April 27, 2026

Development of Cricket Ground at Mills Park
RFP #354-PR26-14
Addendum No. 1

The purpose of this addendum is to answer questions received during the open question and answer period to date, including questions asked at the April 15, 2026, onsite preproposal meeting. All other terms and conditions given in this Request for Proposals are in full force and effect.

PREPROPOSAL MEETING

Cary staff in attendance at the preproposal meeting:

William Davis – Sports Venue Manager and main point of contact
Paul Kuhn – Capital Planning Manager
Chris Duty – Parks, Recreation & Cultural Resources Assistant Division Manager
Dana Kennedy – Assistant Director of Parks, Recreation & Cultural Resources

QUESTIONS & ANSWERS

Question: Please provide an overview and examples of what Cary is looking for with this project?

Answer: There has been expressed some interest in providing cricket grounds in the Cary area. Cary is exploring partnering with one or more cricket organizations to build and operate a cricket ground. Cary has partnered with organizations/clubs in other sports to build and program sports fields so there are some models that work. Cary is interested in pursuing a model that might work for cricket.

Question: What is the history of the property?

Answer:

- Purchased in 2001 and owned by Cary for Park Use.
- Joint Use agreement with Wake County Public School System (WCPSS) for Cary facilities on school property or overlapping on Town property
- Concept Plan done with public and approved by Town Council in 2016 (See attachment)
- A few years ago, playground, restroom and greenway trail connection to Panther Creek Greenway were installed. This is when the lawn field area was graded out for future field of some sort – baseball, soccer, cricket. Attached is geotechnical info from 2018.
- Around six acres are available which is about a 340-foot circle of space for actual field.
- Area only graded out, no irrigation or drainage exists other than surface drainage to the stormwater device at north end.
- To north of the site is floodplains and creeks that can't be impacted, and neighbors over 800 feet away
- School to south and highway to east

Question: Was there fill on site to create the existing field area?

Answer: Please see the attached grading plan that shows how the site was graded.

Question: Was rock found on the site when the previous work was done?

Answer: Per the attached geotechnical report partially weathered rock was discovered and the reports provides more details.

Question: Can Cary provide any drawings of the site?

Answer: Attached is the existing conditions plan and grading plan for reference as PDF.

Question: Are there any environmental, HOA, or deed restrictions on the use of the grounds for organized sports?

Answer: A park and park use including fields, is allowed and rezoning the property is not needed. Cary owns the property and there are no HOA or deed restrictions on this property. Due to no immediate neighbors, we anticipate similar uses will not be an issue as long as all of Carys requirements are met. So, for example, if lighting is added Cary has certain standards that must be met.

Question: What existing drainage, irrigation, or utility infrastructure is in place at the site? Is there any irrigation or other water restrictions on the property?

Answer: When the playground and parking lot were installed, water, power and sewer was extended into the site. The site is currently not irrigated. There is a main reclaim water line on the edge of the parking lot that if the site becomes irrigated could be connected to provide irrigation for the site.

Question: Is Cary open to exploring various maintenance options such as Cary maintains the natural grass and the organization maintains the cricket pitch?

Answer: Yes

Question: Does Cary have any funding for this project and are you open to exploring grants?

Answer: First step is determining if there is a feasible project and partner. Then Cary will identify what, if any, funding is needed from Cary to make this successful. At that point we would be willing to explore grants including Wake County Small to Mid-Size Hotel Occupancy Grants that have been offered in the past.

Question: What are the current dimensions of the available playing area at Mills Park, and are there any restrictions on the pitch orientation?

Answer: Approximately 340 feet in each direction. Pitch orientation should be what is best for the users.

Question: What is the Town's expectation for pitch surface type — turf, prepared natural wicket, or both?

Answer: We are open to all options.

Question: Will we be permitted to install semi-permanent infrastructure such as pitch covers, sight screens, and practice nets?

Answer: Potentially. Please include these details in your proposal.

Question: What is the anticipated length of the initial agreement, and what are the renewal terms?

Answer: Based on past agreements, Cary has done its typically 8-10 years in length.

Question: Is this a license agreement, lease, or management/operating agreement?

Answer: It will depend, based on the proposal and what is occurring. Cary has experience with different types of agreements based on the circumstances.

Question: Will the selected organization have priority scheduling rights, or will the field remain shared with other sports?

Answer: With our other agreements for other fields, the organization that is providing the funding does receive priority in scheduling. Cary wants to make sure there is community benefit and depending on the proposal and use there may be opportunity to share.

Question: What is the Town's process for resolving scheduling conflicts during peak season?

Answer: Schedules are set prior to the season. We would only change it if the group that was scheduled gave up their time, then Cary would open it up to others to fill in.

Question: Does the Town have a capital budget allocated for initial ground preparation, or is the expectation that the selected organization funds all improvements?

Answer: No additional funding is currently set aside for this project at this time. Once we know what is being proposed we would then work through the process of requesting funding.

Question: Will organizations be evaluated on their financial capacity to invest in the ground, and if so, what documentation is expected in the proposal?

Answer: Section 2 of the RFQ discusses “Financial Statement”. Please provide the information noted.

Question: Are there revenue-sharing expectations if the selected organization hosts paid tournaments or events?

Answer: Generally, we charge a set annual fee. Any additional funding that a group brings in would be the groups to keep as long as the term of the agreement is being met.

Question: Who is responsible for general turf maintenance — the Town or the selected organization?

Answer: Cary currently does it both ways based on the clubs experience. Cary generally takes care of the parks grounds but the field itself depending on the club experience has either been by Cary or by the club.

Question: What are the insurance and liability requirements for the selected organization?

Answer: This would be negotiated with any final agreement.

Question: Are there noise ordinance or lighting restrictions that would affect evening or weekend programming?

Answer: Generally, at Cary Parks with lighted facilities approved activities can go up to 11 PM. This includes any sound expected from that type of use.

Question: Section 2 the first paragraph, last sentence discusses “Section 3” but there is no Section 3?

Answer: Please revise this sentence to “Proposal responses shall be organized in the following manner:”

ATTACHMENTS:

1. Preproposal Site Meeting Sign in Sheet from April 15, 2026
2. Mills Park Final Park Concept Plan approved by Cary Town Council
3. Existing Conditions Site Plan (Prior to building parking lot and playground)
4. Grading Plan for existing site
5. Geotech Report from 2018

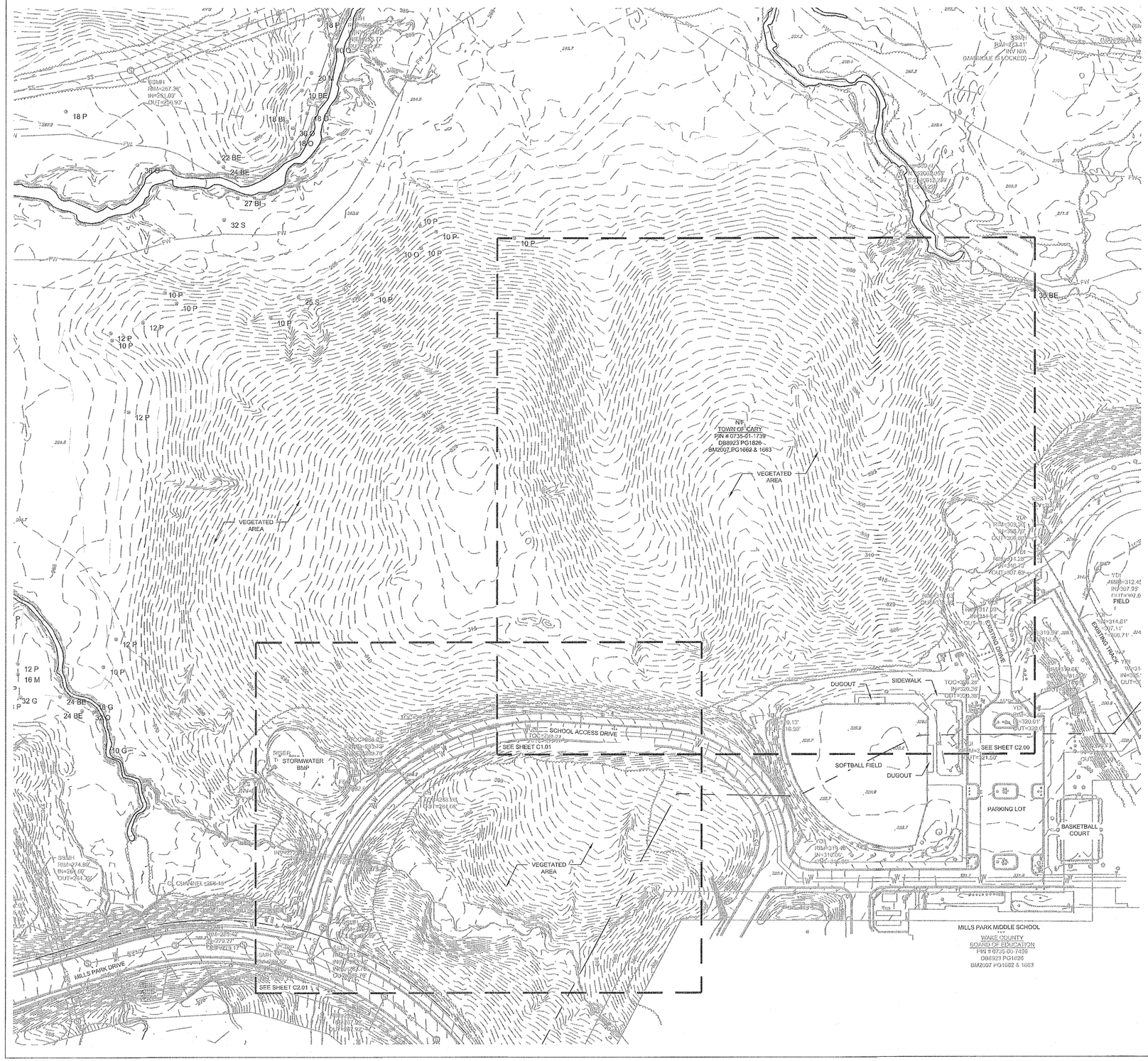
RFQ Cricket Ground

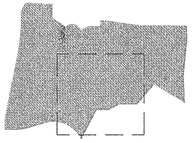
Town of Cary

Site Visit / Pre-Proposal Mtg – 4/15/2026

Name	Organization	Phone	Email
SARVESH	SZOSTAK DESIGN INC	9842189533	Sarvesh@szostakdesign.com
Jordan Boughner	WESTON & SAMPSON	941-704-7691	boughner.jordan@wseinc.com
KEVIN BARNES	TIMMONS GROUP	919.332.3252	kevin.barnes@timmons.com
JANA C	CORE CRICKET	978-491-7692	janachell@gmail.com
MARK STOHLMAN	CORE CRICKET	919-949-1403	mstohlman58@gmail.com
Puneet Bhasin	Sun Sports	516 312 6255	puneetb@hotmail.com
Vijay N	CORE CRICKET	919-527-4393	Vijay.nandakumar@gmail.com

Final Park Concept Plan





KEY MAP

SURVEY NOTES

1. THIS SURVEY MAP IS INTENDED TO REPRESENT THE EXISTING CONDITIONS ON A PORTION OF THE PROPERTY OF THE TOWN OF CARY AND THE WAKE COUNTY BOARD OF EDUCATION, PINS 0735911739, 0735007498, 0725903144, AND IS NOT A BOUNDARY SURVEY. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND THEREFORE ALL ENCUMBRANCES UPON THE PROPERTY MAY NOT BE SHOWN.
2. THE PROPERTY LINES SHOWN HEREON HAVE BEEN CONFIRMED FROM A PARTIAL SURVEY BY STEWART ENGINEERING. PROPERTY LINES SHOWN TAKEN FROM BOOK OF MAPS 2007, PAGE 1662 & 1663.
3. HORIZONTAL DATUM IS NAD 83 (2011) AND VERTICAL DATUM IS NAVD88. BASED ON GPS METHODS USING REAL-TIME KINEMATIC SOLUTIONS FOR THE SURVEY CONTROL POINTS SHOWN HEREON AND TIED TO NORTH CAROLINA GEODETIC SURVEY MONUMENTS "A. EARL SMITH" AND "HOPSON".

"A. EARL SMITH"	"HOPSON"
N 727,659.31'	N 773,721.04'
E 2,043,744.81'	E 2,034,908.25'
EL 468.32'	EL 334.68'

4. THE INITIAL STATE PLANE POSTIONS FOR THIS SURVEY WERE SCALED FROM GRID TO GROUND FROM A PROJECT LOCATION OF N:750615.7071' E:2028702.9824', AN ELEVATION OF 331.41', USING A COMBINED FACTOR OF 0.99991020'.
5. THIS DRAWING DOES NOT CONFORM TO N.C. GS47-30 AND THEREFORE IS NOT FOR RECORDATION.
6. THE SUBJECT PROPERTY IS ZONED "R40" (PER WAKE COUNTY GIS).
7. THE SUBJECT PROPERTY LIES IN ZONES X (AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE AND FUTURE CONDITIONS 1% ANNUAL CHANCE FLOODPLAIN), X (SHADED) (AREA OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF FUTURE CONDITIONS 1% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS OF LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD), AE (AREA DETERMINED TO BE INSIDE THE 1% ANNUAL CHANCE FLOOD, BASE FLOOD ELEVATIONS DETERMINED), AND FLOODWAY (DELINEATED FLOODWAY OF A STREAM), BASED ON THE FLOOD INSURANCE RATE MAP COMMUNITY MAP NUMBER 3720072500L DATED 02/02/07. FLOOD HAZARD LINES SHOWN HEREON ARE FROM NCFLOODMAPS.COM.
8. LANDSCAPE ARCHITECT WALKED SITE AND DETERMINED NO CHAMPION TREES ON SITE SOUTH OF PANTHER CREEK
9. ADDRESS: 425 MILLS PARK DRIVE, CARY, NC 27519

15-SP-060
HTE#: N/A
Approved by the Town of Cary
Development Review Committee
Planner _____ Date 25 Oct 2016

EXISTING CONDITIONS PLAN

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROJECT NO.:
C14020.00

C1.11

SITE PLAN SUBMITTAL FOR
PANTHER CREEK GREENWAY AND TRAILHEAD
425 MILLS PARK DRIVE CARY, NC

TOWN OF CARY
TRANSPORTATION AND FACILITIES DEPARTMENT
316 N. ACADEMY STREET,
CARY, NC 27513
919-462-2075, FAX: 919-460-4935
CONTACT:
SARAH ALEXANDER, PLA
LANDSCAPE ARCHITECT

PLANS PREPARED BY:
STEWART
Firm License No. C-1051
421 Fayetteville St,
Suite 400
Raleigh, NC 27601
T: 919.380.8750
www.stewartinc.com

GRADING & STORM DRAINAGE NOTES:

1. REFER TO C3.00 FOR GENERAL NOTES. REFER TO THE EROSION CONTROL DETAILS SHEET FOR THE SEQUENCE OF CONSTRUCTION.
2. REFER TO C5.01 FOR GRADING AND STORM DRAINAGE NOTES.

EROSION CONTROL NOTES
EROSION CONTROL REVIEW AND INSPECTION WILL BE ADDRESSED BY NCDENR. THE PROPOSED SITE IS LOCATED WITHIN THE JORDAN LAKE BASIN. THE PROPOSED PROJECT WILL NOT EXCEED 24% IMPERVIOUS AREA FOR LOW DENSITY DEVELOPMENT AND WILL NOT REQUIRED TSS TREATMENT. METHOD OF WATERSHED PROTECTION WILL BE A BMP.

PIPE TABLE

START STRUCTURE	END STRUCTURE	START INVERT	END INVERT	SIZE	LENGTH	SLOPE
11-DI	10-FES	289.83	288.20	18"	74.62'	2.18%
* 21-AD	20-FES	295.90	294.00	12"	106.82'	1.78%
22-AD	21-AD	299.75	296.10	12"	162.41'	2.25%
* 31-DI	30-FES	295.20	294.00	18"	120.32'	1.00%
* 32-DI	31-DI	295.75	295.40	18"	32.71'	1.07%
33-JB	32-DI	300.00	295.95	15"	205.62'	1.97%
34-MH	33-JB	302.00	301.00	15"	31.05'	3.22%
35-CB	33-JB	304.50	301.00	15"	137.61'	2.54%
36-CB	35-CB	309.00	305.00	15"	160.51'	2.49%

* INDICATES PIPE SHALL BE CONSTRUCTED WITH O-RING GASKETS.
ALL PIPES TO BE CLASS IV RCP EXCEPT 12" PIPES

STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT
10-FES	RIM = 290.41 INV IN = 288.20	11, 18" RCP INV IN =288.20	
11-DI	RIM = 295.67 INV OUT = 289.83		11, 18" RCP INV OUT =289.83
20-FES	RIM = 295.73 INV IN = 294.00	21, 12" RCP INV IN =294.00	
21-AD	RIM = 298.45 INV IN = 296.10 INV OUT = 295.90	22, 12" RCP INV IN =296.10	21, 12" RCP INV OUT =295.90
22-AD	RIM = 303.75 INV OUT = 299.75		22, 12" RCP INV OUT =299.75
30-FES	RIM = 295.94 INV IN = 294.00	31, 18" RCP INV IN =294.00	
31-DI	RIM = 300.31 INV IN = 295.40 INV OUT = 295.20	32, 18" RCP INV IN =295.40	31, 18" RCP INV OUT =295.20
32-DI	RIM = 297.80 INV IN = 295.95 INV OUT = 295.75	33, 15" RCP INV IN =295.95	32, 18" RCP INV OUT =295.75
33-JB	RIM = 306.50 INV IN = 301.00 INV IN = 301.00 INV OUT = 300.00	35, 15" RCP INV IN =301.00 34, 15" RCP INV IN =301.00	33, 15" RCP INV OUT =300.00
34-MH	RIM = 308.50 INV OUT = 302.00		34, 15" RCP INV OUT =302.00
35-CB	RIM = 308.30 INV IN = 305.00 INV OUT = 304.50	36, 15" RCP INV IN =305.00	35, 15" RCP INV OUT =304.50
36-CB	RIM = 313.10 INV OUT = 309.00		36, 15" RCP INV OUT =309.00

STORM DRAINAGE NETWORK

TYPE CODE:
AD = AREA DRAIN
FES = FLARED END SECTION
JB = JUNCTION BOX
RI = RISER

TYPE CODE:
L-AD = AREA DRAIN
L-JB = JUNCTION BOX

UPSTREAM STRC
UPSTREAM GRD. ELEV.
FLOW
UPSTREAM INVERT
DOWNSTREAM STRC
DOWNSTREAM GRD. ELEV.
DOWNSTREAM INVERT

NOTES:
1. STRUCTURES WITHIN NCDOT RIGHT-OF-WAY SHALL BE TO NCDOT STANDARDS.
2. STRUCTURES NOT WITHIN RIGHT OF WAY SHALL EITHER ALL BE TO NCDOT STANDARDS OR SHALL ALL BE TO LOCAL JURISDICTIONAL STANDARDS.
3. ALL STORM PIPES TO BE CLASS III RCP UNLESS OTHERWISE NOTED.

Peak Flow Summary Table

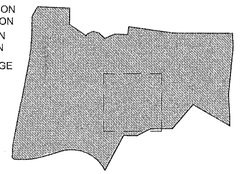
	Q1	Q2	Q5	Q10
PRE	15.44	23.03	35.31	45.48
POST (No Detention)	17.36	25.37	38.16	48.72
Attenuation Required	1.92	2.34	2.85	3.24
POST (with Detention)	12.73	21.37	34.13	41.9
Discharge to BMP	7.72	11.04	16.26	20.5
Discharge from BMP	5.56	9.71	15.67	18.12
BMP Attenuation Prov.	2.16	1.33	0.59	2.38
Non-BMP Atten. Prov.	2.47	2.67	3.44	4.44
OK	OK	OK	OK	OK

IMPERVIOUS TABLE

PROJECT AREA	151835 SF	
TOTAL PARCEL	243695 SF	5.30%

GRADING LEGEND

- PROPOSED MAJOR ELEVATION (200)
- PROPOSED MINOR ELEVATION
- EXISTING MAJOR ELEVATION (200)
- EXISTING MINOR ELEVATION
- PROPOSED STORM DRAINAGE
- PROPOSED CATCH BASIN
- PROPOSED JUNCTION BOX
- PROPOSED AREA DRAIN
- RIPRAP DISSIPATOR
- FLOW DIRECTION



KEY PLAN
15-SP-060
HTE#: N/A
Approved by the Town of Cary
Development Review Committee
Planner KAHal Date 25 Oct 2016

0 20 40 80

NORTH

TOWN OF CARY
TRANSPORTATION AND FACILITIES DEPARTMENT
316 N. ACADEMY STREET,
CARY, NC 27513
919-462-2075, FAX: 919-460-4935
CONTACT:
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LANDSCAPE ARCHITECT

SITE PLAN SUBMITTAL FOR
PANTHER CREEK GREENWAY AND TRAILHEAD
425 MILLS PARK DRIVE CARY, NC

PLANS PREPARED BY:
STEWART
Firm License No. C-1051
421 Fayetteville St.
Suite 1000
Raleigh, NC 27601
T 919.380.8750
www.stewartinc.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033778 JOSEPH W. PUCKETT
2016 OCT 12

GRADING PLAN

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROJECT NO.:
C14020.00

C5.00

GeoTechnologies, Inc.
Geotechnical and Construction Materials Testing Services

January 12, 2018

Ms. Sarah Alexander
TOWN OF CARY
316 N. Academy Street
Cary, NC 27513

Re: Report of Subsurface Investigation
Mills School Park Expansion
Cary, North Carolina
GeoTechnologies Project No. 1-17-1125-EA

Dear Ms. Alexander:

GeoTechnologies, Inc. has completed the authorized investigation to evaluate subsurface soil conditions for the proposed park additions at Mills School Park in Cary, North Carolina. Subsurface conditions at the site were investigated by completing 8 soil test borings at the approximate locations shown on the attached Figure 1. The boring locations were established in the field utilizing a Trimble GPS unit with NC grid coordinates estimated from the Wake County GIS website. Elevations were estimated from the provided site grading plan. The grid coordinates and elevations are presented on the attached Table 1. Boring B-1 was offset due to the near proximity of unmarked underground utilities. As such, the indicated boring locations and elevations should be considered approximate. The test borings were extended to depths of approximately 9.4 to 24.2 feet below site grade. The borings were completed utilizing standard penetration test (STP) procedures (ASTM D-1586) at selected intervals to evaluate the consistency and density 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 proposed park site is located at the northeast corner of the intersection of Green Level Church Road and Mills Park Drive in Cary, North Carolina. The area of the expansion is currently wooded and undeveloped. Based on a review of the provided site grading plan the site generally slopes from south to north with elevations of just over 325 feet on the south to around 280 feet on the north end of the property.

The proposed project will involve construction of new amenities to the Mills School Park. Expansions to the park will include parking areas, trails, a restroom building, baseball field and playground area. We expect that the restroom building will be light weight construction supported on a slab on grade. Based on a review of the site grading plan grading plan was provided; however, we understand that fill depths of up to 20 feet will be required in the proposed ball field area with cuts of 10 to 15 feet in other areas.

AEAR GEOLOGY

The subject site is located within the Piedmont Geologic and Physiographic Province of North Carolina. The Piedmont Province is characterized by gently to steeply sloping topography, rolling hills and ridgelines,

dissected by moderate to well-developed (mature) dendritic type drainage systems and drainage swales, hollows, tributaries, creeks, streams, and rivers. More specifically, the site is located in the Triassic Basin Geologic Formation. This geologic formation was formed approximately 160 to 220 million years ago when a large half graben fault developed along the Jonesboro Fault. The half graben which resulted from this fault was as much as two miles in depth and extended from South Carolina into New York. With the passing of geologic time, sediments eroded from the Piedmont Uplands were washed into the basin and deposited where they consolidated to form the sandstones, claystones, and siltstones now found in the basement rock within this area.

The Triassic Basin is characterized by shallow partially weathered rock throughout the area and by the presence of highly plastic surface clays which cover a large percentage of the basin area. Penetration resistances within the partially weathered rock are typically in excess of 100 blows per foot (bpf) and are generally sampled as very fine silty sands and sandy silts. Additionally, the soils within the basin typically exhibit low permeability and create difficulties in developing production wells with capacities of more than 2 to 5 gallons per minute. Exceptions are the numerous diabase intrusions located throughout the basin which were formed by intrusion being forced up through the sedimentary formations from below. These intrusions generally form narrow northeast trending dikes or large surface sills and are the primary channel for underground water movement through the Triassic Basin area.

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 which extended to depths of 3 to 12 inches. The near surface topsoil was underlain by residual soils that have formed in place by weathering of the parent bedrock. The near surface residual soil consisted primarily of stiff to very hard sandy and clayey silt with some firm to very stiff clays and a few layers of dense to very dense silty sand. All of the soils had low plasticity characteristics except the upper 3 feet in boring B-7 which consisted of highly plastic clay. Penetration resistances in the residual soils ranged from 8 to 92 blows per foot (bpf). The residual soils transitioned to partially weathered rock (PWR) at depths of 2 to 12 feet below existing grade. PWR is defined as material that can be penetrated with the soil drilling augers but that exhibits penetration resistances in excess of 100 bpf. All of the borings, except B-8 were terminated at depths of 9.4 to 23.7 feet below existing grade in PWR; however, the PWR was discontinuous in borings B-2 and B-4 through B-7. Boring B-8 encountered refusal on harder rock at 17 feet below existing grade.

Groundwater was not encountered in the test borings 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.

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 characteristics of the project change from those described in this report, that information should be provided to GeoTechnologies so that our recommendations can be confirmed or modified as necessary. Additionally, should 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.

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.

Site grading should begin with the removal of all vegetation and topsoil from those areas designated for construction of new structures or pavement areas. Based on the results of the soil test borings, we anticipate that topsoil thickness will generally be on the order of 3 to 6 inches, although boring B-5 encountered 12 inches of topsoil. In areas where tree roots are encountered the required stripping thickness with be higher to remove the root mat. Once stripping is completed, 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. In areas such as athletic fields it may be possible to use bridge lifts to stabilize subgrade. However, no bridge lifts can be used in structural areas. Repairs areas will need to be evaluated on a case by case basis as grading proceeds.

We recommend that the grading contractor be required to have a farm disc and tractor on the site and be agreeable to performing discing and drying of the soils as needed. Effective drying will require continuous discing of the soils on a warm sunny day. The 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. Highly plastic clays can be used in the deeper fill sections where they can be covered with at least 3 feet of lower plasticity material. PWR which is ripped can be used as fill and will break down into soil sized particles when compacted with a larger compactor such as a CAT 815 or equivalent. Material that is blasted will need to be processed through a rock crusher to reduce maximum particle sizes to no more than 4 inches if it will be used as structural fill. Larger pieces of rock can be placed in the deeper fill sections of parking lots or athletic fields as long as the rock is spaced out and surrounded with compacted structural fill. Rock fills constructed with blasted Triassic rock will settle over time and will not be allowed.

The contractor should be prepared to moisture condition the soils as necessary in order to achieve adequate compaction. Off-site borrow that is needed should consist of clayey or silty sands or low plasticity silts and clays having a Unified Soil Classification of SC, SM, ML, or CL. Fill soils should be compacted to not less than 95% of the standard Proctor maximum dry density, except in the final foot of pavements where this requirement should be increased to 100% of the standard Proctor maximum. Additionally, the subgrade of any cut areas should be scarified and recompacted to 100 percent of the standard Proctor maximum dry density in

pavement areas. Moisture contents should be maintained within about 2 percent of optimum moisture content to facilitate compaction and to maintain stability of the fill section.

Difficult Excavation Considerations. As indicated, some partially weathered rock was encountered on the site as shallow as 2 feet below existing grade. Our experience has been that PWR exhibiting resistances of 50 blows per 2 inches of penetration and softer can generally be preloosened with a D-8 dozer, or equivalent, pulling a single tooth ripper during general site grading. Material harder than 50 blows per 2 inches of penetration generally requires blasting to remove with conventional equipment.

The equipment utilized for installation of utilities and foundations is less powerful than that which is used in general excavation and our experience has been that excavation of PWR harder than 50 blows per 4 inches of penetration is typically impossible with most equipment available for trench excavation, such as track mounted excavators equivalent to a CAT 330. Large track mounted excavators with rock teeth can sometimes excavate PWR with penetration resistances ranging from 50 blows per 4 inches to 50 blows per 6 inches of penetration; however, the rate of excavation is slow and most contractors will request a trench rock price for any removal of PWR. We recommend that contract documents clearly specify the type of equipment which will be used to demonstrate difficult excavation. We also recommend that a fair unit price be established for difficult excavation removal, and that verification/measurement protocols be established at the start of construction. All difficult excavation quantification should be based on bank yardage and not on loose material piles or truck load counts which are not accurate.

Based on a review of the proposed site grading plan. Most of the open mass grading cuts will terminate at or close to the surface of the PWR. Where encountered in mass excavations the material can be ripped with a D-8 (or equivalent) pulling a single tooth ripper. However, excavation of the material in the deeper utility cuts will require blasting or use of a hoe ram to remove the PWR. The estimated elevations of the PWR are indicated on the attached Table 1.

Foundation Support Considerations. Following proper grading, the subsurface conditions encountered on this site are conducive to the use of shallow foundations or slab on grades for support of the restroom structure. Following repair of any soft near surface soils, shallow foundations can be designed for a contact pressure of 4,000 psf. All foundations subgrades should be inspected prior to concrete placement. The soils which were encountered in the borings will exhibit a subgrade modulus of 100 pci, and properly compacted structural fill will exhibit a similar bearing capacity. Settlement for the lightly loaded restroom structure will be less than one inches with differential settlements of less than half the total settlement.

We recommend all footings bear at least 18 inches below finished grade for frost protection. We recommend that all foundation excavations be inspected by a geotechnical engineer to verify that the exposed subgrades soils have adequate strength to support the anticipated loads.

Below Grade Walls and Concrete Retaining Walls. For permanent below grade walls and concrete retaining walls above the water table, we suggest designing for a triangular lateral earth pressure distribution computed based on the assumption that soils behave as an equivalent fluid weighing 50 lbs. per cubic foot (excluding highly plastic soils and assuming level backfill behind the walls). A design friction factor of 0.35 may be utilized to calculate sliding resistance. All below grade walls must be waterproofed and a drainage medium must be placed behind those walls to collect and divert any perched water which may otherwise migrate towards the structures. These design values assume backfill soils will be compacted as indicated previously, and that compaction within 4 feet of these walls will be achieved with hand operated equipment.

Segmental Type Retaining Walls. Our experience has been that the fine grained soils on this site are not well suited for use as backfill in the reinforced zone of segmental walls. As such, if any segmental walls are proposed for the site we recommend that backfill in the reinforced zone consist of an imported quarry material, such as screenings or washed stone. Consideration may also be given to using processed fill from the quarry as long as the material contains less than 35% fines (% passing #200 sieve) by weight. Once an import material is selected, GeoTechnologies can provide recommended design parameters. Drainage should be placed against the back of all cut walls.

Utility Construction. As previously discussed some difficult excavation due to the presence of PWR and rock will be encountered in the deeper utility cuts and it is likely that some blasting or use of a hoe ram will be required for removal of the PWR. Where rock is exposed at invert elevation, we recommend that the pipe be placed over at least 6 inches of open graded stone such as #57 stone in order to provide a leveling cushion for the base of the pipe. Shallow rock at the bedding elevation even with six inches of over excavation will increase stresses in the pipe due to the low compressibility of the foundation. All backfill placed over the pipe should be compacted to at least 90% of the standard Proctor maximum dry density except where post-construction settlement of backfill cannot be tolerated. If any settlement sensitive areas exist, backfill in those areas should be compacted to 95% of the standard Proctor maximum dry density. The initial lift of soil over the pipe should consist of soil and not contain rock or weathered rock to serve as a cushion over the pipe for subsequent fill placement and compaction. Soils excavated from the trench may be utilized as backfill provided it can be suitably compacted.

We recommend that all OSHA regulations be strictly adhered to during installation of the sanitary sewer line. The soils will classify as a type “B” material which will generally require temporary side slopes of 1H:1V, except where shallow groundwater is encountered and the temporary side slopes will need to be flattened to 1.5H:1V. If insufficient room exists for maintaining those side slopes, we recommend that the contractor be prepared to utilize temporary shoring such as a trench box during installation of the sewer line.

At the time that borings were completed, groundwater levels were below the boring termination depth. As such, dewatering is not expected to be a significant issue during site grading operations. It is possible that some shallow perched groundwater conditions could occur depending on climatic conditions. However, the seepage quantities are expected to be low and can likely be easily handled by placement of a pump and sump within the excavation. The need for dewatering and type of dewatering will need to be determined by the contractor as the installation progresses.

Pavement Design Considerations. A representative bag sample was collected from the site and returned to our office for laboratory testing. The laboratory testing included completing standard Proctor compaction test (ASTM D-698), CBR test (ASTM D-1883), Atterberg limits test (ASTM D-4318) and natural moisture content test (ASTM D-2216). The results of the testing indicate a standard Proctor maximum dry density of 117.1 pcf with a CBR value of 12.0 percent. However, to account for variability in soil subgrade conditions, we recommend limiting the design CBR to no more than 6 percent.

GeoTechnologies recommends using a pavement section consisting of 2 inches of SF 9.5A asphalt (2 one inch lifts) over 6 inches of CABC base course stone in areas restricted to automobile parking only. In driveways areas subject to channelized car traffic and an occasional light maintenance truck an appropriate pavement section would consist of 3 inches of asphalt (2 inches of S9.5A and 1 inch of SF9.5A) over 8 inches of

stone. If heavier truck traffic is expected, we should be provided with an estimate of the truck traffic so that a heavier pavement section can be specified.

We recommend that all stone and asphalt materials comply with specifications outlined in the North Carolina Department of Transportation (NCDOT) specifications for road and bridge structures with regard to both material gradations and placement requirements, including compaction requirements. Additionally, we recommend that all soil subgrades be recompacted to a minimum of 100% of the standard Proctor maximum dry density immediately prior to base course stone placement. Proofrolling should also be completed prior to stone placement to verify stability of the pavement subgrade.

We recommend that all subgrade soils be moisture conditioned to within 2% of optimum moisture content immediately prior to base course stone placement. Additionally, all soil subgrades should be proofrolled prior to placement of the base course stone to verify that stable conditions exist. If any areas of instability are identified, they should be repaired as directed by the on-site engineer. Typical repair options generally include undercutting followed by placement of a thicker stone section.

The most important parameters affecting pavement life on a site of this nature are the condition of the subgrade at the time of base course stone placement and post construction drainage. It is recommended that pavement subgrades be reworked and compacted to not less than 100% of the standard Proctor maximum dry density immediately prior to base course stone placement. Additionally, site grades should be detailed to promote drainage away from the pavement areas.

Seismic Design Considerations. This site is a site class “C” relative to seismic design considerations.

Retention Pond Considerations. It is our understanding that bioretention pond will be constructed on the northwest southern end of the site. Based on a review of the site grading plan, it appears that the new retention pond will require maximum cut and fills of 5 feet.

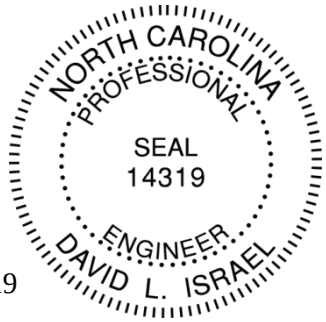
In recent years we have seen several wet ponds in the area which appear to meet plan infiltration criteria (typically 0.01 in/hr), but which do not perform as expected. This is due to the fact that the boundary conditions of the field infiltration test typically do not match those of the pond under normal pool conditions. Essentially, the hydraulic head (and therefore gradient) of the pond under normal operating conditions is higher (often significantly higher) than the head from the standard double ring infiltrometer test. Common problems we have seen associated with this issue include water levels which cannot support the required vegetation and unacceptably low water levels for a project amenity such as a fountain.

Our experience has been that, when required, a soil liner constructed from a properly tested (lab and field) and placed low permeability soil can be used to maintain water levels reasonably close to the intent of the infiltration specification, even when accounting for the hydraulic head/liner thickness at normal pool levels. However, the higher the head and/or thinner the liner, the more impervious the liner material should be. As such, a soil liner material may be acceptable for one combination of hydraulic head/liner thickness, but not for another. If a wet pond will be incorporated as an architectural amenity, it is recommended that a manufactured synthetic liner be used in conjunction with a soil liner or as a replacement. In this case, if a synthetic liner is not used, consideration should be given to installing a make-up well to maintain pond water levels.

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.

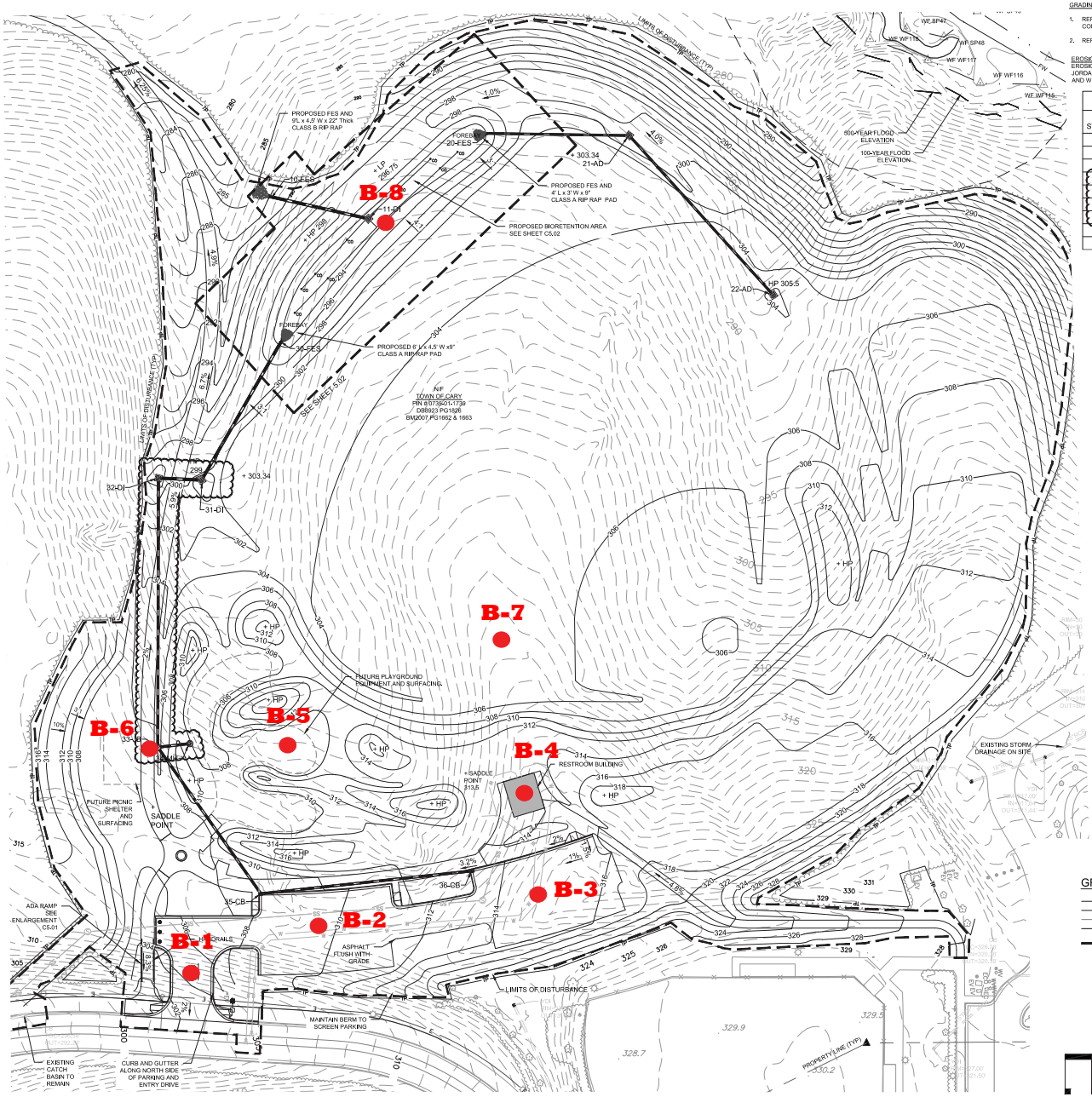


David L. Israel, P.E.
NC Registration No. 14319

DLI/pr-els
Attachments
1171125ea.Sub

TABLE 1
Summary of Borings

Boring #	NC Grid Coordinates (ft)		Existing Elevation (ft)	Proposed Grade (ft)	Proposed Utility Invert (ft)	Elevation of PWR (ft)
	Northing	Easting				
B-1	751238	2030138	308	304	~291	304.5
B-2	751275	2030234	319	310	~304	317
B-3	751294	2030395	326	315	~306	314
B-4	751373	2030387	321	315	~300	314.5
B-5	751406	2030212	306	309	N/A	302
B-6	751404	2030108	312	308	~301	308.5
B-7	751485	2030372	316.5	306	N/A	313.5
B-8	751794	2030280	298	294	N/A	290



GRADING & STORM DRAINAGE NOTES:

1. REFER TO C3.00 FOR GENERAL NOTES. REFER TO THE EROSION CONTROL DETAILS SHEET FOR THE SEQUENCE OF CONSTRUCTION.
2. REFER TO C5.01 FOR GRADING AND STORM DRAINAGE NOTES.

EROSION CONTROL NOTES

EROSION CONTROL REVIEW AND INSPECTION WILL BE ADDRESSED BY NCDENR. THE PROPOSED SITE IS LOCATED WITHIN THE JORDAN LAKE BASIN. THE PROPOSED PROJECT WILL NOT EXCEED 24% IMPERVIOUS AREA FOR LOW DENSITY DEVELOPMENT AND WILL NOT REQUIRED TSS TREATMENT. METHOD OF WATERSHED PROTECTION WILL BE A BMP.

PIPE TABLE

START STRUCTURE	END STRUCTURE	START INVERT	END INVERT	SIZE	LENGTH	SLOPE	MATERIAL	MIN COVER	MAX COVER
11-DI	10-FES	289.83	288.20	18"	74.62'	2.18%	RCP	1.6	7.15
* 21-AD	20-FES	295.90	294.00	12"	106.82'	1.78%	RCP	0.6	6.93
22-AD	21-AD	299.75	296.10	12"	162.41'	2.25%	RCP	1.7	4.68
* 31-DI	30-FES	295.20	294.00	18"	120.32'	1.00%	RCP	0.8	3.51
* 32-DI	31-DI	295.75	295.40	18"	32.71'	1.07%	RCP	0.5	2.95
33-JB	32-DI	300.00	295.95	15"	203.48'	1.99%	RCP	0.5	9.33
34-MH	33-JB	302.00	301.00	15"	24.39'	4.10%	RCP	3.5	6.98
35-CB	33-JB	304.50	301.00	15"	135.40'	2.58%	RCP	2.8	7.34
36-CB	35-CB	309.00	305.00	15"	160.51'	2.49%	RCP	1.9	3.17

* INDICATES PIPE SHALL BE CONSTRUCTED WITH O-RING GASKETS. ALL PIPES TO BE CLASS IV RCP EXCEPT 12" PIPES

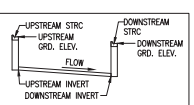
STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT
10-FES	RIM = 290.41 INV IN = 288.20	11, 18" RCP INV IN =288.20	
11-DI	RIM = 295.67 INV OUT = 289.83		11, 18" RCP INV OUT =289.83
20-FES	RIM = 295.73 INV IN = 294.00	21, 12" RCP INV IN =294.00	
21-AD	RIM = 298.45 INV IN = 296.10 INV OUT = 295.90	22, 12" RCP INV IN =296.10	21, 12" RCP INV OUT =295.90
22-AD	RIM = 303.75 INV OUT = 299.75		22, 12" RCP INV OUT =299.75
30-FES	RIM = 295.94 INV IN = 294.00	31, 18" RCP INV IN =294.00	
31-DI	RIM = 300.31 INV IN = 295.40 INV OUT = 295.20	32, 18" RCP INV IN =295.40	31, 18" RCP INV OUT =295.20
32-DI	RIM = 297.80 INV IN = 295.95 INV OUT = 295.75	33, 15" RCP INV IN =295.95	32, 18" RCP INV OUT =295.75
33-JB	RIM = 305.85 INV IN = 301.00 INV IN = 301.00 INV OUT = 300.00	35, 15" RCP INV IN =301.00 34, 15" RCP INV IN =301.00	33, 15" RCP INV OUT =300.00
34-MH	RIM = 308.50 INV OUT = 302.00		34, 15" RCP INV OUT =302.00
35-CB	RIM = 308.50 INV IN = 305.00 INV OUT = 304.50	36, 15" RCP INV IN =305.00	35, 15" RCP INV OUT =304.50
36-CB	RIM = 313.10 INV OUT = 309.00		36, 15" RCP INV OUT =309.00

STORM DRAINAGE NETWORK

TYPE CODE:
AD = AREA DRAIN
FES = FLARED END SECTION
JB = JUNCTION BOX
RI = RISER

TYPE CODE:
L-AD = AREA DRAIN
L-JB = JUNCTION BOX



NOTES:
1. STRUCTURES WITHIN NCDOT RIGHT-OF-WAY SHALL BE TO NCDOT STANDARDS.
2. STRUCTURES NOT WITHIN RIGHT OF WAY SHALL EITHER ALL BE TO NCDOT STANDARDS OR SHALL ALL BE TO LOCAL JURISDICTIONAL STANDARDS.
3. ALL STORM PIPES TO BE CLASS III RCP UNLESS OTHERWISE NOTED.

Peak Flow Summary Table

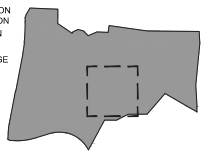
	Q1	Q2	Q5	Q10
PRE	15.44	23.03	35.31	45.48
POST (No Detention)	17.36	25.37	38.16	48.72
Attenuation Required	1.92	2.34	2.85	3.24
POST (with Detention)	12.73	21.37	34.13	41.9
Discharge to BMP	7.72	11.04	16.26	20.5
Discharge from BMP	5.56	9.71	15.67	18.12
BMP Attenuation Prov.	2.16	1.33	0.59	2.38
Non-BMP Atten. Prov.	2.47	2.87	3.44	4.44
OK	OK	OK	OK	OK

IMPERVIOUS TABLE

PROJECT AREA	151835 SF	
TOTAL PARCEL	243665 SF	5.30%

GRADING LEGEND

- PROPOSED MAJOR ELEVATION
- PROPOSED MINOR ELEVATION
- EXISTING MAJOR ELEVATION
- EXISTING MINOR ELEVATION
- PROPOSED STORM DRAINAGE
- PROPOSED CATCH BASIN
- PROPOSED JUNCTION BOX
- PROPOSED AREA DRAIN
- RIPRAP DISSIPATOR
- FLOW DIRECTION



KEY PLAN

15-SP-060
HTE#: N/A
Approved by the Town of Cary
Development Review Committee

Planner_____Date_____

0 20 40 80

NORTH

TOWN OF CARY
TRANSPORTATION AND FACILITIES DEPARTMENT
316 N. ACADEMY STREET, CARY, NC 27513
919-462-2075, FAX: 919-460-4935
CONTACT: SARAH ALEXANDER, PLA
LANDSCAPE ARCHITECT

SITE PLAN SUBMITTAL FOR
PANTHER CREEK GREENWAY AND TRAILHEAD
425 MILLS PARK DRIVE CARY, NC

PLANS PREPARED BY:
STEWART
Firm License No.: C-1051
421 Fayetteville St.
Suite 400
Raleigh, NC 27601
919.380.8520
www.stewartinc.com

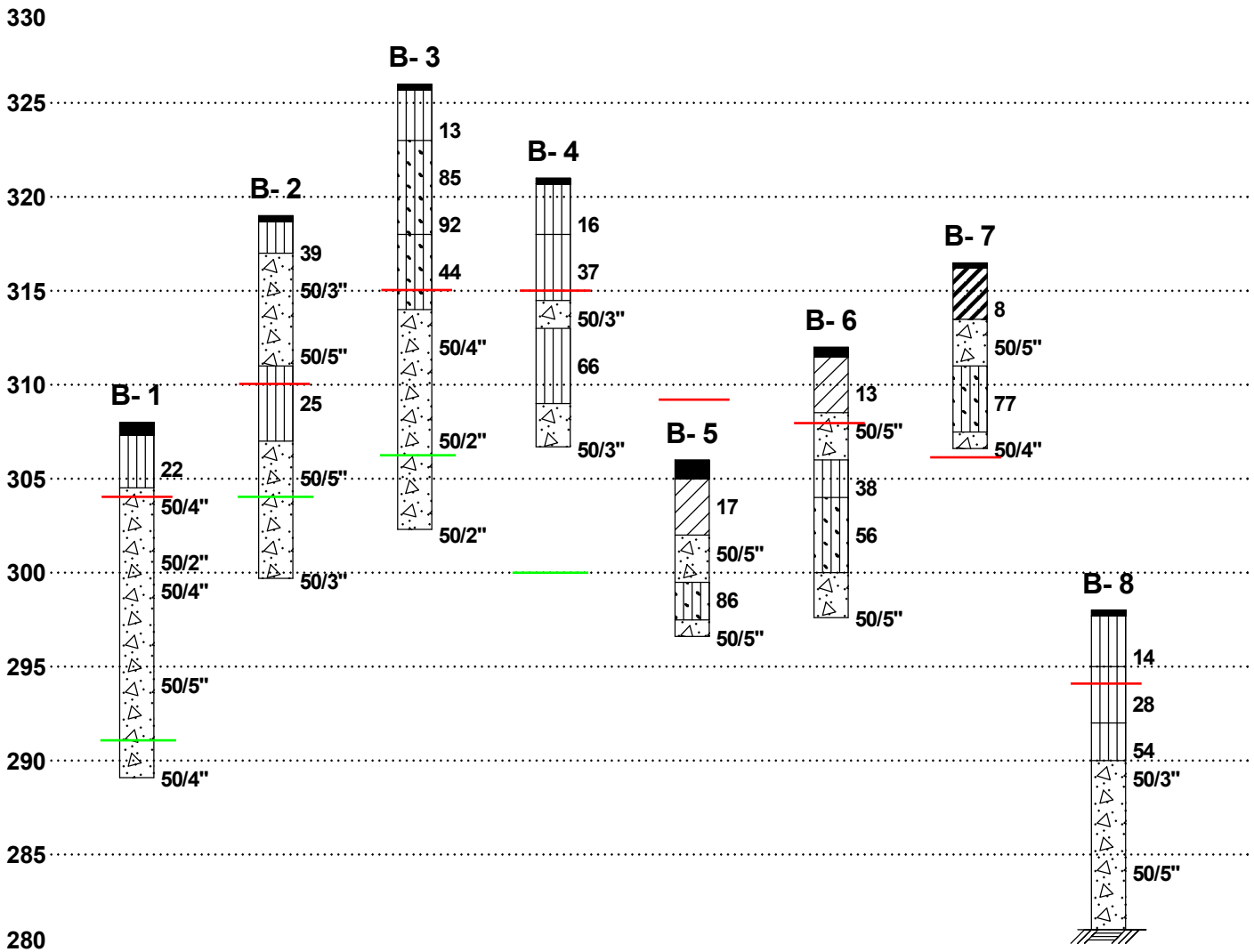
GRADING PLAN

PROJECT NO.:
C14020.00

C5.00

FIGURE 1

GENERALIZED SUBSURFACE PROFILE



LEGEND

- Topsoil
- Low Plasticity Silt
- Partially Weathered Rock
- Silty Sand
- Low Plasticity Clay
- High Plasticity Clay
- 8 Standard Penetration Resistance
- Auger Refusal
- Proposed Grade
- Utility Invert

PROJECT:

Mills School Park Expansion
Cary, North Carolina

GeoTechnologies, Inc.

SCALE: As Shown

JOB No:1-17-1125-EA

FIGURE No:2

TEST BORING RECORD

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	PENETRATION (BLOWS/FT.)	BLOWS PER SIX INCHES
0.0		308.0	0 10 20 40 60 100	
0.7	Topsoil			
	Very Stiff Gray & Reddish Brown Fine Sandy SILT	ML		7-8-14
3.5	Partially Weathered Rock - Sampled as Reddish Brown & Gray Silty SAND & Sandy SILT	303		30-50/4"
				31-50/2"
				50/4"
		298		
				50/5"
		293		
18.9	Boring terminated at 18.9'			50/4"
		288		

GTI_MAIN 171125.GPJ GTI.GDT 1/8/18

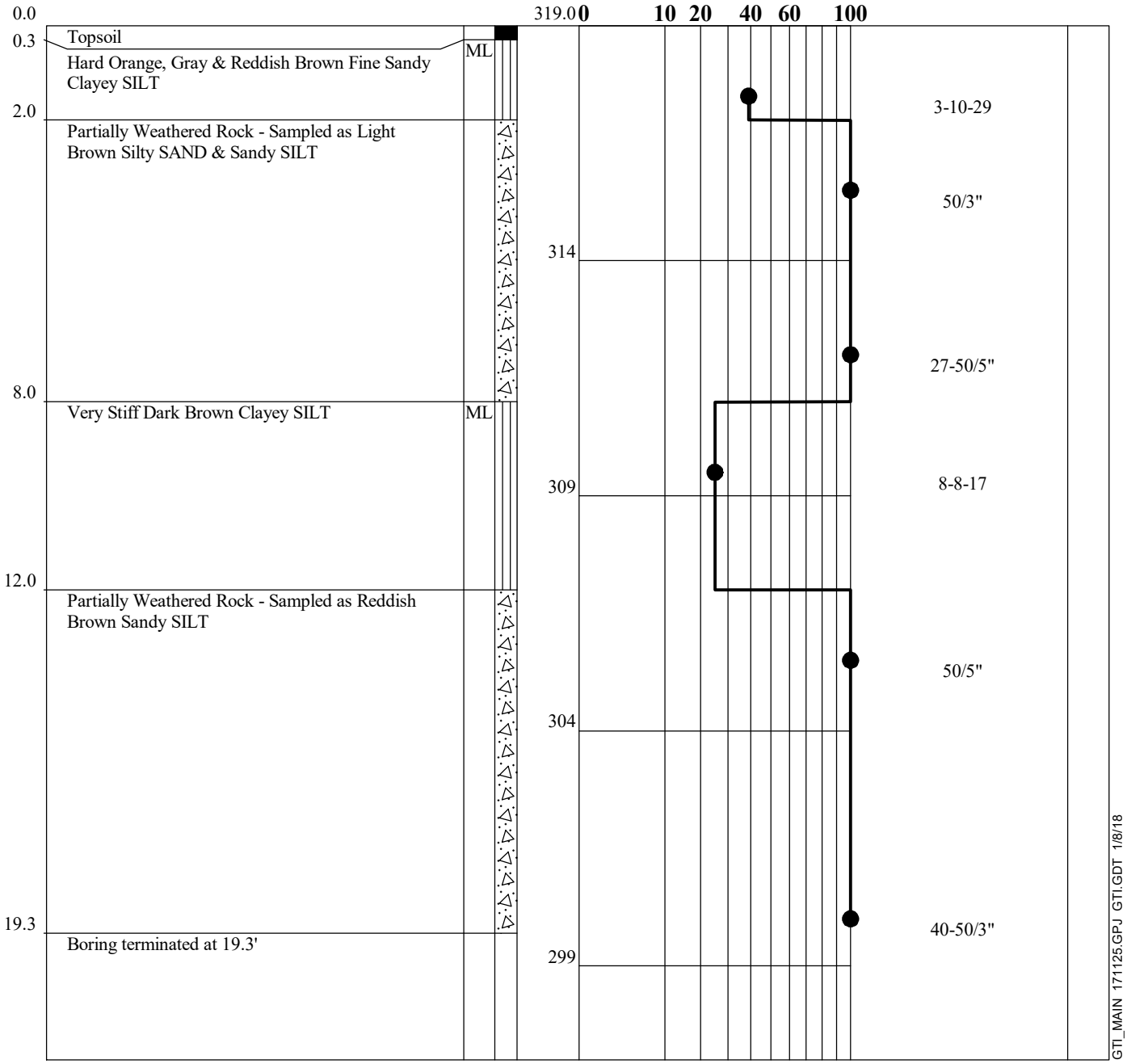
Dry at time of boring.

JOB NUMBER 1-17-1125-EA
BORING NUMBER B- 1
DATE 1-6-18

PAGE 1 OF 1

GeoTechnologies, Inc.
3200 Wellington Court, Ste 108
Raleigh, NC 27615

TEST BORING RECORD



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JOB NUMBER 1-17-1125-EA
BORING NUMBER B- 2
DATE 1-6-18

PAGE 1 OF 1

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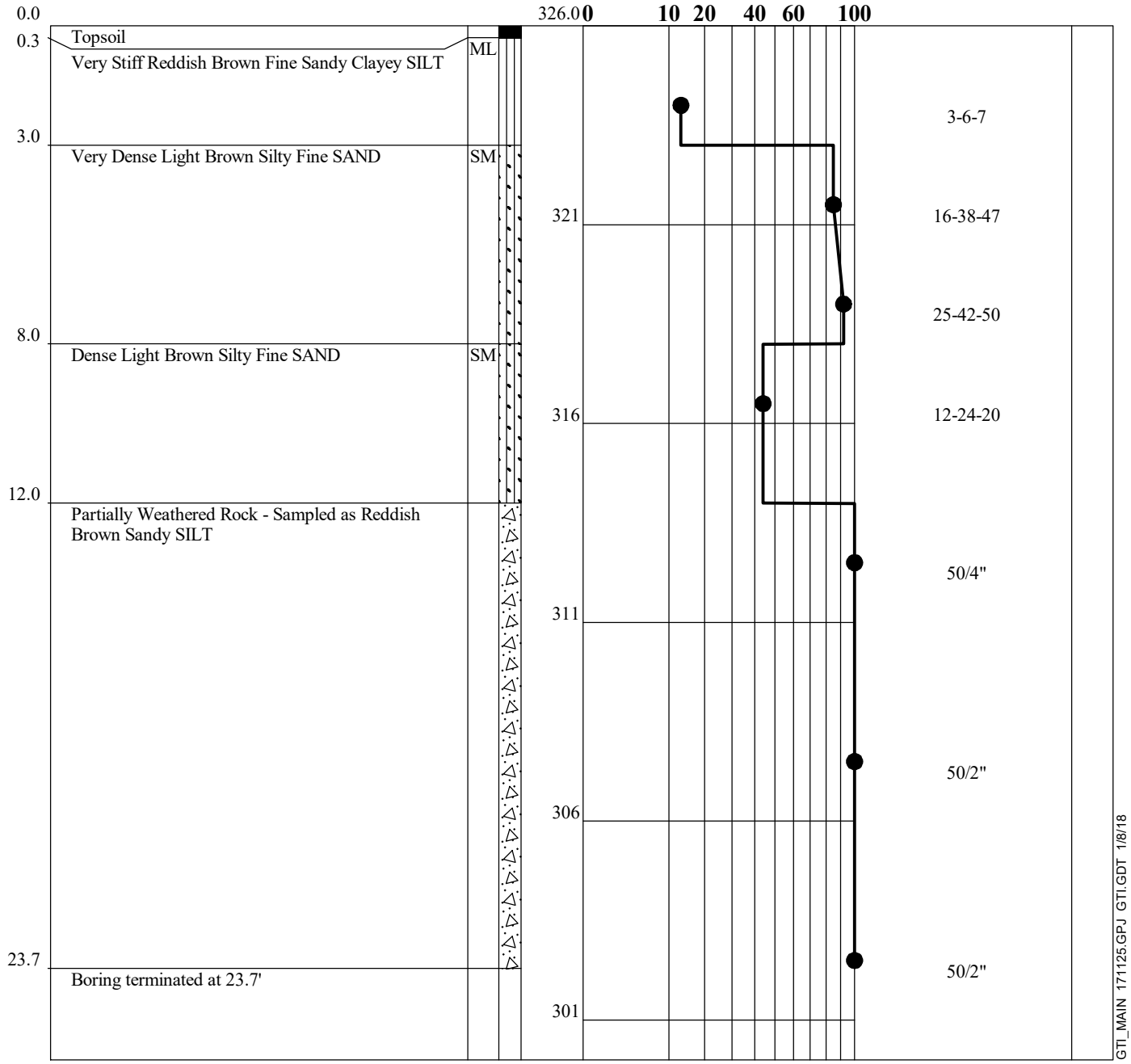
TEST BORING RECORD



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JOB NUMBER 1-17-1125-EA
BORING NUMBER B- 3
DATE 1-6-18

PAGE 1 OF 1

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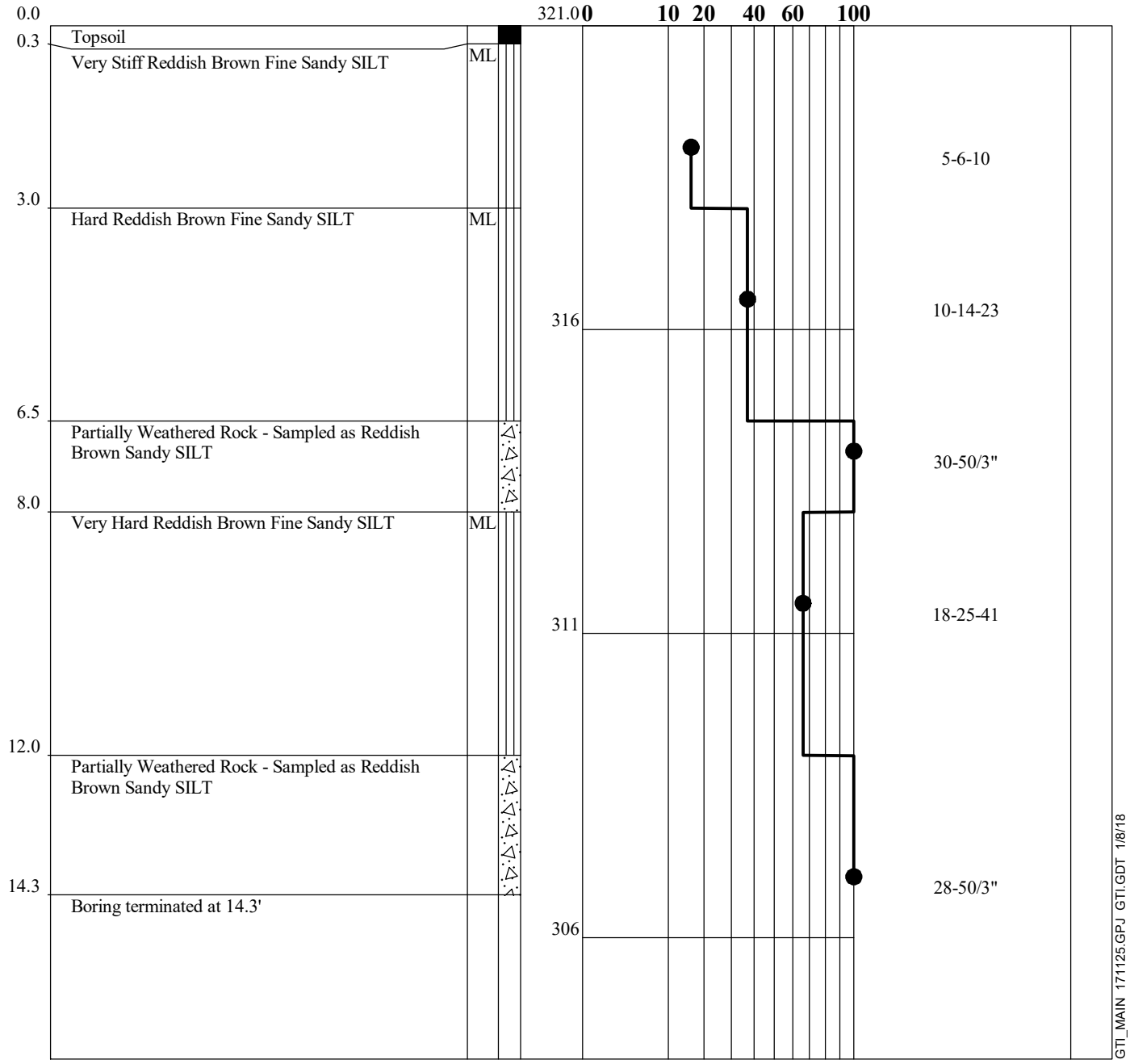
TEST BORING RECORD



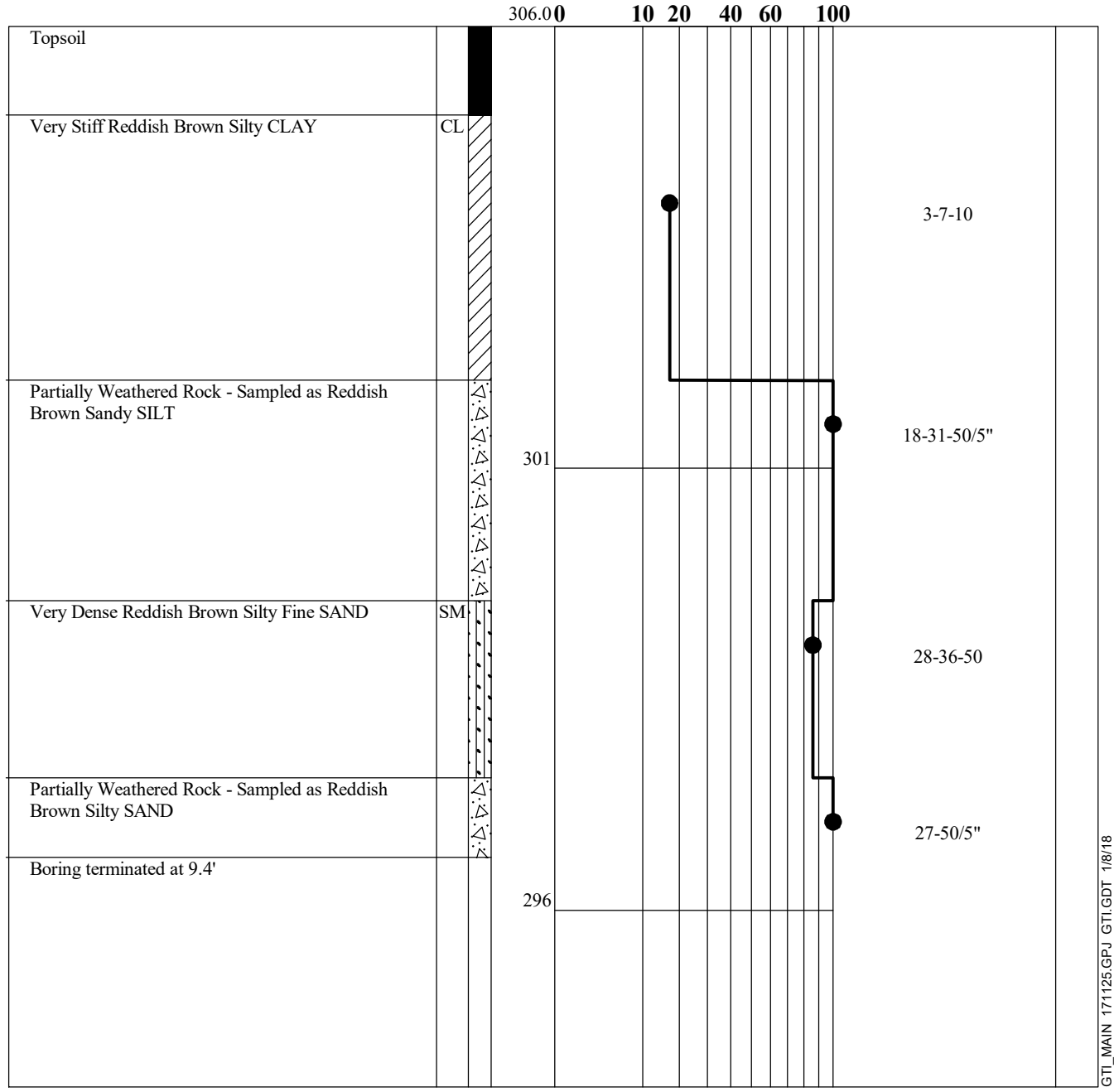
Dry at time of boring.

JOB NUMBER 1-17-1125-EA
BORING NUMBER B- 4
DATE 1-6-18

GeoTechnologies, Inc.
3200 Wellington Court, Ste 108
Raleigh, NC 27615

TEST BORING RECORD

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	PENETRATION (BLOWS/FT.) 0 10 20 40 60 100	BLOWS PER SIX INCHES
0.0	Topsoil	306.0		
1.0	Very Stiff Reddish Brown Silty CLAY (CL)			3-7-10
4.0	Partially Weathered Rock - Sampled as Reddish Brown Sandy SILT	301		18-31-50/5"
6.5	Very Dense Reddish Brown Silty Fine SAND (SM)			28-36-50
8.5	Partially Weathered Rock - Sampled as Reddish Brown Silty SAND			27-50/5"
9.4	Boring terminated at 9.4'	296		



GTI_MAIN 171125.GPJ GTI.GDT 1/8/18

Dry at time of boring.

JOB NUMBER 1-17-1125-EA
BORING NUMBER B- 5
DATE 1-6-18

PAGE 1 OF 1

GeoTechnologies, Inc.
3200 Wellington Court, Ste 108
Raleigh, NC 27615

TEST BORING RECORD

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	PENETRATION (BLOWS/FT.)	BLOWS PER SIX INCHES
0.0		312.0	0 10 20 40 60 100	
0.5	Topsoil			
	Stiff Reddish Brown Fine Sandy Silty CLAY (CL)			5-6-7
3.5	Partially Weathered Rock - Sampled as Reddish Brown Sandy SILT	307		27-50/5"
6.0	Hard Reddish Brown Fine Sandy SILT (ML)			10-18-20
8.0	Very Dense Light Brown Silty Fine to Medium SAND (SM)	302		17-21-35
12.0	Partially Weathered Rock - Sampled as Reddish Brown & Gray Clayey SILT			
14.4	Boring terminated at 14.4'	297		31-50/5"

GTI_MAIN 171125.GPJ GTI.GDT 1/8/18

Dry at time of boring.

JOB NUMBER 1-17-1125-EA
BORING NUMBER B- 6
DATE 1-6-18

PAGE 1 OF 1

GeoTechnologies, Inc.
3200 Wellington Court, Ste 108
Raleigh, NC 27615

TEST BORING RECORD

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	PENETRATION (BLOWS/FT.)	BLOWS PER SIX INCHES
0.0		316.5	0 10 20 40 60 100	
0.3	Topsoil			
	Firm Reddish Brown Silty CLAY	CH		3-3-5
3.0	Partially Weathered Rock - Sampled as Light Brown Silty SAND			50/5"
		312		
5.5	Very Dense Light Brown Silty Fine SAND	SM		25-36-41
9.0	Partially Weathered Rock - Sampled as Light Brown Silty SAND			27-41-50/4"
9.9	Boring terminated at 9.9'	307		

GTI_MAIN 171125.GPJ GTI.GDT 1/8/18

Dry at time of boring.

JOB NUMBER 1-17-1125-EA
BORING NUMBER B- 7
DATE 1-6-18

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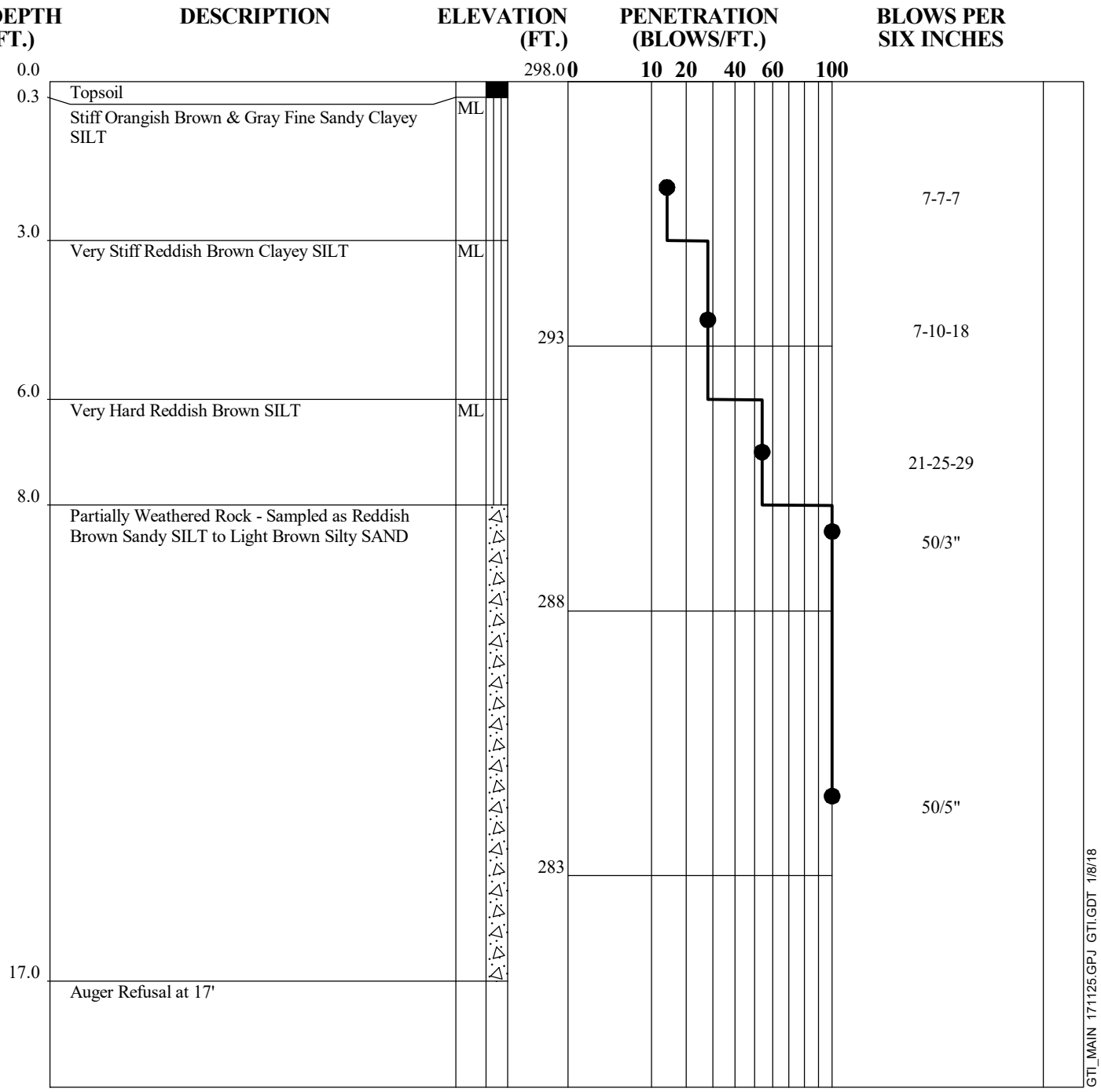
3200 Wellington Court, Ste 108
Raleigh, NC 27615

TEST BORING RECORD



Dry at time of boring.

JOB NUMBER 1-17-1125-EA
BORING NUMBER B- 8
DATE 1-6-18

PAGE 1 OF 1

GeoTechnologies, Inc.
3200 Wellington Court, Ste 108
Raleigh, NC 27615

GeoTechnologies, Inc.

Job No: 1-17-1125-EA Date: 1/12/18

Job Name: Mills School Park Expansion

Job Location: Cary, North Carolina

Boring No: B-1

Sample No:

Depth: 1.0-8.0'

TEST RESULTS

Method of Test: ASTM D 698

Maximum Dry Density: 117.1 PCF

Optimum Moisture Content: 13.9%

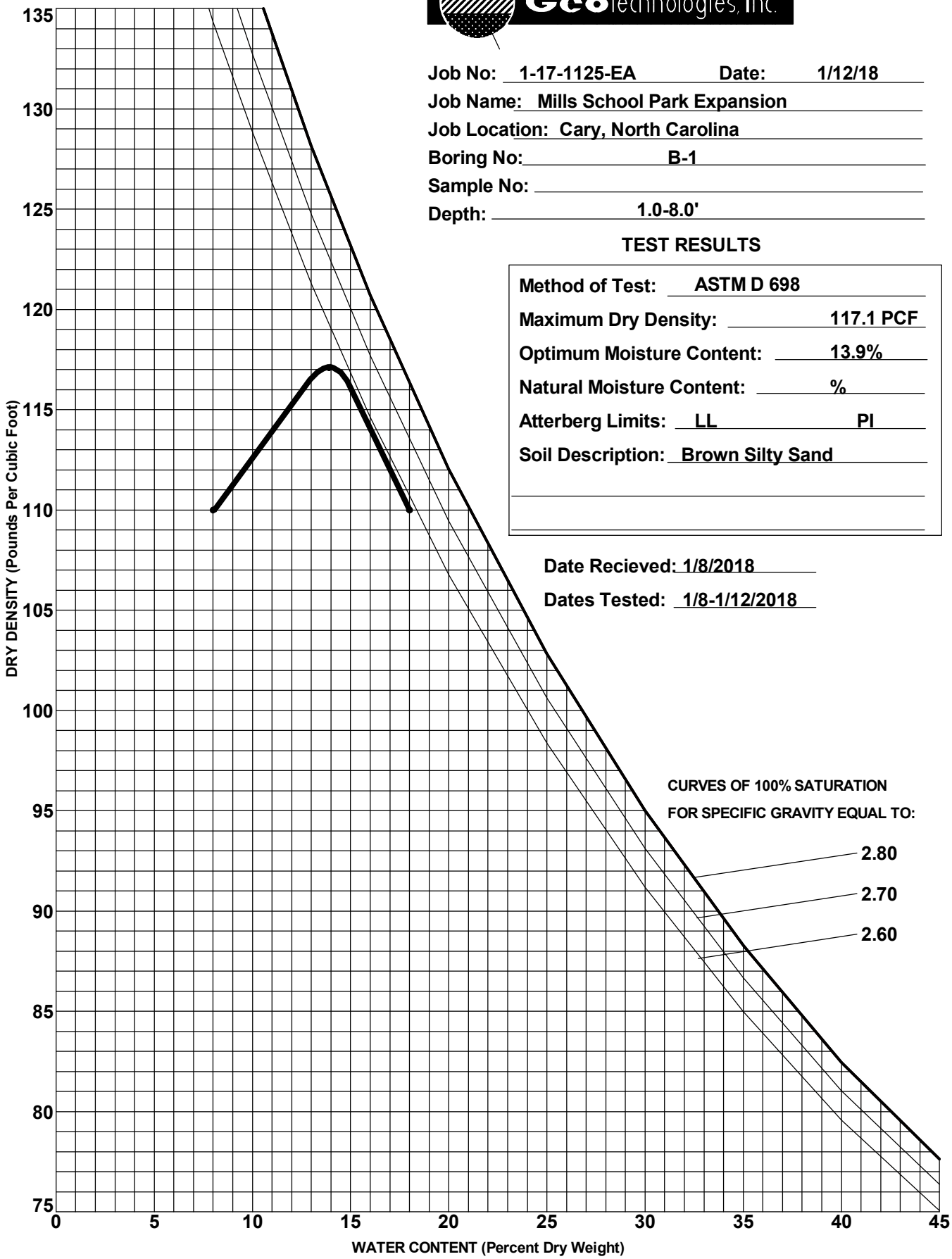
Natural Moisture Content: %

Atterberg Limits: LL PI

Soil Description: Brown Silty Sand

Date Recieved: 1/8/2018

Dates Tested: 1/8-1/12/2018



MOISTURE-DENSITY RELATIONSHIP

3200 Wellington Court, Ste 108
Raleigh, NC 27615

GeoTechnologies, Inc. CBR DATA SHEET ASTM D-1883

JOB #: 1-17-1125-EA JOB NAME: Mills School Park

DATE: 1/12/2018 SAMPLE I.D.: B-1 Depth: 1.0-8.0'

NOTES: PROCTOR DATA: TEST PROCEDURE: ASTM D-698

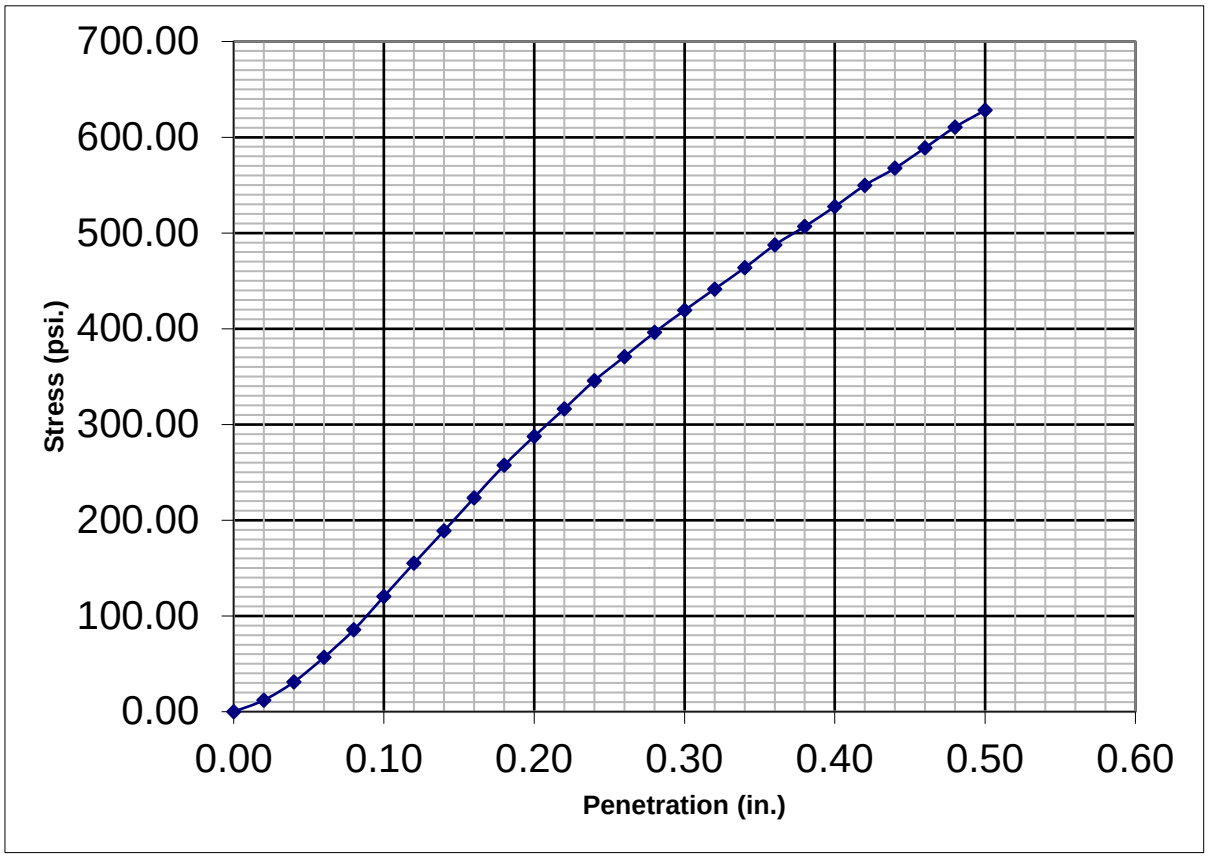
Opt. Moisture = 13.9% Max. Dry Density = 117.1 PCF

SOIL DESCRIPTION: Brown Silty Sand

CBR SPECIMEN DATA		Swell Data	
MOISTURE CONTENT	12.7%	Initial Reading	0.334
WET DENSITY	130.6 lbs./cu.ft.	Final Reading	0.357
DRY DENSITY	115.9 lbs./cu.ft.	Mold Height	4.570
% COMPACTION	99.0 %	% Swell	0.50

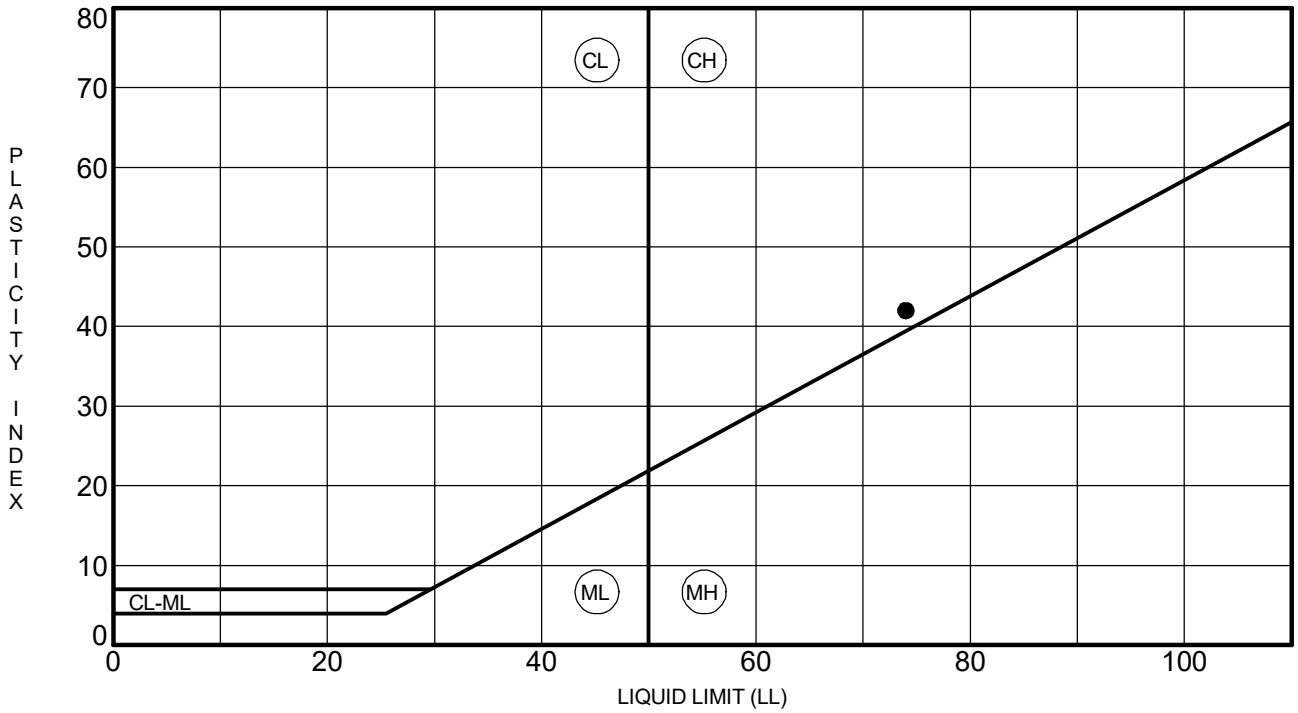
LOAD CELL 5000 LB. RATE OF DEFORMATION .05 in./min.

SURCHARGE USED 10 lbs.



CBR @ 0.1"	12.0
CBR @ 0.2"	19.2
% SWELL	0.5

ASTM D-4318



Specimen Identification	LL	PL	PI	Fines	Classification
● B-7 S-1 1.0-2.5'	74	32	42		Red Brown Sandy Silty Clay

PROJECT **Mills School Park Expansion - Cary, North Carolina**

JOB NO. **1-17-1125-EA**

DATE **1/12/18**

Date Recieved: 1/8/2018

Dates Tested: 1/8-1/12/2018

ATTERBERG LIMITS' RESULTS

3200 Wellington Court, Ste 108
Raleigh, NC 27615