



ADDENDUM NO. 1 TO PLANS AND SPECIFICATIONS

Project: North Cherry Street Parking Lot
Date: March 13, 2023
Bid Date: March 17, 2023
Bid Time: 10:30 A.M. EST
Bid Location: Public Services Office (Hamlin Center)
509 Michael Street
Kernersville, NC 27284

The following changes, additions, interpretations, and corrections are herewith made a part of the scope of the referenced project. Contractors shall familiarize themselves with the content of this addendum, as it will become a part of this contract.

Addendum Item No. 1 Geotechnical Report prepared by GeoTechnologies, Inc. and dated June 15, 2022 shall be incorporated into the contract documents.

Addendum Item No. 2 Due to the long lead time for the Filterra System the contract time will be adjusted as needed.

Addendum Item No. 3 All trees and scrubs within the project limits shall be removed. For all other demolition items, please refer to the Demolition Plan.

Addendum Item No. 4 The 3' Screening Wall and the 4 each ADA HC ramps shall be paid for under contract line Item No. 23 (Miscellaneous).

Addendum Item No. 5 Contract line Item No. 25 (3" PVC) quantity shall be 474'.

Addendum Item No. 6 Stone Undercut Allowance Contract Item No. 24 shall be \$5,000.

A handwritten signature in black ink, appearing to read "Doran Maltba", is written over a large, loopy initial "D".

Doran Maltba, PWLF, CGPM

Director of Public Services



Geotechnical and Construction Materials Testing Services

June 15, 2022

Withers Ravenel
6201 Fairview Road, Suite 200
Charlotte, NC 28201

Attn: Ms. Frances S. Gallagher, PE

Re: Report of Subsurface Investigation
N Cherry Street Parking Lot
Kernersville, North Carolina
GeoTechnologies Project No. 1-22-0461-EA

Dear Ms. Gallagher:

GeoTechnologies, Inc. has completed the authorized investigation to evaluate subsurface soil conditions for the above referenced project in Kernersville, North Carolina. Subsurface conditions at the site were investigated by completing three soil test borings at the approximate locations shown on the attached Figure 1. The boring locations were established in the field using GPS coordinates obtained from the Forsyth County GIS website. The indicated boring locations shown on Figure 1 should be considered approximate. The test borings were extended to a depth of approximately 7 feet below site grade utilizing hand equipment. Dynamic cone penetrometer testing procedures (ASTM STP-399) at selected intervals to evaluate the consistency of the subsurface soils. This report presents the findings of the investigation and our recommendations concerning site grading and foundation support considerations.

SITE AND PROJECT INFORMATION

The site consists of two adjoining parcels of land totaling about 0.72 acres with addresses of 120 and 126 N Cherry Street. The lots are currently open however, they were previously developed with houses that have been demolished. The project will involve construction of a new public parking lot. A grading plan has not been provided, however, we anticipate minimal grading to achieve design subgrade elevations.

AREA GEOLOGY

The site is located in the Piedmont Physiographic and Geologic Province of North Carolina. The Piedmont Province is characterized by a gently to steeply sloping topography, rolling hills and ridge lines, dissected by moderate to well-developed (mature) dendritic type drainage system and drainage swales, hollows, tributaries, creeks, streams, and rivers. More specially, the site is located within the Charlotte and Milton Belts in an area comprised of intrusive Granitic rock. These materials were deposited during the Pennsylvanian-Permian Period. The bedrock materials have weathered in place to form the residual soils which are typically found near the ground surface in the vicinity of the site.

SUBSURFACE CONDITIONS

A generalized subsurface profile prepared from the test boring data is attached to this report as Figure 2 to graphically illustrate subsurface conditions encountered at this site. More detailed descriptions of the conditions encountered at the individual test boring locations are then presented on the attached test boring records.

Near surface conditions at the site were characterized by the presence of topsoil or gravel which extended to a depth of about 4 inches. Underlying the topsoil/gravel the test borings typically encountered 9 to 18 inches of fill soils consisting of silty/clayey sands and sandy clay. Underlying the fill, the soils consisted of silty/clayey sands, sandy silts and clays to the boring termination depth of 7 feet. Penetration resistances within the soils ranged from 10 to greater than 15 blows per increment (bpi), indicative of firm to very stiff consistency in the silts and clays. No partially weathered rock (PWR) was encountered.

Groundwater was not encountered at the time of boring completion. Due to the fine grain nature of the near surface soils, perched water conditions can be expected following periods of inclement weather. Additionally, regional groundwater levels will fluctuate with seasonal and climatic changes and may be different at other times.

LABORATORY TESTING

A sample was collected of the soils in the top 3 feet and transported to our laboratory for testing. Laboratory testing included natural moisture content testing (ASTM D-2216), Atterberg limits testing (ASTM D-4318), particle size distribution testing (ASTM D-6913), standard Proctor testing (ASTM D-698) and CBR testing (ASTM D-1883). The test results attached to the end of the report and summarized below:

Laboratory Test Summary Table

Sample	Depth (ft)	Atterberg Limits		Fines (% passing 200)	Moisture Content (%)	Standard Proctor		CBR	
		LL	PI			MDD (pcf)	OM (%)	0.1"	0.2"
S-1	1-3	64	30	66.3	26.8	97.0	24.5	10.5	10.2

RECOMMENDATIONS

The following recommendations are made based upon a review of the attached test boring data, our understanding of the proposed construction, and past experience with similar projects and subsurface conditions. Should project details change or subsurface conditions different than those indicated in this report be encountered during site grading, that information should be provided to GeoTechnologies for review and comment. Furthermore, once a grading plan is established that information should be provided to GeoTechnologies for additional review and comment.

Site Grading Considerations: The soils at existing grade are moisture sensitive and will be difficult to compact during the wetter winter months of December through April or May. To avoid delays during site grading operations, we recommend that earthwork activities be scheduled after May and prior to December if possible, in order to facilitate site grading work.

Withers Ravenel

Re: N Cherry Street Parking Lot

June 15, 2022

Site grading should begin with the removal of vegetation and topsoil from those areas designated for construction of paved areas. Based on the results of the soil test borings, we anticipate that topsoil thickness will generally be on the order of about 4 inches, however, topsoil thickness may vary.

Once stripping is complete, we recommend that any at grade areas or areas designated to receive fill be proofrolled with a partially loaded dump truck or similar piece of rubber tired equipment to identify areas necessitating additional repair. Any area that ruts or pumps excessively in the opinion of the engineer should be undercut to firm bearing or be repaired as directed by the engineer. Based upon the test borings, the near surface soils will be variable with some firm areas and some loose/soft areas (B-3, B-4) which will likely require repairs. For this reason, some repairs should be budgeted for. The best type of repair will need to be determined in the field during construction and will depend upon the future use of the area. Within building pads, we recommend full removal of soft/loose soils and replacing with properly compacted soils. In paved areas, full or partial removal of soft/loose soils as well as bridging and use of geogrid can be considered.

Although some repair will be needed anytime of the year, repair quantities can be minimized by scheduling grading activities during the warmer months of the year. The near surface soils at this site are moisture sensitive, and grading during a wet period if the year will increase the need for undercut type repairs.

The on-site materials, excluding topsoil, should be suitable for reuse as structural fill provided compaction moisture can be maintained near optimum. Due to the silt and clay content of the near surface soils, the contractor should be prepared to moisture condition the soils as necessary in order to achieve adequate compaction. However, we expect that new fill soils may be imported. Off-site borrow should consist of clayey or silty sands or low plasticity silts and clays having a Unified Soil Classification of SC, SM, ML, or CL. Processed fill can also be used.

Fill soils should be compacted to not less than 95% of the standard Proctor maximum dry density, except in the final foot where this requirement should be increased to 98% of the standard Proctor maximum. Moisture contents should be maintained within about 2 percent of optimum moisture content to facilitate compaction and to maintain stability of the fill section.

Temporary Excavations: Temporary excavations should be designed in accordance with OSHA guidelines assuming that the on-site soils can be classified as Type "B" soils for the silts and clays and Type "C" soils for the sands. Excavations exceeding 20 feet in depth must be designed by an engineer. Once open, all excavations should be observed on a daily basis by qualified personnel.

General Pavement Design Considerations: Based upon the lab CBR test results, we recommend using a design CBR value of 10% for pavement design. A typical asphalt pavement section for travel lanes and parking stalls would consist of 3 inches asphalt over 8 inches stone base. A non-woven geotextile fabric should be considered between the subgrade soils and stone base to provide for separation of the fine grained subgrade soils and stone base.

The most important factors affecting pavement life in the area of the site are the condition of the subgrade immediately prior to base course stone placement and post construction drainage. We recommend that the subgrade of all pavement areas be proofrolled and that any yielding areas be identified and repaired prior to placement of the base coarse stone. All subgrade soils should be recompacted to a minimum of 98% of the standard Proctor maximum dry density immediately prior to base course stone placement where appropriate. Once the

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June 15, 2022

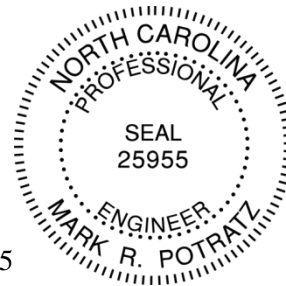
subgrade is stable, we recommend that all construction equipment stay off of stable subgrades during placement of stone and that the stone be end-dumped and spread with a dozer to help protect the exposed subgrades. We recommend that all pavement areas be properly graded to promote run-off of water and to prevent ponding of water on the pavement surface which can lead to eventual saturation of subgrade soils and the loss of pavement support. Permanent drainage swales and/or french drains should be installed on the uphill side of pavement areas to intercept and divert water. Strip drains should be provided within traffic islands to prevent stone and subgrade saturation.

CLOSING

GeoTechnologies, Inc. appreciates the opportunity to have provided you with our services on this phase of the project. Please contact us if you should have questions regarding this report or if we may be of any further assistance.

Sincerely,
GeoTechnologies, Inc.

Mark R. Potratz, PE
NC Registration No. 25955



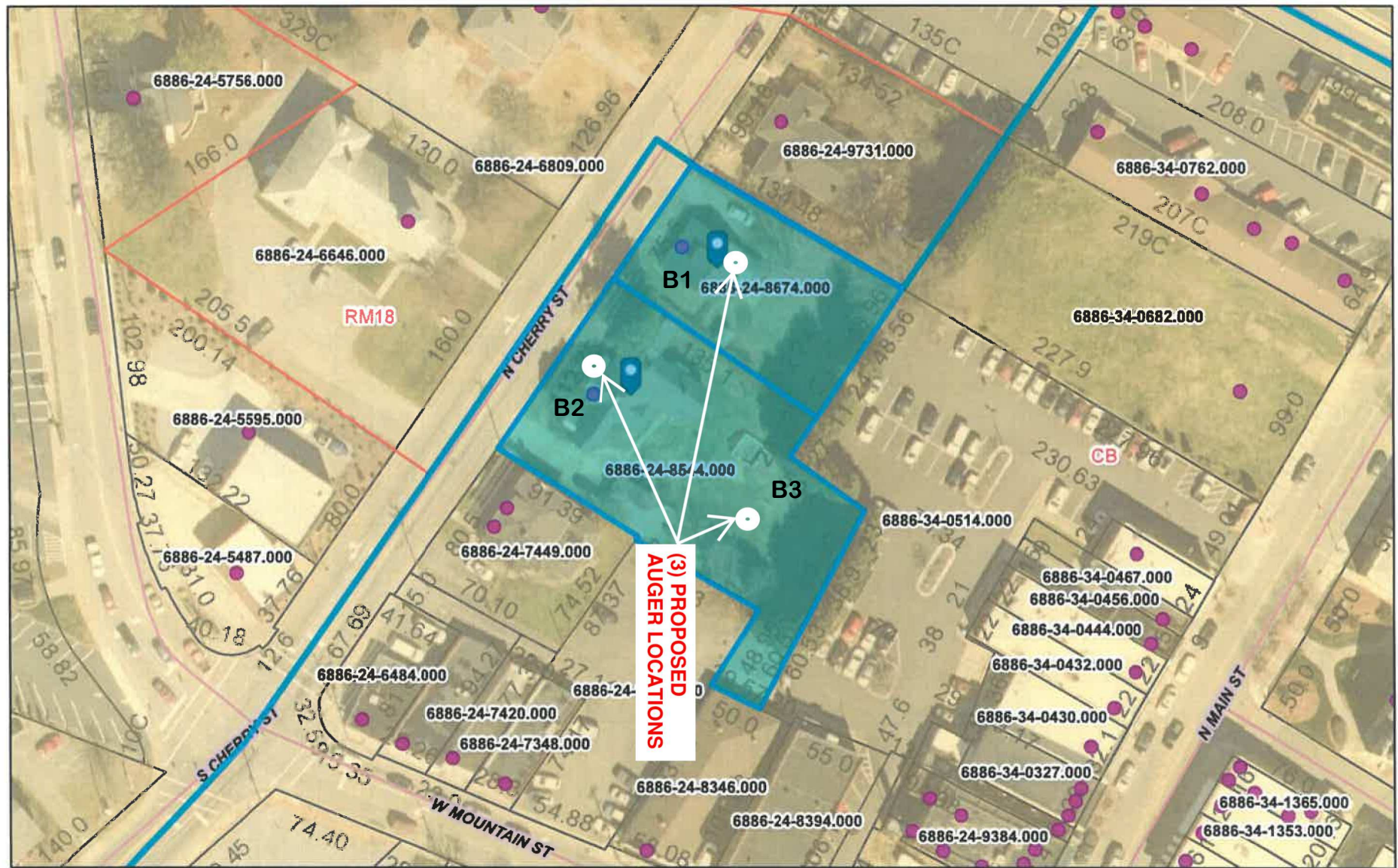
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Attachments

EXHIBIT I

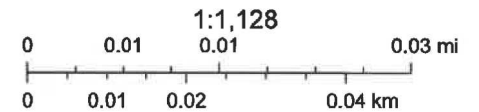
N. Cherry Street - Parking Lots

Figure 1



3/21/2022, 1:09:42 PM

- Corporate Limits
- Kemeroville
- Address Points
- Forsyth County Boundary
- Zoning
- Streets
- Parcels
- Parcels-Mailing Labels
- 2018 Aerial Imagery
- Red: Band_1
- Green: Band_2
- Blue: Band_3



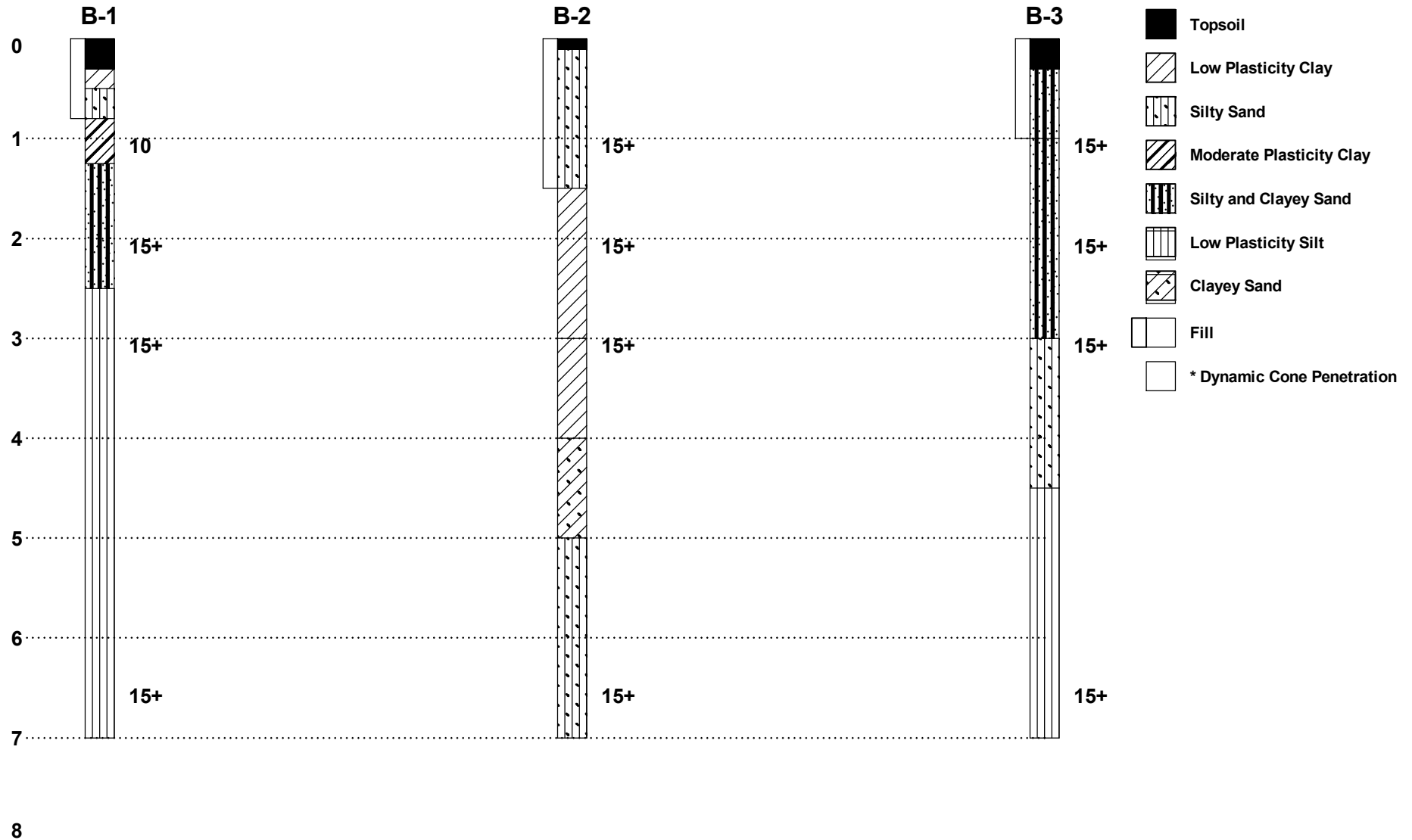
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, FEMA, MapForsyth, Forsyth County Tax Administration

Planning & Inspections Viewer

Depth (Feet)

GENERALIZED SUBSURFACE PROFILE

LEGEND

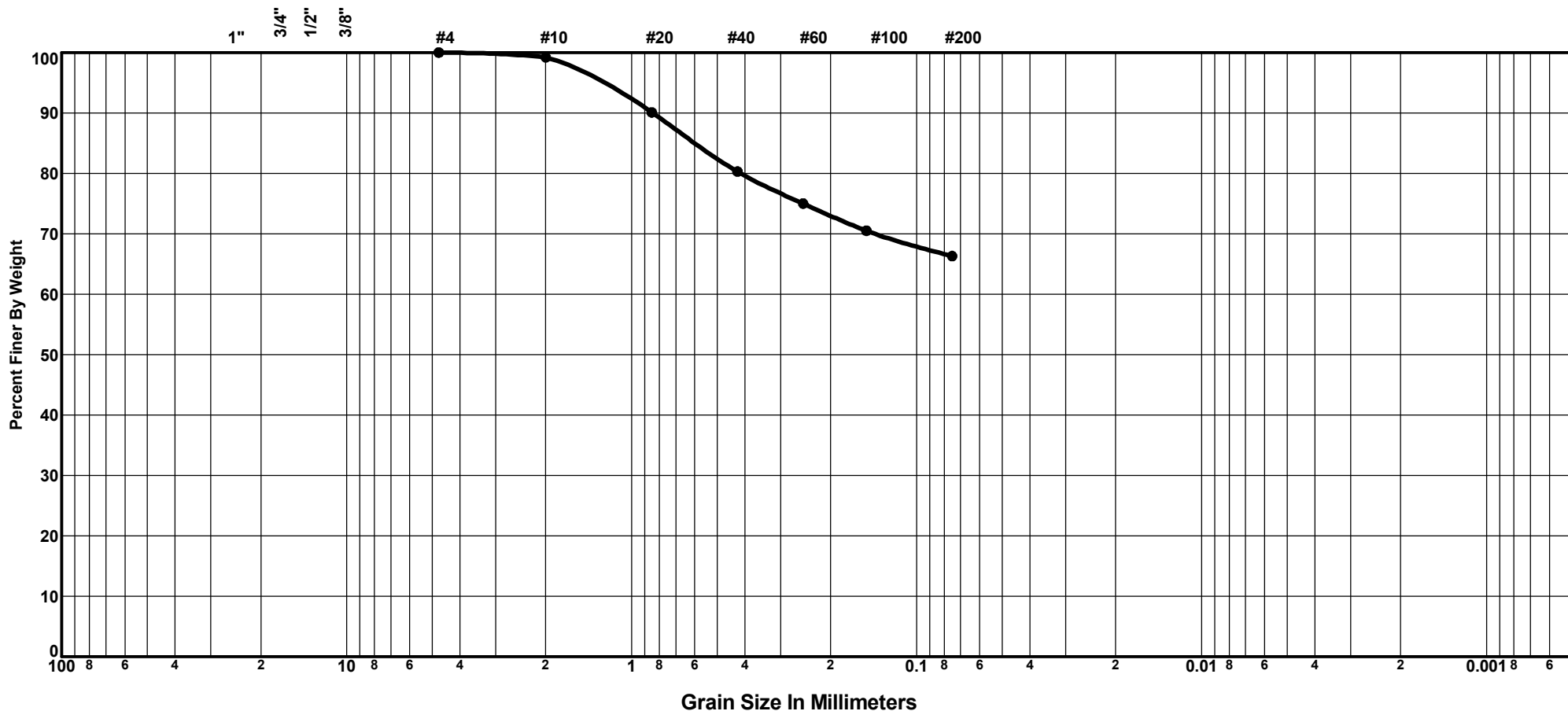


PROJECT:
N. Cherry St. Parking Lot
Kernersville, NC



SCALE: As Shown
JOB No: 1-22-0461-EA
FIGURE No: 2

U.S. Standard Sieve Sizes



GRAVEL		SAND			FINES	
COARSE	FINE	COARSE	MEDIUM	FINE	SILT SIZES	CLAY SIZES

Boring No.	Elev./Depth	Nat. W.C.	L.L.	P.L.	P.I.	Soil Description or Classification
S-1		26.8	64.0	34.0	30.0	Red Brown Medium to Fine Sandy Clayey Silt
Project: N. Cherry St. parking Lot Kernersville, NC						Job No.: 1-22-0461-CA Date: 6/14/22
						Date Recieved: 5/26/2022 Dates Tested: 5/26-6/13/22

GRAIN SIZE DISTRIBUTION



3200 Wellington Court, Ste 108
Raleigh, NC 27615

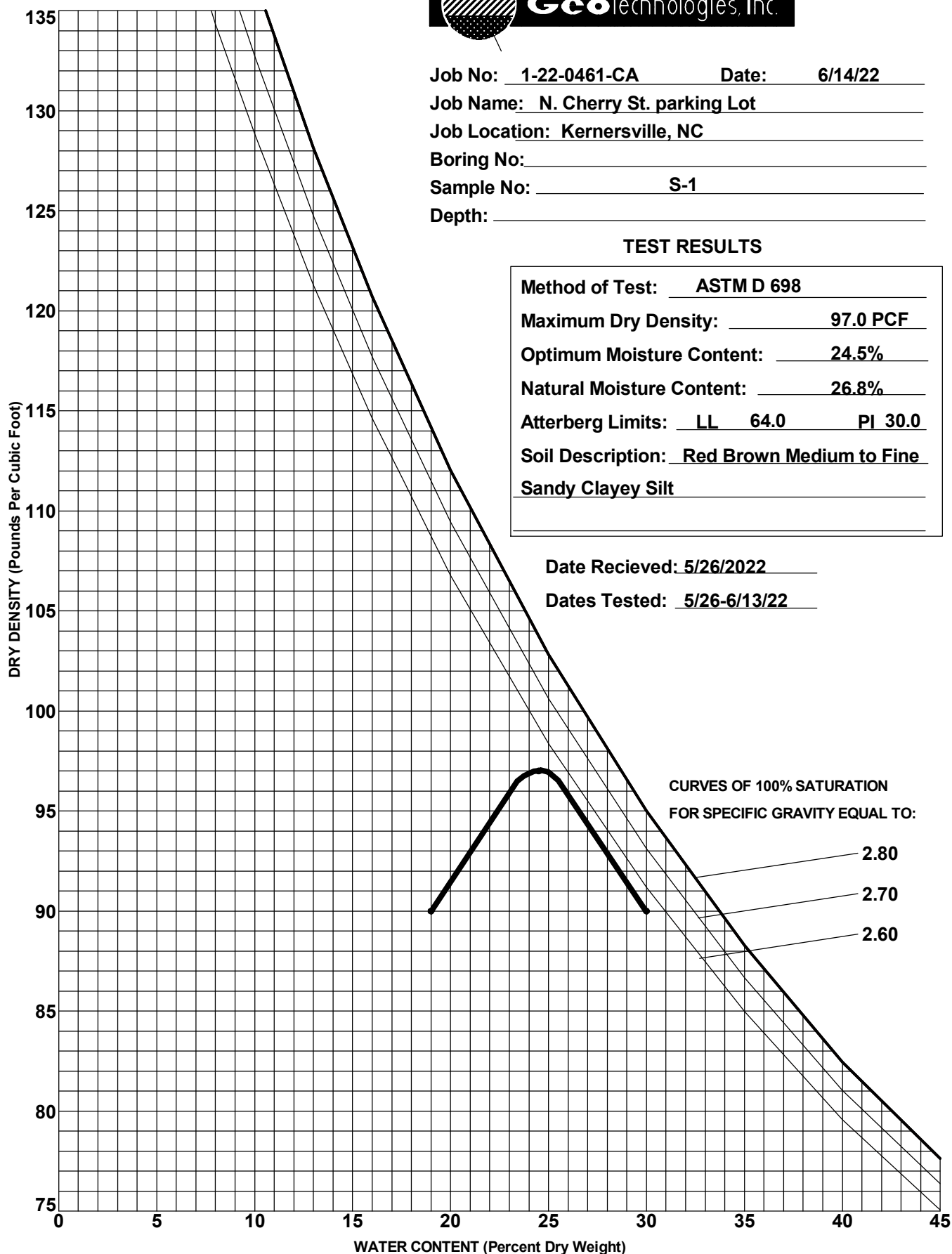


Job No: 1-22-0461-CA Date: 6/14/22
Job Name: N. Cherry St. parking Lot
Job Location: Kernersville, NC
Boring No: _____
Sample No: S-1
Depth: _____

TEST RESULTS

Method of Test:	<u>ASTM D 698</u>
Maximum Dry Density:	<u>97.0 PCF</u>
Optimum Moisture Content:	<u>24.5%</u>
Natural Moisture Content:	<u>26.8%</u>
Atterberg Limits:	<u>LL 64.0 PI 30.0</u>
Soil Description:	<u>Red Brown Medium to Fine Sandy Clayey Silt</u>

Date Received: 5/26/2022
Dates Tested: 5/26-6/13/22



MOISTURE-DENSITY RELATIONSHIP

3200 Wellington Court, Ste 108
Raleigh, NC 27615

JOB #: 1-22-0461-EA

JOB NAME: N. Cherry St. Parking Lot

DATE: 6/6/2022

SAMPLE I.D.: S-1 Depth:

NOTES: PROCTOR DATA:

Opt. Moisture = 24.5%

TEST PROCEDURE: ASTM D-698
 Max. Dry Density = 97.0 PCF

SOIL DESCRIPTION:

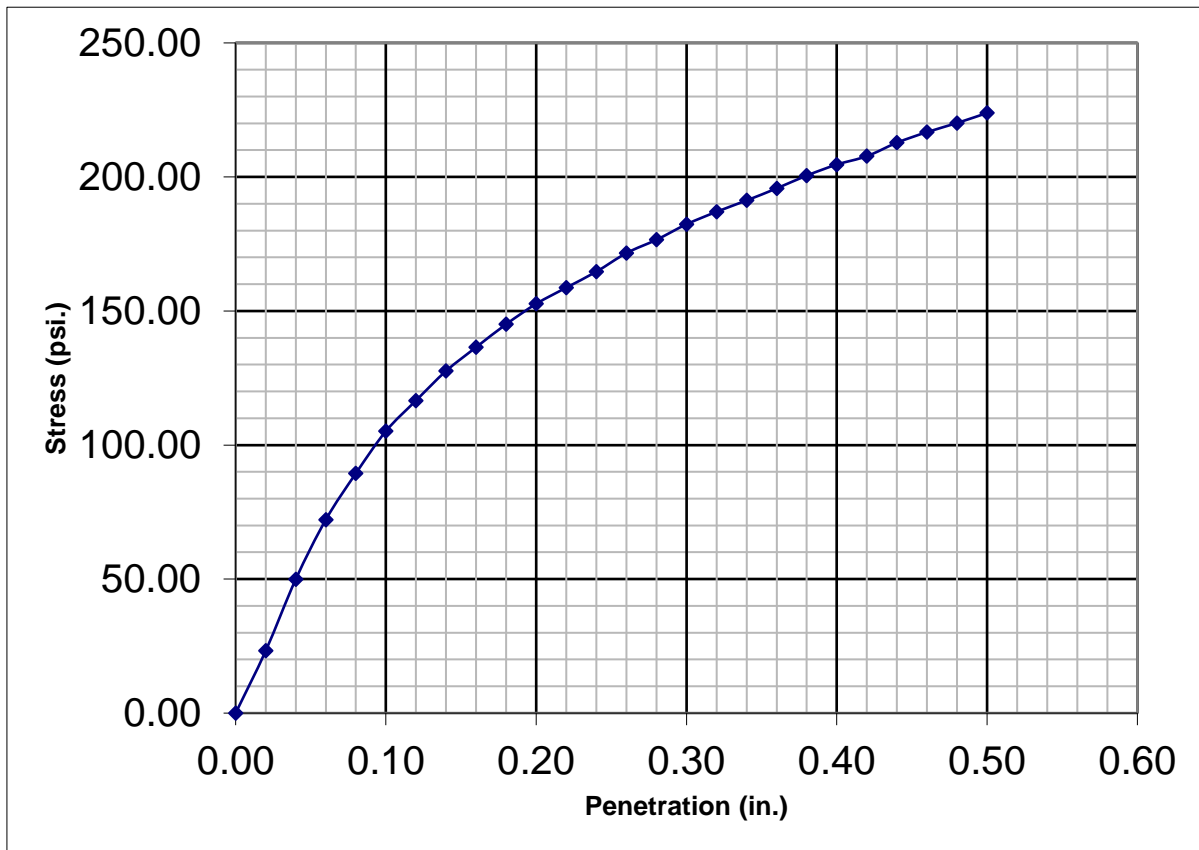
Red Brown Medium to Fine Sandy Clayey Silt

CBR SPECIMEN DATA		Swell Data	
MOISTURE CONTENT	23.1%	Initial Reading	0.307
WET DENSITY	117.7 lbs./cu.ft.	Final Reading	0.329
DRY DENSITY	95.6 lbs./cu.ft.	Mold Height	4.591
% COMPACTION	98.6 %	% Swell	0.48

LOAD CELL 5000 LB.

RATE OF DEFORMATION .05 in./min.

SURCHARGE USED 10 lbs.



CBR @ 0.1"	10.5
CBR @ 0.2"	10.2
% SWELL	0.5

**DYNAMIC HAND CONE
PENETROMETER RECORD**

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	PENETRATION PER INCREMENT						BLOWS PER 1 3/4"
			0	10	20	40	60	100	
0.0	Fill - Gravel								
0.3	Fill - Orange & Brown CLAY	CL							
0.5	Fill - Hard Brown Silty Fine SAND	SM							
0.8	Stiff Brown & Gray Slightly Micaceous Fine Sandy Moderately Plastic CLAY	CL CH							8-11-11
1.3	Medium Dense Red & Brown Micaceous Clayey Silty Fine SAND	SM SC							15+
2.5	Stiff Red & Orange Fine to Medium Sandy SILT	ML							11-12-15+
7.0	Boring terminated at 7'								13-15+

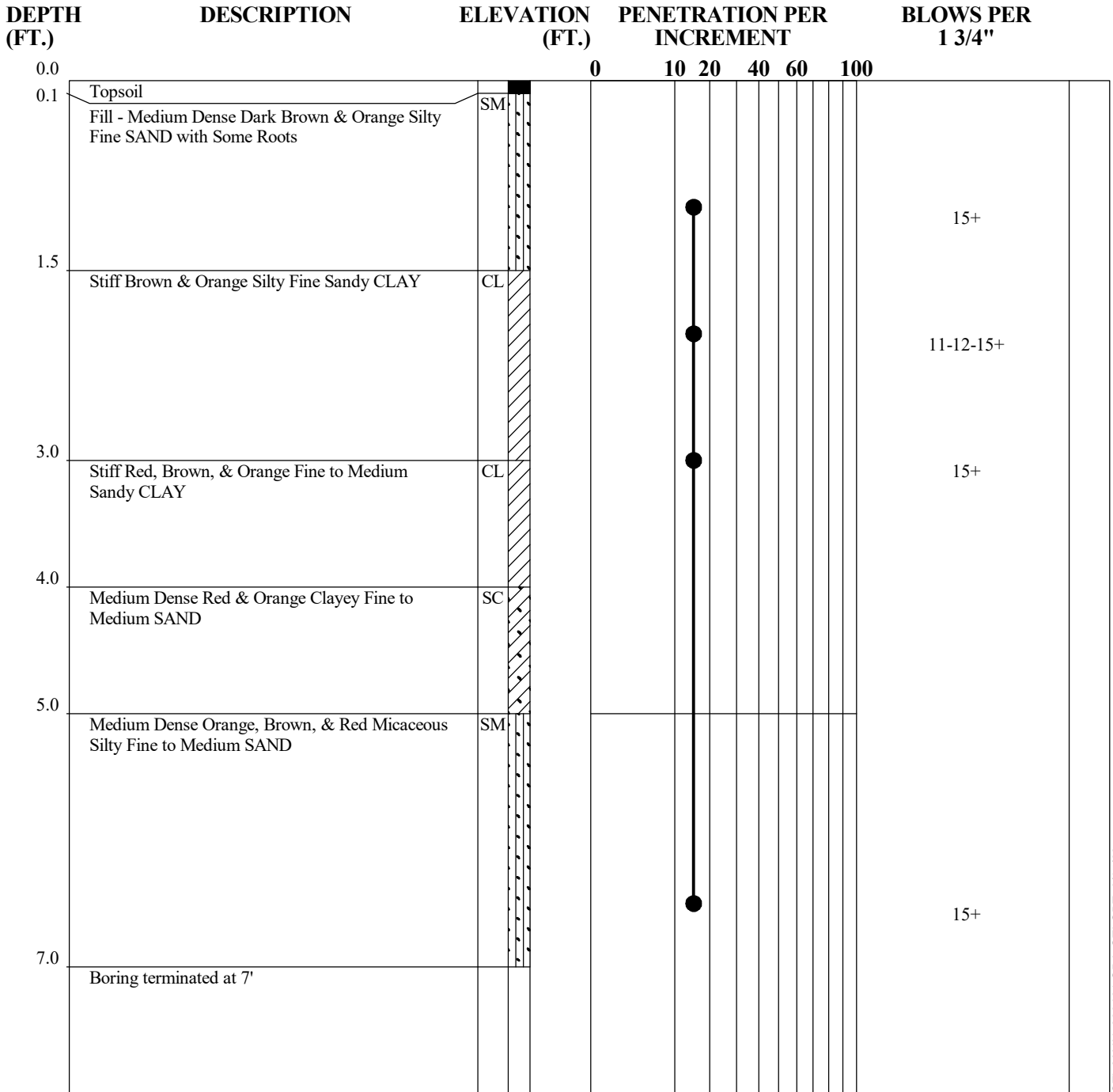
GTI_MAIN 220461.GPJ GTI.GDT 6/15/22

Dry at Time of Boring

JOB NUMBER 1-22-0461-EA
BORING NUMBER B-1
DATE



**DYNAMIC HAND CONE
PENETROMETER RECORD**



GTI_MAIN 220461.GPJ GTI.GDT 6/15/22

Dry at Time of Boring

JOB NUMBER 1-22-0461-EA
BORING NUMBER B-2
DATE

**DYNAMIC HAND CONE
PENETROMETER RECORD**

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	PENETRATION PER INCREMENT						BLOWS PER 1 3/4"
			0	10	20	40	60	100	
0.0	Topsoil								
0.3	Fill - Medium Dense Brown Silty Clayey Fine to Medium SAND	SM SC							
1.0	Medium Dense Brown Slightly Micaceous Silty Clayey Fine to Medium SAND	SM SC			●				15+
					●				15+
3.0	Medium Dense Orange & Red Micaceous Silty Fine to Medium SAND	SM			●				15+
4.5	Stiff Orange, Red, & Tan Micaceous Fine to Medium Sandy SILT	ML							
7.0	Boring terminated at 7'				●				15+

GTI_MAIN 220461.GPJ GTI.GDT 6/15/22

Dry at Time of Boring

JOB NUMBER 1-22-0461-EA
BORING NUMBER B-3
DATE

