recommend that loose/soft soils along the bottom of the possible spring be removed. We recommend that a French drain be installed along the possible spring to promote site drainage during grading.

6.2 Earthwork

6.2.1 General

Site grading will be difficult during periods of extended rainfall that generally occur during the winter months. Near-surface soils are moisture sensitive, and when wet, will tend to rut and pump under rubber-tired traffic and provide poor subgrade support for structures and pavements. To reduce potential earthwork problems, site preparation and grading should be scheduled during the typically drier months of May through November, if possible. If winter grading is attempted, repair of near-surface soils and possible use of select on-site or off-site borrow will be necessary to adequately prepare subgrades for new construction. Heavy rubber-tired construction equipment should not be allowed to operate on exposed subgrades during wet conditions. Even during drier periods of the year, we recommend that exposed subgrades be sloped and sealed at the end of each day to promote runoff and reduce infiltration from rainfall.

6.2.2 Site Preparation

Initial site preparation should include removing logging debris, grubbing of stumps, stripping of organics and topsoil, and any other deleterious materials. Topsoil thicknesses encountered in the borings were approximately 6 inches. However, these thicknesses will likely be greater in some areas of the site due to prior logging operations.

After stripping, exposed subgrade of areas to receive fill and areas near final grades should be evaluated by the geotechnical engineer or his representative. This evaluation should include proofrolling with a fully loaded tandem axle dump truck or similar rubber-tired construction equipment. Any areas that deflect excessively and cannot be densified by further rolling should be undercut to suitable soils or moisture conditioned and recompacted. Some undercut and/or subgrade repair should be anticipated, especially in and around the possible spring and near boring locations B-1 through B-4 and B-6 through B-10 which exhibited near-surface SPT N-values of 5 to 7 bpf. The amount of subgrade repair required for the soil types encountered can significantly increase during wet conditions. Limiting rubber-tired construction traffic on subgrades is also important to minimize the amount of subgrade repair required.

Preliminary Geotechnical Exploration Report

Aura Development

Chapel Hill, North Carolina

S&ME Project No. 1305-20-031



6.2.3 Possible Spring

A possible spring exists in the southeastern portion of the site between borings B-7 and B-13. We expect that undercutting of soft, wet soils in this area will be required. It may also be necessary to install a French drain during site grading to facilitate drainage. This will be a field decision during construction. If required, the French drain should consist of a backhoe excavated ditch, filled with washed stone, and encapsulated by a geotextile filter fabric. The drain should daylight to a suitable outlet point. The locations of French drains should be determined during construction. We recommend installing the French drains early during the construction process to help drain surrounding soils to improve their stability by lowering their moisture content.

6.2.4 High Plasticity Soils

Based on visual classifications, high plasticity soils (CH) were encountered in the upper 3 to 6 feet in borings B-1, B-3, B-4, B-6, and B-8, B-9, and B-10. These soils are very sensitive to moisture content and lose significant strength as they become saturated. These soils also have the tendency to shrink and swell with changes in moisture content. High plasticity soils are generally not considered suitable within 2 feet beneath final pavement subgrades and 3 feet beneath final building subgrades. Where present, we recommend that high plasticity soils be undercut to these depths, and replaced with low plasticity material.

6.2.5 Excavations

Based on assumed grading, borings indicate that excavations will likely extend through moderate to high-consistency soils, isolated surface rock, and partially weathered rock (PWR). Moderate- to high-consistency soils can be excavated using backhoes, dozers, and other types of typical earthmoving equipment.

PWR was encountered in the upper 10 feet in borings B-5 and B-6. Rock outcroppings were observed in the eastern, central portion of the site. More weathered portions of partially weathered rock can sometimes be removed by using a large trackhoe, such as a CAT 330 equipped with new rock teeth, or large dozers, such as a CAT D-8 pulling a single-tooth ripper. The excavation of partially weathered rock can be slow and incompatible with the construction schedule. The use of hydraulic equipment (hoe ram, rock hammer, etc.), or rock blasting should be anticipated for removal of the partially weathered rock and rock. Prior to any blasting being performed, we recommend that a pre-blast survey be performed of any nearby structures and that all blast vibrations be monitored.

Excavations should be sloped or shored in accordance with local, state and federal regulations, including OSHA (29 CFR Part 1926) excavation trench safety standards. The contractor is usually responsible for site safety. This information is provided only as a service and under no circumstances should we be assumed responsible for construction site safety.

6.2.6 Reuse of On-Site Soils as Structural Fill

Soils at this site having Unified Soil Classifications of ML, CL, SC, and SM, should be suitable for reuse as structural fill provided that moisture content is properly controlled during placement and compaction. High plasticity soils (CH) may be used as structural fill in deeper fill areas (i.e. below 3 feet from subgrade elevations) provided their moisture content is properly controlled. However, these soils are highly susceptible to changes in moisture

Preliminary Geotechnical Exploration Report

Aura Development

Chapel Hill, North Carolina

S&ME Project No. 1305-20-031



content which can make them difficult to use during site grading. An exception is that high plasticity soils should not be used behind retaining wall structures.

6.2.7 *Subgrade Repair and Improvement Methods*

The exposed subgrade can deteriorate and lose support when exposed to construction traffic and adverse weather conditions. Deterioration can occur in the form of rutting, pumping, freezing, or erosion. We recommend that during construction, exposed subgrade surfaces be sealed at the end of each day or when wet weather is forecast. Water should not be allowed to pond on exposed subgrades. Heavy rubber-tired construction equipment should not be allowed to operate on exposed subgrades during wet conditions.

Immediately prior to floor slab or pavement construction, exposed subgrade soils should be evaluated by proofrolling to determine their stability. Soils which rut, pump, or deflect under proofrolling should be repaired prior to ABC stone placement. Repair measures may include scarifying/drying/recompacting, undercutting, placement of geotextiles, use of chemical additives, or some combination of these. Actual repair measures will be influenced by project schedule and weather conditions and can only be determined in the field by the geotechnical engineer.

6.3 Preliminary Foundation Recommendations

Based on the results of the widely-spaced soil test borings, assumed site grading and structural loads, and assumption that the site is prepared as recommended above, we anticipate that proposed buildings can be supported on a shallow spread foundation system. Depending on final grading and structural loads, the use of ground improvement may be necessary to manage settlements under heavier loads. Geotechnical design parameters for foundation design, along with settlement estimates, can be provided in a final geotechnical exploration report once project information is further developed and additional exploration is performed.

7.0 Additional Geotechnical Exploration

Once site plans and grading plans, and structural loading information have been developed, a final geotechnical exploration should be performed. The final exploration will include additional test borings, laboratory testing, and engineering analyses. The final exploration would further evaluate subsurface conditions within planned development areas in order to confirm and extend the preliminary recommendations made herein.

8.0 Qualifications of Report

This preliminary report has been prepared in accordance with generally accepted geotechnical engineering practice for specific application to this project. The conclusions and recommendations contained in this report are based upon applicable standards of our practice in this geographic area at the time this report was prepared. No other representation or warranty either express or implied, is made.

We relied on project information given to us to develop our conclusions and recommendations. If project information described in this report is not accurate, or if it changes during project development, we should be

Preliminary Geotechnical Exploration Report

Aura Development

Chapel Hill, North Carolina

S&ME Project No. 1305-20-031



notified of the changes so that we can modify our recommendations based on this additional information if necessary.

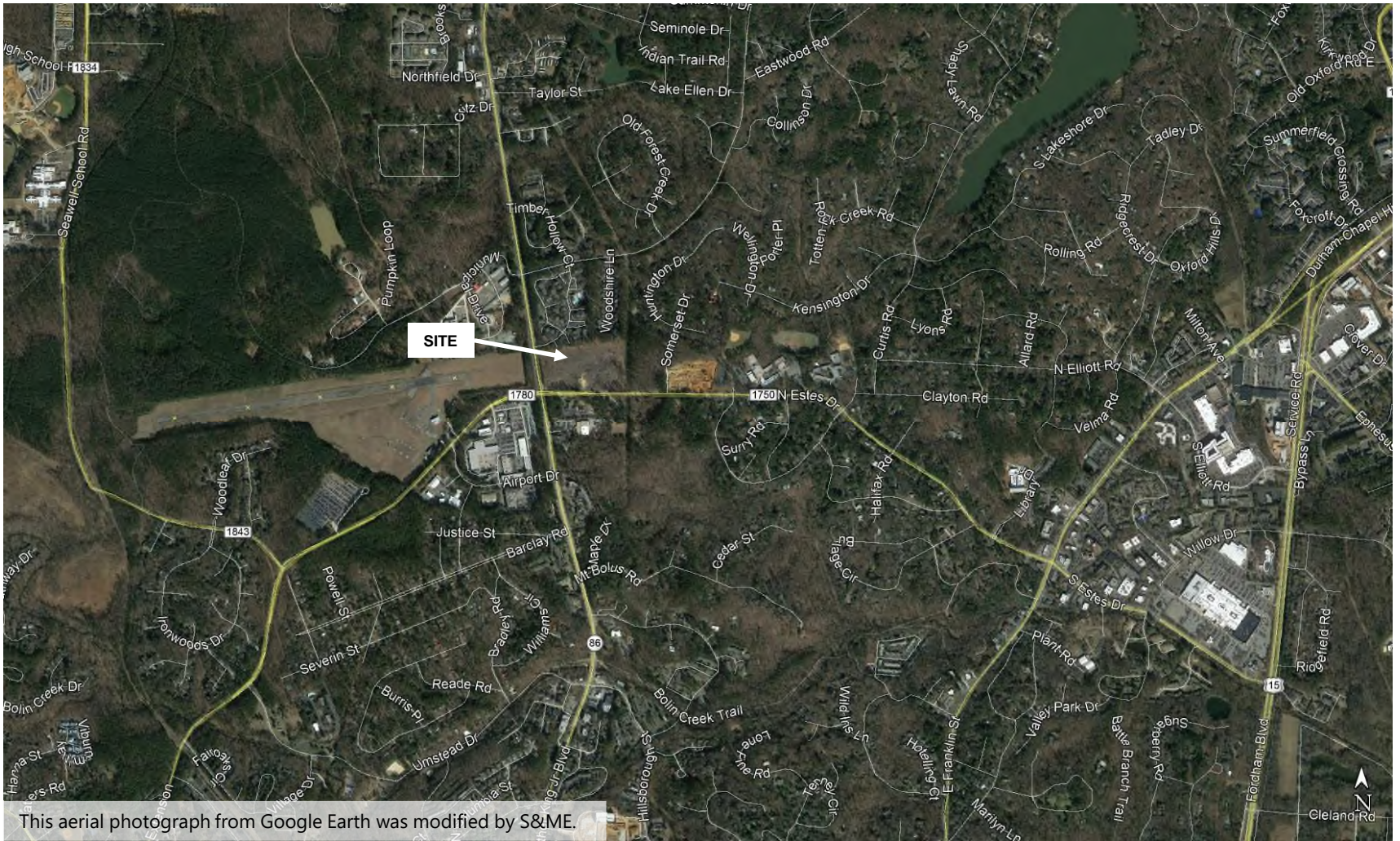
Our conclusions and recommendations are based on limited data from a field exploration program. Subsurface conditions can vary widely between explored areas. Some variations may not become evident until construction. If conditions are encountered which appear different than those described in our report, we should be notified. This report should not be construed to represent subsurface conditions for the entire site.

Unless specifically noted otherwise, our field exploration program did not include an assessment of regulatory compliance, environmental conditions or pollutants or presence of any biological materials (mold, fungi, bacteria). If there is a concern about these items, other studies should be performed. S&ME can provide a proposal and perform these services if requested.

S&ME should be retained to review the final plans and specifications to confirm that earthwork, foundation, and other recommendations are properly interpreted and implemented. The recommendations in this report are contingent on S&ME's review of final plans and specifications followed by our observation and monitoring of earthwork and foundation construction activities.

Appendices

Appendix I – Figures



This aerial photograph from Google Earth was modified by S&ME.

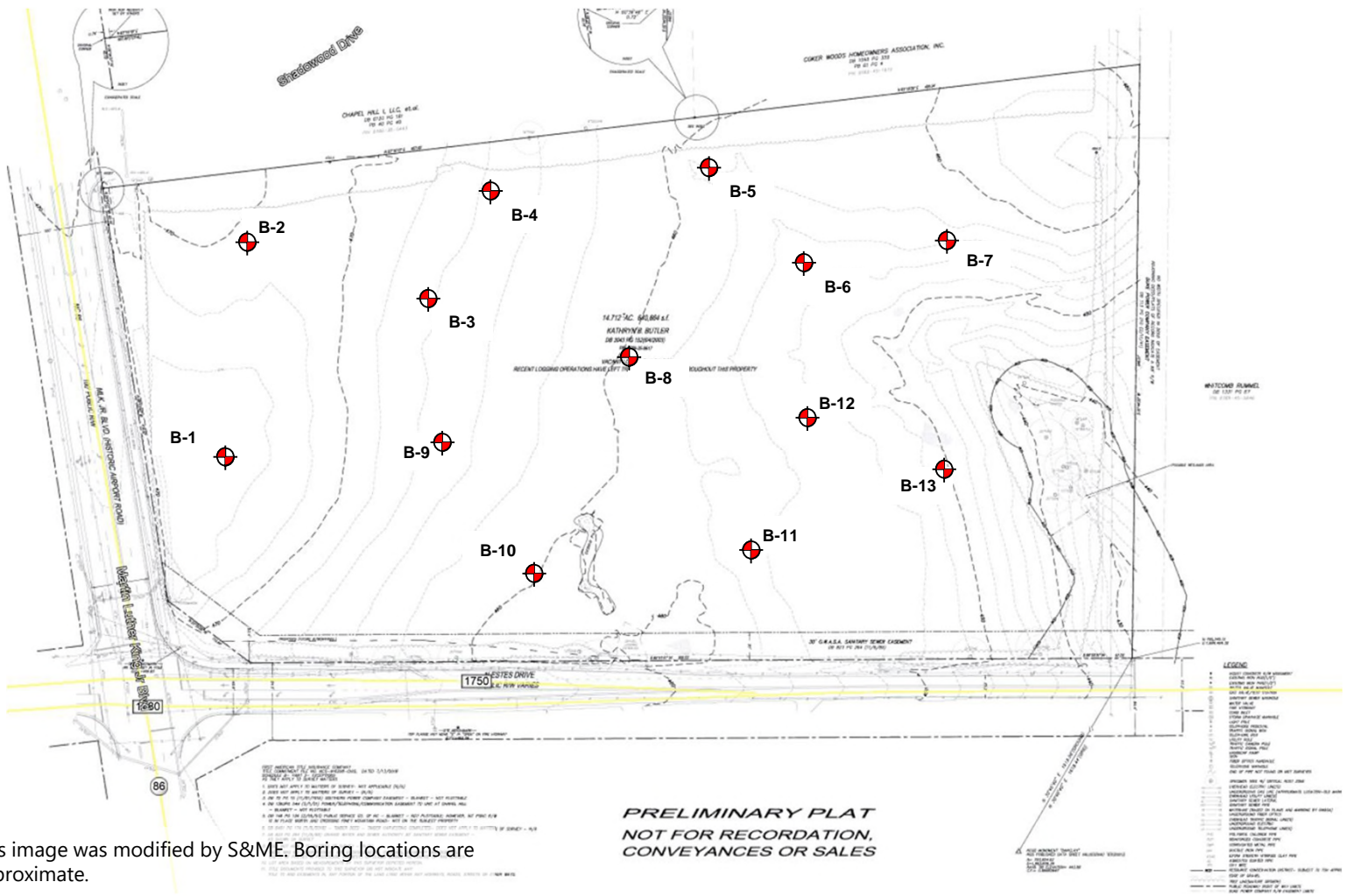


SITE VICINITY PLAN

Aura Development
 North Estes Drive and MLK Jr. Boulevard
 Chapel Hill, North Carolina

SCALE:
NTS
DATE:
3/27/2020
PROJECT NUMBER
1305-20-031

FIGURE NO.
1



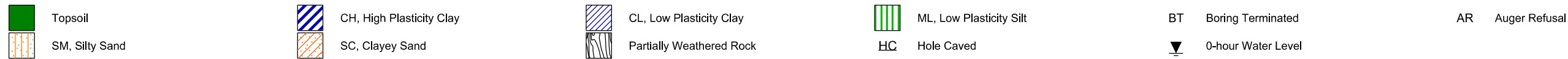
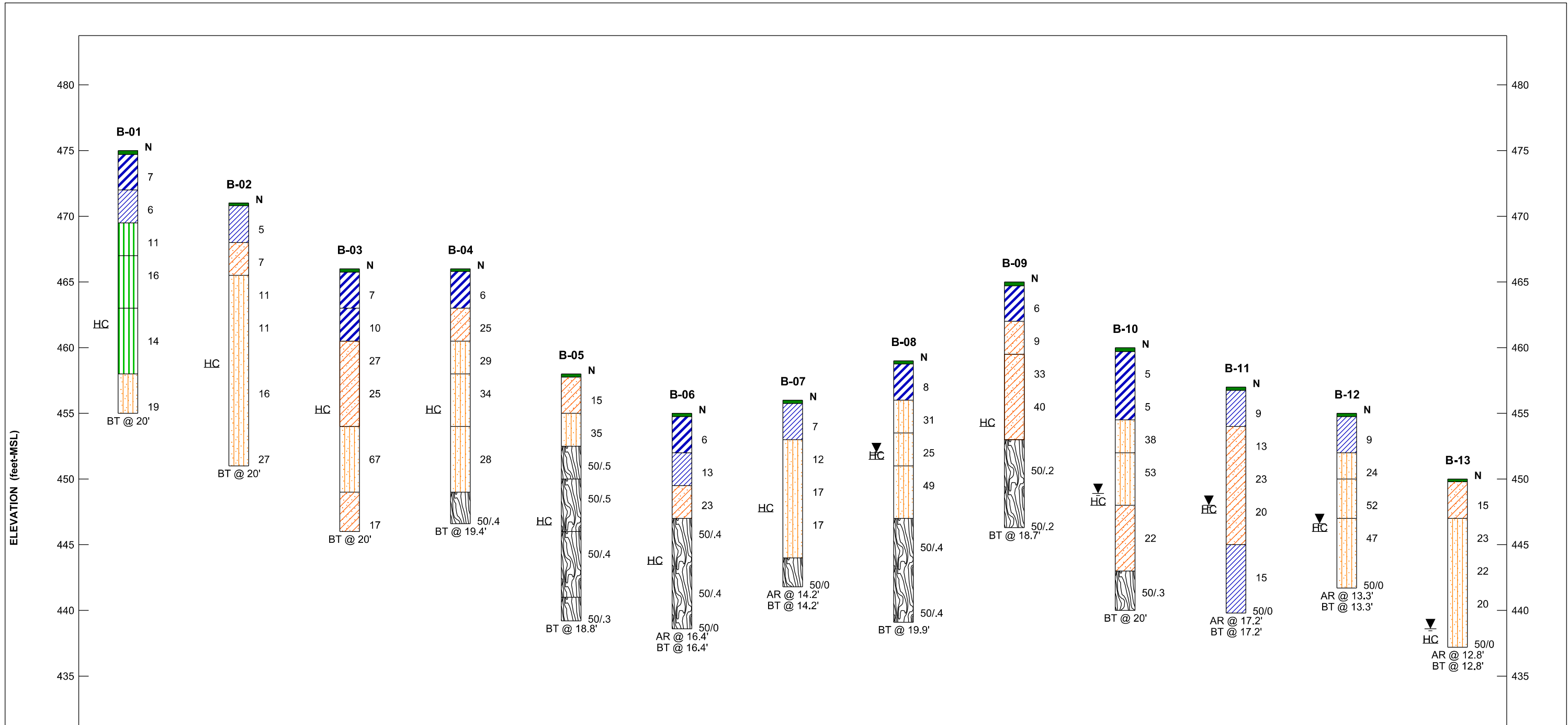
This image was modified by S&ME. Boring locations are approximate.



BORING LOCATION PLAN

Aura Development
 North Estes Drive and MLK Jr. Boulevard
 Chapel Hill, North Carolina

SCALE:	FIGURE NO.
NTS	2
DATE:	
3/27/2020	
PROJECT NUMBER	
1305-20-031	





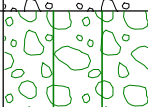
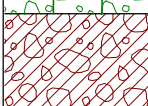

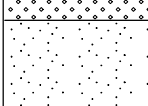
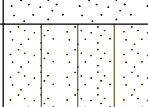
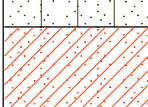
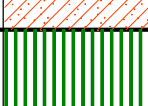
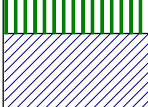
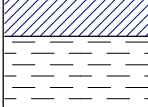

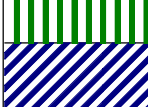
N = Standard Penetration Test resistance value (blows per foot). The depicted stratigraphy is shown for illustrative purposes only. The actual subsurface conditions will vary between boring locations. Elevations are approximate.

Diagram: Generalized Subsurface Profile PROJECT: Aura Development LOCATION: Chapel Hill, North Carolina	JOB NO: 1305-20-031		Figure 3
	DATE: 3/27/20		

Appendix II – Boring Logs

SOIL CLASSIFICATION CHART

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS		
			GRAPH	LETTER			
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES		
		MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES		GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
			(APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES	
		MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE			SANDS WITH FINES		SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
				(APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
	FINE GRAINED SOILS			SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML
			CL			INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
		OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY				
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE		SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS	
					CH	INORGANIC CLAYS OF HIGH PLASTICITY	
					OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS		

DATE DRILLED: 3/13/20	ELEVATION: 475.0 ft	NOTES: Boring location and elevation are approximate.
DRILL RIG: Diedrich D-50	BORING DEPTH: 20.0 ft	
DRILLER: T. Williams	WATER LEVEL: Caved dry @13.5'	
HAMMER TYPE: Automatic	LOGGED BY: H. Camp	
SAMPLING METHOD: Split Spoon		

DRILLING METHOD: **3/4" H.S.A.**

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA			STANDARD PENETRATION TEST DATA (blows/ft) /REMARKS				N VALUE
							1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	10	20	30	60/80	
		TOPSOIL 6 inches												
		RESIDUUM: CLAY (CH) firm, red orange white, moist			SS-1	▲▼	2	3	4					7
		SANDY CLAY (CL) firm, red orange white, moist			SS-2	▲▼	2	2	4					6
5		SANDY SILT (ML) stiff, orange white, moist		470.0	SS-3	▲▼	3	4	7					11
		SANDY SILT (ML) very stiff, orange white, moist			SS-4	▲▼	4	7	9					16
10		SANDY SILT (ML) stiff, tan white, moist			SS-5	▲▼	5	6	8					14
15		SANDY SILT (ML) stiff, tan white, moist	HC	460.0	SS-6	▲▼	5	8	11					19
20		SILTY SAND (SM) medium dense, orange white, fine to medium, moist		455.0										
		Boring terminated at 20 ft												

S&ME BORING LOG NO NORTHING AND EASTING 1305-20-031 AURA DEVELOPMENT.GPJ S&ME.GDT 3/27/20

NOTES:

1. THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.
2. BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.
3. STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.
4. WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.

Page 1 of 1



PROJECT:		Aura Development Chapel Hill, North Carolina S&ME Project No. 1305-20-031		BORING LOG		B-02									
DATE DRILLED: 3/13/20		ELEVATION: 471.0 ft		NOTES: Boring location and elevation are approximate.											
DRILL RIG: Diedrich D-50		BORING DEPTH: 20.0 ft													
DRILLER: T. Williams		WATER LEVEL: Caved dry @12.5'													
HAMMER TYPE: Automatic		LOGGED BY: H. Camp													
SAMPLING METHOD: Split Spoon															
DRILLING METHOD: 3/4" H.S.A.															
DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA			STANDARD PENETRATION TEST DATA (blows/ft) /REMARKS				N VALUE	
							1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	10	20	30	60/80		
		TOPSOIL 6 inches													
		RESIDIUM: SANDY CLAY (CL) firm, orange tan, moist			SS-1	3	2	3							5
		CLAYEY SAND (SC) loose, orange tan, fine to coarse, moist			SS-2	2	3	4							7
5				466.0											
		SILTY SAND (SM) medium dense, brown, with manganese stains, fine to coarse, moist			SS-3	3	5	6							11
					SS-4	3	5	6							11
10				461.0											
			HC												
					SS-5	6	7	9							16
15				456.0											
		--- With no manganese stains, fine													
					SS-6	6	12	15							27
20		Boring terminated at 20 ft		451.0											

S&ME BORING LOG NO NORTHING AND EASTING 1305-20-031 AURA DEVELOPMENT.GPJ S&ME.GDT 3/27/20

NOTES:

1. THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.
2. BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.
3. STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.
4. WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.



DATE DRILLED: 3/17/20	ELEVATION: 466.0 ft	NOTES: Boring location and elevation are approximate.
DRILL RIG: Diedrich D-50	BORING DEPTH: 20.0 ft	
DRILLER: T. Williams	WATER LEVEL: Caved dry @11'	
HAMMER TYPE: Automatic	LOGGED BY: H. Camp	
SAMPLING METHOD: Split Spoon		

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA			STANDARD PENETRATION TEST DATA (blows/ft) /REMARKS				N VALUE
							1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	10	20	30	60/80	
		TOPSOIL 6 inches												
		RESIDUUM: CLAY (CH) firm, orange gray, moist			SS-1	▲▼	2	2	5					7
		CLAY (CH) stiff, orange gray, moist			SS-2	▲▼	2	4	6					10
5		CLAY (CH) stiff, orange gray, moist		461.0	SS-3	▲▼	4	11	16					27
		CLAYEY SAND (SC) medium dense, orange white, fine, relatively dry			SS-4	▲▼	9	12	13					25
10		CLAYEY SAND (SC) medium dense, orange white, fine, relatively dry		456.0	SS-5	▲▼	15	22	45					67
		CLAYEY SAND (SM) very dense, orange white, fine to medium, relatively dry	HC		SS-6	▲▼	9	8	9					17
15		CLAYEY SAND (SM) very dense, orange white, fine to medium, relatively dry		451.0										
		CLAYEY SAND (SC) medium dense, orange, fine to coarse, moist												
20		CLAYEY SAND (SC) medium dense, orange, fine to coarse, moist		446.0										
		Boring terminated at 20 ft												

S&ME BORING LOG NO NORTHING AND EASTING 1305-20-031 AURA DEVELOPMENT.GPJ S&ME.GDT 3/27/20

DATE DRILLED: 3/17/20	ELEVATION: 466.0 ft	NOTES: Boring location and elevation are approximate.
DRILL RIG: Diedrich D-50	BORING DEPTH: 19.4 ft	
DRILLER: T. Williams	WATER LEVEL: Caved dry @11'	
HAMMER TYPE: Automatic	LOGGED BY: H. Camp	
SAMPLING METHOD: Split Spoon		

DRILLING METHOD: **3/4" H.S.A.**

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA			STANDARD PENETRATION TEST DATA (blows/ft) /REMARKS				N VALUE
							1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	10	20	30	60/80	
		TOPSOIL 6 inches												
		CLAY (CH) firm, tan gray, moist												
5		CLAYEY SAND (SC) medium dense, orange gray, fine to medium, relatively dry		461.0	SS-1		2	2	4					6
					SS-2		3	8	17					25
					SS-3		6	14	15					29
10		SILTY SAND (SM) medium dense, brown, with manganese stains, fine to medium, relatively dry			SS-4		8	15	19					34
			HC											
15		SILTY SAND (SM) medium dense, orange, fine to coarse, relatively dry		451.0	SS-5		8	12	16					28
		PARTIALLY WEATHERED ROCK sampled as silty sand, orange, fine to coarse, relatively dry			SS-6		33	50/4						50/4
		Boring terminated at 19.4 ft												

S&ME BORING LOG NO NORTHING AND EASTING 1305-20-031 AURA DEVELOPMENT.GPJ S&ME.GDT 3/27/20

NOTES:

1. THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.
2. BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.
3. STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.
4. WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.

Page 1 of 1



DATE DRILLED: 3/17/20	ELEVATION: 458.0 ft	NOTES: Boring location and elevation are approximate.
DRILL RIG: Diedrich D-50	BORING DEPTH: 18.8 ft	
DRILLER: T. Williams	WATER LEVEL: Caved dry @11.5'	
HAMMER TYPE: Automatic	LOGGED BY: H. Camp	
SAMPLING METHOD: Split Spoon		

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA			STANDARD PENETRATION TEST DATA (blows/ft) /REMARKS				N VALUE
							1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	10	20	30	6080	
0 - 0.5		TOPSOIL 6 inches												
0.5 - 3.5		CLAYEY SAND (SC) medium dense, orange gray, fine to coarse, moist			SS-1	▲	2	4	11					15
3.5 - 5.0		SILTY SAND (SM) dense, orange gray, fine to coarse, relatively dry			SS-2	▲	3	15	20					35
5.0 - 8.0		PARTIALLY WEATHERED ROCK Sampled as silty sand, brown, fine to medium, relatively dry, with manganese stains		453.0	SS-3	▲	11	29	50/5					50/5
8.0 - 10.0		PARTIALLY WEATHERED ROCK Sampled as clayey sand, orange, white, fine to coarse, trace gravel, relatively dry		448.0	SS-4	▲	24	50/5						50/5
10.0 - 13.0		PARTIALLY WEATHERED ROCK Sampled as silty sand, orange, fine to coarse, trace gravel, relatively dry	HC		SS-5	▲	50/4							50/4
13.0 - 18.8		PARTIALLY WEATHERED ROCK sampled as sand with gravel, orange, gray, fine to coarse, relatively dry		443.0	SS-6	▲	50/3							50/3
18.8		Boring terminated at 18.8 ft												

S&ME BORING LOG NO NORTHING AND EASTING 1305-20-031 AURA DEVELOPMENT.GPJ S&ME.GDT 3/27/20

NOTES:

1. THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.
2. BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.
3. STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.
4. WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.

Page 1 of 1



DATE DRILLED: 3/17/20	ELEVATION: 455.0 ft	NOTES: Boring location and elevation are approximate.
DRILL RIG: Diedrich D-50	BORING DEPTH: 16.4 ft	
DRILLER: T. Williams	WATER LEVEL: Caved dry @11.5	
HAMMER TYPE: Automatic	LOGGED BY: H. Camp	
SAMPLING METHOD: Split Spoon		
DRILLING METHOD: 3/4" H.S.A.		

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA			STANDARD PENETRATION TEST DATA (blows/ft) /REMARKS				N VALUE
							1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	10	20	30	6080	
		TOPSOIL 6 inches												
		RESIDIUM: CLAY (CH) firm, orange gray, moist			SS-1	▲▼	2	3	3					6
5		SANDY CLAY (CL) stiff, gray, moist		450.0	SS-2	▲▼	3	4	9					13
		CLAYEY SAND (SC) medium dense, gray, fine, moist			SS-3	▲▼	4	8	15					23
10		PARTIALLY WEATHERED ROCK sampled as silty sand, brown, white, fine to coarse, trace gravel, relatively dry, manganese staining		445.0	SS-4	▲▼	30	50/4						50/4
			HC											
15				440.0	SS-5	▲▼	50/4							50/4
					SS-6	▲▼	50/0							50/0
		Boring terminated at 16.4 ft due to auger refusal												

S&ME BORING LOG NO NORTHING AND EASTING 1305-20-031 AURA DEVELOPMENT.GPJ S&ME.GDT 3/27/20

NOTES:

1. THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.
2. BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.
3. STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.
4. WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.



PROJECT: Aura Development Chapel Hill, North Carolina S&ME Project No. 1305-20-031		BORING LOG B-07	
DATE DRILLED: 3/17/20	ELEVATION: 456.0 ft	NOTES: Boring location and elevation are approximate.	
DRILL RIG: Diedrich D-50	BORING DEPTH: 14.2 ft		
DRILLER: T. Williams	WATER LEVEL: Caved dry @8.5'		
HAMMER TYPE: Automatic	LOGGED BY: H. Camp		
SAMPLING METHOD: Split Spoon			
DRILLING METHOD: 3/4" H.S.A.			

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA			STANDARD PENETRATION TEST DATA (blows/ft) /REMARKS				N VALUE
							1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	10	20	30	60/80	
0 - 0.5		TOPSOIL 6 inches												
0.5 - 5.0		RESIDUUM: SANDY CLAY (CL) firm, red orange white, moist			SS-1	▲	3	3	4					7
5.0 - 10.0		SILTY SAND (SM) medium dense, orange tan white, fine, moist to relatively dry		451.0	SS-2	▲	3	5	7					12
10.0 - 12.0					SS-3	▲	6	7	10					17
12.0 - 14.2					SS-4	▲	6	7	10					17
		PARTIALLY WEATHERED ROCK sampled as silty sand, gray, tan, fine to coarse, relatively dry	HC	446.0	SS-5	▲	50							
		Boring terminated at 14.2 ft due to auger refusal			SS-6	▲	50/0							50/0

S&ME BORING LOG NO NORTHING AND EASTING 1305-20-031 AURA DEVELOPMENT.GPJ S&ME.GDT 3/27/20

NOTES:

1. THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.
2. BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.
3. STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.
4. WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.



DATE DRILLED: 3/17/20	ELEVATION: 459.0 ft	NOTES: Boring location and elevation are approximate.
DRILL RIG: Diedrich D-50	BORING DEPTH: 19.9 ft	
DRILLER: T. Williams	WATER LEVEL: 7' 24 hr	
HAMMER TYPE: Automatic	LOGGED BY: H. Camp	
SAMPLING METHOD: Split Spoon		
DRILLING METHOD: 3/4" H.S.A.		

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA			STANDARD PENETRATION TEST DATA (blows/ft) /REMARKS				N VALUE
							1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	10	20	30	60/80	
		TOPSOIL 6 inches												
		CLAY (CH) firm, orange gray, moist			SS-1		3	4	4					8
5		SILTY SAND (SM) dense, gray white, fine to coarse, relatively dry		454.0	SS-2		5	12	19					31
		SILTY SAND (SM) medium dense, orange white, fine to coarse, relatively dry			SS-3		7	13	12					25
10		SILTY SAND (SM) dense, orange white, fine to medium, relatively dry	 HC		SS-4		9	22	27					49
15		PARTIALLY WEATHERED ROCK sampled as clayey sand, orange, white, fine to coarse, trace gravel, relatively dry, with manganese staining		444.0	SS-5		33	50/4						50/4
		Boring terminated at 19.9 ft			SS-6		34	50/4						50/4

S&ME BORING LOG NO NORTHING AND EASTING 1305-20-031 AURA DEVELOPMENT.GPJ S&ME.GDT 3/27/20

NOTES:

1. THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.
2. BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.
3. STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.
4. WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.



DATE DRILLED: 3/13/20	ELEVATION: 465.0 ft	NOTES: Boring location and elevation are approximate.
DRILL RIG: Diedrich D-50	BORING DEPTH: 18.7 ft	
DRILLER: T. Williams	WATER LEVEL: Caved dry @11'	
HAMMER TYPE: Automatic	LOGGED BY: H. Camp	
SAMPLING METHOD: Split Spoon		
DRILLING METHOD: 3/4" H.S.A.		

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA			STANDARD PENETRATION TEST DATA (blows/ft) /REMARKS	N VALUE
							1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD		
	TOPSOIL 6 inches										
	RESIDUUM: CLAY (CH) firm, orange tan, moist				SS-1	▲▼	2	3	3		6
5	CLAYEY SAND (SC) loose, orange white, fine, moist			460.0	SS-2	▲▼	2	4	5		9
	CLAYEY SAND (SC) dense, orange white, with manganese stains, fine, moist - - - Brown tan, fine to medium				SS-3	▲▼	9	9	24		33
10				455.0	SS-4	▲▼	3	10	30		40
	PARTIALLY WEATHERED ROCK sampled as silty sand, fine, orange, brown, moist to relatively dry		HC		SS-5	▲▼	12	17	50/2		50/2
15				450.0							
		Boring terminated at 18.7 ft			SS-6	▲▼					50/2

S&ME BORING LOG NO NORTHING AND EASTING 1305-20-031 AURA DEVELOPMENT.GPJ S&ME.GDT 3/27/20

NOTES:

1. THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.
2. BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.
3. STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.
4. WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.



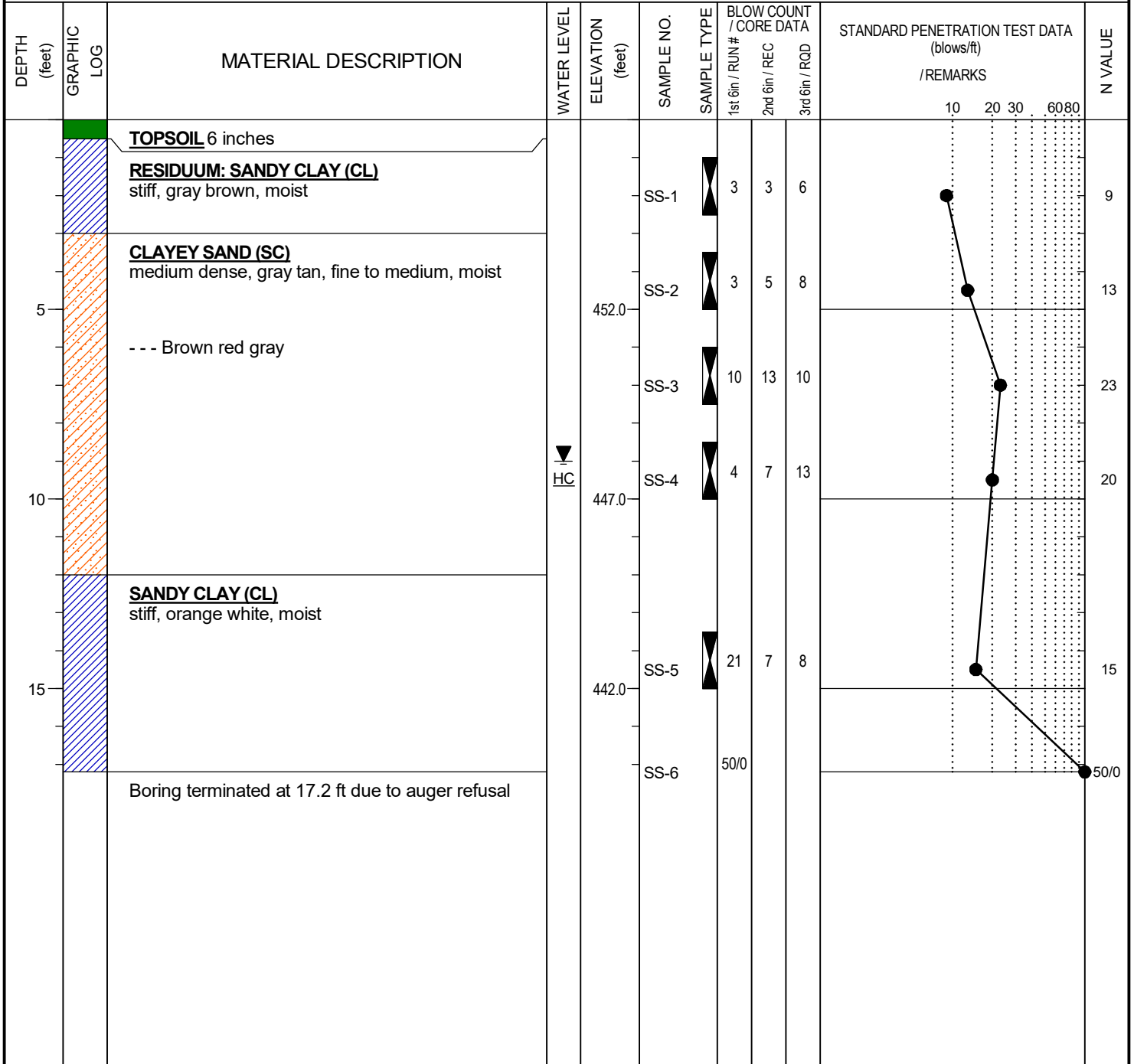
DATE DRILLED: 3/13/20	ELEVATION: 460.0 ft	NOTES: Boring location and elevation are approximate.
DRILL RIG: Diedrich D-50	BORING DEPTH: 20.0 ft	
DRILLER: T. Williams	WATER LEVEL: 11.1' 24 hr	
HAMMER TYPE: Automatic	LOGGED BY: H. Camp	
SAMPLING METHOD: Split Spoon		

DRILLING METHOD: **3/4" H.S.A.**

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA			STANDARD PENETRATION TEST DATA (blows/ft) /REMARKS				N VALUE
							1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	10	20	30	60/80	
		TOPSOIL 6 inches												
		RESIDUUM: CLAY (CH) firm, brown, moist			SS-1	▲▼	2	2	3					5
5				455.0	SS-2	▲▼	2	2	3					5
		SILTY SAND (SM) dense, orange tan gray, fine to medium, relatively dry			SS-3	▲▼	10	15	23					38
		SILTY SAND (SM) very dense, orange tan, fine to coarse, relatively dry			SS-4	▲▼	20	28	25					53
10			▼ HC	450.0										
		CLAYEY SAND (SC) medium dense, orange gray, with manganese stains, fine, moist			SS-5	▲▼	6	10	12					22
15				445.0										
		PARTIALLY WEATHERED ROCK no recovery			SS-6	▲▼	50/3							50/3
20		Boring terminated at 20 ft		440.0										

S&ME BORING LOG NO NORTHING AND EASTING 1305-20-031 AURA DEVELOPMENT.GPJ S&ME.GDT 3/27/20

DATE DRILLED: 3/17/20	ELEVATION: 457.0 ft	NOTES: Boring location and elevation are approximate.
DRILL RIG: Diedrich D-50	BORING DEPTH: 17.2 ft	
DRILLER: T. Williams	WATER LEVEL: 9' 24 hr	
HAMMER TYPE: Automatic	LOGGED BY: H. Camp	
SAMPLING METHOD: Split Spoon		
DRILLING METHOD: 3¼" H.S.A.		



S&ME BORING LOG NO NORTHING AND EASTING 1305-20-031 AURA DEVELOPMENT.GPJ S&ME.GDT 3/27/20

NOTES:

1. THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.
2. BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.
3. STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.
4. WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.



PROJECT: Aura Development Chapel Hill, North Carolina S&ME Project No. 1305-20-031		BORING LOG B-12	
DATE DRILLED: 3/17/20	ELEVATION: 455.0 ft	NOTES: Boring location and elevation are approximate.	
DRILL RIG: Diedrich D-50	BORING DEPTH: 13.3 ft		
DRILLER: T. Williams	WATER LEVEL: 8.4' 24 hr		
HAMMER TYPE: Automatic	LOGGED BY: H. Camp		
SAMPLING METHOD: Split Spoon			
DRILLING METHOD: 3/4" H.S.A.			

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA			STANDARD PENETRATION TEST DATA (blows/ft) /REMARKS				N VALUE
							1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	10	20	30	6080	
0 - 0.5		TOPSOIL 6 inches												
0.5 - 5		RESIDUUM: SANDY CLAY (CL) stiff, orange gray, with manganese stains, moist			SS-1		2	4	5					9
5 - 6.5		SILTY SAND (SM) medium dense, orange white, with manganese stains, fine to medium, moist		450.0	SS-2		4	10	14					24
6.5 - 9.5		SILTY SAND (SM) very dense, brown, with manganese stains, fine to medium, moist			SS-3		15	26	26					52
9.5 - 13.3		SILTY SAND (SM) dense, orange gray, fine, moist	 HC	445.0	SS-4		8	20	27					47
13.3 - 13.3		Boring terminated at 13.3 ft due to auger refusal			SS-5		50/0							50/0

S&ME BORING LOG NO NORTHING AND EASTING 1305-20-031 AURA DEVELOPMENT.GPJ S&ME.GDT 3/27/20

NOTES:

1. THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.
2. BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.
3. STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.
4. WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.



PROJECT:		Aura Development Chapel Hill, North Carolina S&ME Project No. 1305-20-031		BORING LOG		B-13								
DATE DRILLED: 3/17/20		ELEVATION: 450.0 ft		NOTES: Boring location and elevation are approximate.										
DRILL RIG: Diedrich D-50		BORING DEPTH: 12.8 ft												
DRILLER: T. Williams		WATER LEVEL: 11.4' 24 hr												
HAMMER TYPE: Automatic		LOGGED BY: H. Camp												
SAMPLING METHOD: Split Spoon														
DRILLING METHOD: 3/4" H.S.A.														
DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet)	SAMPLE NO.	SAMPLE TYPE	BLOW COUNT / CORE DATA			STANDARD PENETRATION TEST DATA (blows/ft) /REMARKS				N VALUE
							1st 6in / RUN #	2nd 6in / REC	3rd 6in / RQD	10	20	30	60/80	
		TOPSOIL 6 inches												
		RESIDUUM: CLAYEY SAND (SC) medium dense, brown orange gray, fine, moist			SS-1	▲▼	3	6	9					15
5		SILTY SAND (SM) medium dense, brown, with manganese stains, fine, moist		445.0	SS-2	▲▼	4	6	17					23
					SS-3	▲▼	6	9	13					22
10				440.0	SS-4	▲▼	6	9	11					20
			▼ HC											
		Boring terminated at 12.8 ft due to auger refusal			SS-5	▲▼			50/0					50/0

S&ME BORING LOG NO NORTHING AND EASTING 1305-20-031 AURA DEVELOPMENT.GPJ S&ME.GDT 3/27/20

NOTES:

1. THIS LOG IS ONLY A PORTION OF A REPORT PREPARED FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.
2. BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.
3. STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.
4. WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.

