

# Pender County Planning and Community Development

## Planning Division

805 S. Walker Street  
PO Box 1519  
Burgaw, NC 28425



Phone: 910-259-1202  
Fax: 910-259-1295  
[www.pendercountync.gov](http://www.pendercountync.gov)

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## Application Information 7-Eleven Major Site Development Plan

**Case Number:** SDP 2025-484

**Application Type:** Major Site Development Plan

**Applicant:** Gary Franks

**Owners:** Cedar on the Green Rentals, LLC, Bill Lee and Nicholas Stone

**Location:** The subject property is located North West of the US-17 and Jenkins Road intersection in the Topsail Township.

**Property ID #:** 3293-75-3964-0000

**Description:** Gary Franks is requesting the approval of a Major Site Development Plan for the development of a 7-Eleven convenience store with fuel stations.

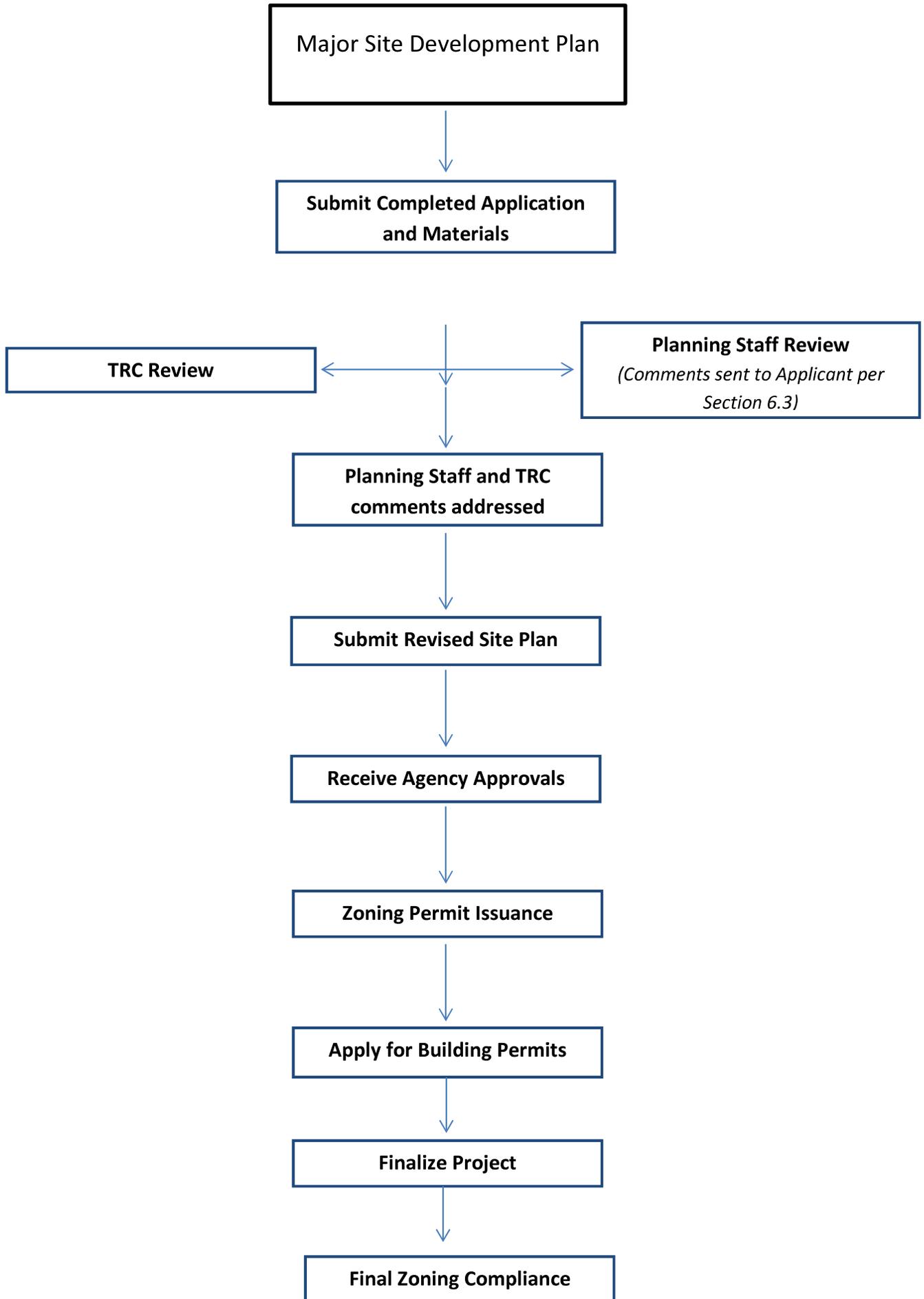
**Current Zoning:** GB, General Business

### Application Materials

Application  
Site Plan

# **APPLICATION**





Specific requirements can be found in Section 6.3 of the Pender County Unified Development Ordinance

## **Major Site Development Plan Specific Requirements**

### **1. Major Site Development Application Submittal**

- Site Plan (per Section 6.3)
  - Scale
  - North Arrow
  - All property information (zoning, setbacks, PIN #)
  - Adjacent property info (owner, zoning, use, PIN #)
  - References to any previously approved plans
  - Utility providers
  - All existing and proposed structures
  - Buffering (Section 8.2.6) & Landscaping (8.3)
  - Parking (Section 7.10)
  - Lighting
  - Cross Access Connections (Section 7.4.4)
  - AM/PM Peak Hour Trip Calculations (TIA required with 100 AM/PM trips or >1,000 trips per day)
  - Soil Erosion and Sedimentation Control Plan
  - Location of all environmental features
  - Stormwater management features
  - Proposed accesses, easements, streets, and sidewalks
- Permits received

### **2. TRC Meeting**

- Site Plan Review
- Agency comments/requirements

### **3. Post-TRC Meeting**

- Submit site plan with revisions
- Receive agency approvals
- Forward all agency approvals to Planning Staff.

### **4. Approval of Site Plan**

- All TRC comments and agency requirements addressed
- Zoning approval allows for building permit process to begin
- Apply for building permits

### **5. Final Zoning**

- Site Visit to check the following:
  - Landscaping
  - Buffering
  - Parking

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## MAJOR AND MINOR SITE DEVELOPMENT APPLICATION

<b>SECTION 1: GENERAL INFORMATION</b>			
<b>Applicant's Name:</b>	Gary Franks	<b>Property Owner's Name:</b>	Cedar On The Green Rentals, LLC Owner #1: Bil Lee Owner #2: Nicholas Stone
<b>Applicant's Address:</b>	457 Court Street	<b>Property Owner's Address:</b>	256 Osprey Place
<b>City, State, &amp; Zip</b>	Portsmouth, VA 23704	<b>City, State, &amp; Zip</b>	Wilmington, NC 28411
<b>Phone Number:</b>	757-908-2372	<b>Phone Number:</b>	910-200-9800
<b>Email Address:</b>	gfranks@dsgva.com	<b>Email Address:</b>	nicholas.f.stone@gmail.com wflsales2021@gmail.com
<b>Legal relationship of applicant to landowner:</b>			
<b>SECTION 2: PROJECT INFORMATION</b>			
<b>PIN (Property Id #):</b>	3293-75-39-64-000	<b>Total property acreage:</b>	1.86
<b>Zoning:</b>	GB	<b>Acreage to be disturbed:</b>	1.86
<b>Water Provider:</b>	PCU	<b>Wastewater Provider:</b>	Pluris Hampstead, LLC
<b>Directions to Site:</b>	NEC Hwy 17 & Jenkins Rd.	<b>Township:</b>	N/A
<b>Road Type:</b>	<b>Public/Private/Both</b>		
<b>Sq Ft of Building:</b> 4,816		<b>Building Height:</b> 25'-8"	
<b>Setbacks</b>	<b>Front:</b> 25'	<b>Side:</b> 10'	<b>Rear:</b> 10'
<b>NAICS Code/Use:</b>	Convenience Store with Fuel Sales		
<b>Business Name:</b>	7-Eleven		
<b>Describe activities to be undertaken on project site:</b>	Retail Sales		

<b>SECTION 5: SIGNATURES</b>			
<b>Applicant's Signature</b>		<b>Date:</b>	
<b>Applicant's Name Printed</b>	Gary Franks	<b>Date:</b>	03/31/25
<b>Owner's Signature</b>		<b>Date:</b>	4/3/2025
<b>Owner's Name Printed</b>	Nicholas Stone	<b>Date:</b>	

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<b>City, State, &amp; Zip</b>	Portsmouth, VA 23704	<b>City, State, &amp; Zip</b>	Wilmington, NC 28411
<b>Phone Number:</b>	757-908-2372	<b>Phone Number:</b>	910-200-9800
<b>Email Address:</b>	gfranks@dsgva.com	<b>Email Address:</b>	wflsales2021@gmail.com nicholas.f.stone@gmail.com
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<b>Applicant's Signature</b>		<b>Date:</b>	
<b>Applicant's Name Printed</b>	Gary Franks	<b>Date:</b>	03/31/25
<b>Owner's Signature</b>		<b>Date:</b>	4/2/2025
<b>Owner's Name Printed</b>	Bill Lee	<b>Date:</b>	

11:14

**NARRATIVE**

# Site Narrative

**7-Eleven – US Hwy 17 & Jenkins Rd.  
17007 US Hwy 17  
Pender County, NC**

*Prepared For*  
**7-Eleven Inc.**  
**3200 Hackberry Rd.**  
**Irving, TX 75063**



**Dated: 03/31/25**

*Prepared By:*





**7-ELEVEN – US HWY 17 & JENKINS RD.  
17007 US HWY 17  
PENDER COUNTY, NC**

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# SITE NARRATIVE

**7-Eleven – US Hwy 17 & Jenkins Rd.  
17007 US Hwy 17  
Pender County, NC**

## **1.0 Project Summary:**

Site is located on the northeast corner of US Hwy 17 and Jenkins Rd. in Pender County, NC. The property is a proposed outparcel to a larger master planned development. The proposed parcel location is currently made up of portions of three separate parcels, Parcel IDs 3293-75-3964-0000, 3293-75-4817-0000, and 3293-76-4263-0000. The site is currently partially developed, however the site will be cleared and graded as part of the master planned development. The site was recently rezoned from RP to GB as part of rezoning application REZONE 2024-64.

The master planned development will include the construction of all off-site infrastructure needed for this development including private access drives, utilities, and stormwater quantity and quality management. The master planned development will also be responsible for permitting and constructing the necessary improvements within the NCDOT right-of-way.

There are no additional off-site improvements associated with this project. The entirety of the proposed improvements will result in approximately 1.86 acres of total land disturbance.

## **2.0 Utilities:**

### **Water**

The proposed water services will tap the existing water main located along the southern side of Prosperity Ridge Rd. A new tap and 1.5" meter is proposed for the domestic service line, and a secondary 3/4" meter is proposed for the site irrigation. Any existing water meters that will not be reused will be abandoned in place. There is an existing fire hydrant located on Prosperity Ridge Rd. directly in front of the site that will provide fire protection for the proposed building.

### **Sanitary Sewer**

The proposed sanitary sewer service will tie into the existing public gravity sewer manhole located in Stanley Farm Rd. Based on the NC state wastewater design flow rates, the proposed development will generate a peak flow rate of 2,900 gal/day.



### **3.0 Stormwater Management**

The topography of the site primarily slopes from south to north. The majority of the site sheet flows to the northwest. Based upon geotechnical investigation, the existing soils consist primarily of silty sand and slightly silty sand. The development will result in approximately 1.86 Ac. of land disturbance.

Based on the master planned stormwater infrastructure, the entirety of the proposed development is located within a single drainage area (DA-A). This drainage area will be collected on-site, conveyed through the master planned stormwater infrastructure and discharged into a master planned stormwater management facility.

The master development plan assumed an impervious coverage of CN=86 for this parcel. This equates to an impervious coverage of approximately 68%. The proposed development will result in a CN=84 or approximately 63% impervious coverage. This reduction from the master planned design will result in a reduction in peak flowrates from all design storms and therefore no additional stormwater mitigation is necessary for this development.



**APPENDIX A**

**GEOTECHNICAL REPORT**



June 28, 2024

**HRP RRJ Hampstead, LLC**  
3 Keel Street, Unit 2  
Wrightsville Beach, NC 28480

Attn: Mr. Rod Young

Re: Report of Subsurface Investigation  
Hampstead Commercial  
Hampstead, North Carolina  
GeoTechnologies Project No. 124-0528-EA

Dear Mr. Young,

GeoTechnologies, Inc. has completed the authorized investigation to evaluate subsurface soil conditions for the above referenced project in Hampstead, North Carolina. Subsurface conditions at the site were investigated by completing fourteen soil test borings at the approximate locations shown on the attached Figure 1. Sixteen borings were originally planned, however, two borings (B-14 and B-15) could not be performed due to underground utility conflicts at those locations. The borings were advanced to depths between 10 and 30 feet below the existing ground surface. The boring locations were established in the field using a handheld Trimble GPS and should be considered approximate. The borings were completed using an all-terrain drill rig utilizing standard penetration testing (SPT) procedures with an autohammer at selected intervals to evaluate the consistency and density of the subsurface soils. This report presents the findings of our investigation and our recommendations concerning site grading and foundation support.

### **SITE & PROJECT INFORMATION**

The property consists of multiple parcels of land totaling approximately 10.2 acres and is bounded by Hwy 17 to the south, St Johns Church Road to the north and Jenkins Road to the west in Hampstead, North Carolina. The site is partly wooded and partly developed with multiple small structures along Hwy 17 and a self storage facility on the east side of the site. The proposed development will include construction of six additional self storage buildings, a retail/fast food type building and convenience store/gas station building. Additional development will include paved access roads, parking areas and two stormwater ponds. A site grading plan and structural loads have not been provided at this time.

### **AREA GEOLOGY**

The site is located in the Coastal Plain Physiographic and Geologic Province of North Carolina. The near surface soils in the area of the site generally consist of sands, clays, and silts which have eroded from the Piedmont Uplands and been deposited by streams. More specifically, the site is located within the River bend Geologic Formation which is comprised of sands overlying limestone which was deposited during the Tertiary Period approximately 2 to 63 million years ago. Frequent migration of the shoreline over the last two million years have redistributed the sedimentary soils originally deposited by streams and has resulted in the fairly Coastal Plain topography.

## SUBSURFACE CONDITIONS

Generalized subsurface profiles were prepared from the test boring data as Figures 2A and 2B to graphically illustrate subsurface conditions encountered during the investigation. More detailed descriptions of the conditions encountered at the boring locations are presented on the attached boring records.

Topsoil was encountered in six of the boring extending to a depth of about 4 inches below the existing ground surface. About 4 inches of gravel was encountered in boring B-8 at the ground surface. Underlying the topsoil/gravel or at the ground surface in the remaining borings, sands with varying amounts of silt and clay were encountered to depths of 10 to 22 feet. Clay was noted in borings B-11 and B-13 from 22 to 30 feet. The soils exhibited SPT resistances ranging from weight of hammer (WOH) to 34 bpf. At boring B-1 a significant amount of debris was noted at the ground surface and auger refusal was noted on a large obstruction, possibly concrete, at a depth of about 3 feet.

Groundwater was encountered in the borings at depths 5.7 to 7.2 feet upon completion. Regional groundwater levels can also 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. Once site grading plans and structural loads are developed, we would appreciate being provided with that information so that these recommendations can be confirmed, extended, or modified as necessary. Additionally, should subsurface conditions adverse to those indicated by this report be encountered during construction, those differences should be reported to us for review and comment.

Site Grading Considerations: Site grading should begin with demolition of any existing buildings, removal of any debris, proper abandonment/rerouting of existing underground utilities, clearing and stripping of all topsoil and vegetation within the limits of the proposed construction. Topsoil thicknesses may vary from those noted in the boring logs. We recommend digging test pits with an excavator in the vicinity of boring B-1 to further identify any buried debris. Following the initial site preparation, all areas at grade or which are designated to receive fill should be proof rolled for stability with a partially loaded tandem axle dump truck in the presence of a geotechnical engineer to identify areas necessitating repairs. Repairs should be performed as directed by the engineer.

The near surface soils consist of very loose to loose sands. Additionally, buried debris was noted at boring B-1. Furthermore, conditions can vary immediate of the borings performed and for this reason, unstable surface soils may be encountered that will require repair. Any buried debris should be removed within building footprints. It is expected that near surface instability can be mitigated with limited undercut provided that the contractor is prepared to disc and dry wet soils prior to recompaction. In our experience, the most effective way to dry any wet on-site soils is with a farm disc turning the soils every 60 to 90 minutes under favorable (warm/dry) conditions. In this area, these conditions are most prevalent from about April through October. If the contractor is not prepared to dry soils, or if the site is graded during a wet or cool period of the year, drying will be ineffective and undercut quantities may increase. Furthermore, it may be possible to densify the near surface sands with a large, smooth-drum roller. It may be beneficial to include some additional undercut allowance if the site is to be graded during cooler months.

Fill Materials & Compaction Recommendations: The on-site soils, excluding topsoil and any old fill with debris in it, should be suitable for reuse as structural fill. If off-site borrow is required, low plasticity clays, sands, or silts with Unified Soil Classification of CL, SM, SC, and ML may be used for structural fill. Quarry processed material such as processed fill may also be used.

A standard backfill compaction recommendation for soils placed in structural areas is to compact the material to at least 95% of the standard proctor maximum dry density, except at subgrade elevations where the compaction should be at least 98% of the standard proctor maximum dry density. In order to achieve proper density and stability, soil moisture contents should be maintained within 2% of the optimum moisture content, which may require some drying or the addition of moisture. Non-structural areas should have some compaction effort when filling. We recommend that fill in non-structural areas be compacted to at least 85% of the standard Proctor maximum dry density, if some post-construction settlement is acceptable.

Fill Induced Settlements: Fill placement of more than 6 feet in the building areas will result in settlement which should be allowed to subside before construction begins. As such, we recommend that the project surveyors establish monitoring points in deep fill areas (any area with more than 6 feet) of the building pads to verify that fill induced settlements have subsided. Based on experience, we anticipate that the monitoring period will not exceed 30 days following the completion of filling. Because fill induced settlements will subside before paving operations, monitoring these areas is not necessary.

Temporary Excavations: Temporary excavations should be designed in accordance with OSHA guidelines assuming that the on-site soils can be classified as Type "C" for the sandy soils and fill. 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.

Dewatering Considerations: Groundwater was encountered at a depth of about 5 to 7 feet in the borings during the drilling. However, groundwater depths will fluctuate and perched water may be encountered. We anticipate that a sump pump can be used to effectively remove water in utility excavations, however, dewatering methods are ultimately the responsibility of the contractor.

Permanent Slopes: In this geology, dry and well compacted unreinforced fill slopes built at 3H:1V are stable without exception. Steeper fill slopes can be used with properly designed and installed geosynthetic reinforcement. Cut slopes should also be about 3H:1V or flatter. Any water encountered on the face of slopes should be brought to the attention of the geotechnical engineer so that necessary provisions can be made.

Segmental Walls: The sandy soils may be considered for use in reinforced zones, however, additional testing may be required by the design engineer to be able to determine if it can be used. CABC base course stone, washed stone, granular processed fill, or screenings are generally used in place of on-site soils. These can typically be imported from local quarries in surrounding areas.

We recommend that all retaining wall designs include an assessment of global stability to include tiered walls and walls located in or on slopes. These analyses should be considered part of the wall design package, and designs which do not explicitly address global stability should not be considered complete. Additionally, all wall designs should include appropriate drainage provisions both directly behind the face block as well as behind the reinforced zone.

Foundation Design: The results of our test borings indicate that, following the repair of any unsuitable near surface soils, the subsurface conditions on the site are suitable for the use of shallow spread footing foundations. Assuming that the site is prepared as directed, foundations may be designed for an allowable bearing pressure of 2,000 psf subject to the restriction that column and wall footings have least dimensions of not less than 24 and 16 inches, respectively. These foundations may bear at nominal depth below finished exterior grade in residual soils or in properly compacted fill except that a minimum embedment depth of not less than 18 inches for exterior footings is recommended for frost protection. GeoTechnologies recommends that all foundations excavations be carefully evaluated by a geotechnical engineer to verify that suitable bearing materials have been

encountered. Should foundations need to be extended to provide adequate bearing, we recommend that over-excavated footings be backfilled to design bearing elevation utilizing uniformly graded #57 or #67 washed stone.

The attached Figures 3 and 4 depict preliminary estimated settlements. These preliminary estimates assume bearing at current grades and in areas with fill, settlements may be higher. Furthermore, these settlements do not account for fill induced settlements. Once site grading plans with FFE and structural loads are available, GeoTechnologies should be provided with that information so that additional settlement estimates can be performed if needed.

We recommend that foundations for the pump island canopies be designed for an allowable bearing pressure of 2,000 psf. The majority of the load on the canopies is likely uplift, so we anticipate that they would typically be oversized for uplift resistance. To evaluate resistance to uplift, we recommend assuming a soil unit weight of 110 pcf above the foundation, assuming that all backfill soils are properly compacted to 95% of the standard Proctor maximum dry density. The weight of the concrete within the foundations can be properly sized to provide any additional uplift resistance needed. Buoyant unit weights should be used below the ground water level. In order to evaluate resistance to sliding, GeoTechnologies recommends assuming a friction factor of 0.35 along the base of the foundations. A uniform ultimate passive resistance of 600 psf may be used for design.

Tank Pit Construction: We understand that the project may include installation of below grade underground fuel tanks. We anticipate that the base of the tanks will likely extend to depths of as much as 15 to 20 feet below existing ground surface.

Groundwater was encountered on-site at a depth of about 5 to 7 feet. As such, the tanks should be designed to resist buoyancy assuming that perched groundwater could develop within the tank pit backfill. All OSHA regulations should be strictly adhered to when performing below grade excavation.

Slab-on-Grades: We recommend that slabs-on-grade for the structure are designed for an assumed subgrade modulus of 100 pci (for a 1 foot by 1 foot area). This assumes that subgrades will be compacted to a minimum of 98% of the standard proctor maximum dry density. We recommend that slabs be supported on a minimum of a 4 inch thick layer of compacted CABC. CABC is preferred over washed stone for slabs subject to forklift traffic. All slabs should be constructed per current ACI guidelines, including proper jointing to help control shrinkage cracking.

Below Grade Walls: Below grade walls may be designed using the soil parameters indicated in the table below for on-site sandy soils. The design values assume level grade behind or in front of the wall and should be modified for sloping grades. A buoyant unit weight should be used below the water table.

At-rest EP Coeff.	Active EP Coeff.	Passive EP Coeff.	Friction Angle	Base Sliding Friction	Unit Weight (pcf)
0.5	0.33	3.00	30°	0.4	120

Hydrostatic conditions should be considered for any walls extending below the water table (not expected). Below grade walls must include an effective drainage medium which intercepts water moving towards the wall such that hydrostatic conditions do not develop above the static water level. A drainage pipe, waterproofing and drainage boards/washed stone should be considered. Appropriate safety factors should be used in conjunction with these design values.

Any fill material placed adjacent to below grade walls should be compacted to a minimum of 95% of the standard Proctor maximum dry density, except where 98% is required at subgrade. Additionally, any soils placed within 3 to 4 feet of below grade walls should be compacted with light handheld equipment to prevent overstressing of the walls. This will necessitate that backfill be placed in 4 to 6 inch lifts.

**Seismic Site Classification:** Based on the results of SPT testing performed at this site, we recommend designing for a seismic site class of “E”, excluding liquefaction. However, the soil profile as indicated on the borings includes zones of very loose sands below the water table which are subject to liquefaction during the design seismic event indicating that the site is technically an “F”. This indicates that during the design earthquake event (Charleston, SC) which is predicted to occur with a 2% probability in a 50 year period (return period of approximately 2,500 years), that some of the sands may liquefy. During liquefaction, pore pressures within the sands increase resulting in subsequent densification of those sands which causes settlement. Liquefaction also temporarily reduces the shear strength of the impacted sands such that the load carrying capacity (bearing capacity) of foundations may be impacted.

Based on a review of the Building Code and past correspondence with personnel at the Department of Insurance, mitigation is only mandatory for structures in Seismic Design Categories D, E, and F. We have not been provided with the Seismic Design Category for this particular project; however, if the structures are not a Category D, E, or F, the owner can decide whether or not to mitigate for liquefaction. If the owner elects to proceed with construction without provisions for liquefaction, he should be aware that damage may occur should a strong seismic event occur which results in liquefaction. The literature suggests that very large earthquakes such as the Charleston event will occur about every 2,500 years; however, that is a number based on probability and the reoccurrence interval could be much shorter.

If liquefaction is not mitigated, the building code includes the provision that structures with a fundamental period of vibration of 0.50 seconds or less may be designed using the class determined in the absence of liquefaction (Class E). As such, if the period is 0.50 seconds or less, a site class of E may be used for seismic design. If the period is higher, a site specific analysis to determine seismic design parameters is required.

**Pavement Design Considerations:** The on-site soils are considered fair for pavement support. Proper preparation of the subgrade soils will be very important for the performance of the pavements. Laboratory CBR testing has not been performed, however, we recommend using a design value of 7 percent. The recommended pavement thicknesses are based upon a 20-yr service life and are for passenger vehicles parking spaces (light duty asphalt) and access roads (heavy duty asphalt). The concrete section is appropriate for dumpster pads. The Wake Forest design method was used for flexible pavements and AASHTO design method for rigid pavements.

**Recommended Asphalt (Flexible) Pavement Section**

	Light Duty Thickness (in.)	Heavy Duty Thickness (in.)	Remarks
Surface Course	3 (2, 1.5")	3 (2, 1.5")	NCDOT S9.5B
Base Course	6	8	NCDOT CABC Stone compacted to 100% modified Proctor max. dry density (ASTM D1557).
Subgrade	N/A	N/A	Top 10 inches of subgrade compacted to 98% standard Proctor max. dry density (ASTM D698).

**Recommended Concrete (Rigid) Pavement Section**

	Thickness (in.)	Remarks
Pavement Slab	6	4,500 psi compressive strength, air-entrained concrete, properly jointed per current ACI guidelines. Slump less than 3 inches without admixtures.
Base Course	4	NCDOT CABC Stone compacted to 100% modified Proctor max. dry density (ASTM D1557).
Subgrade	NA	Top 10 inches of subgrade compacted to 98% standard Proctor max. dry density (ASTM D698).

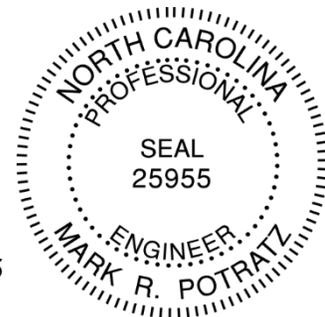
The most important factors affecting pavement life in the area of the site are the condition of the subgrade immediately prior to base course stone placement and post construction drainage. We recommend that the subgrade of all pavement areas be proofrolled and that any unstable, yielding areas be identified and repaired prior to placement of the base course stone. As indicated earlier in the report, no highly plastic clay soils should be within 12 inches of subgrade elevation. 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. 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.

**CLOSING**

GeoTechnologies, Inc. appreciates the opportunity to be of service on the phase of the project. Please contact us if you have any questions concerning this letter or if we may be of additional service on this or other projects.

Sincerely,  
 GeoTechnologies, Inc.

Mark R. Potratz, PE  
 NC License No. 25955

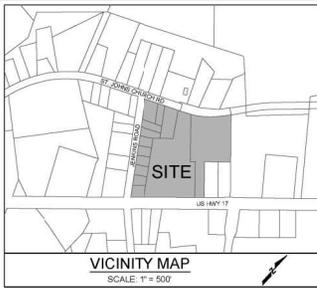


Attachments

MRP/pr-ceh

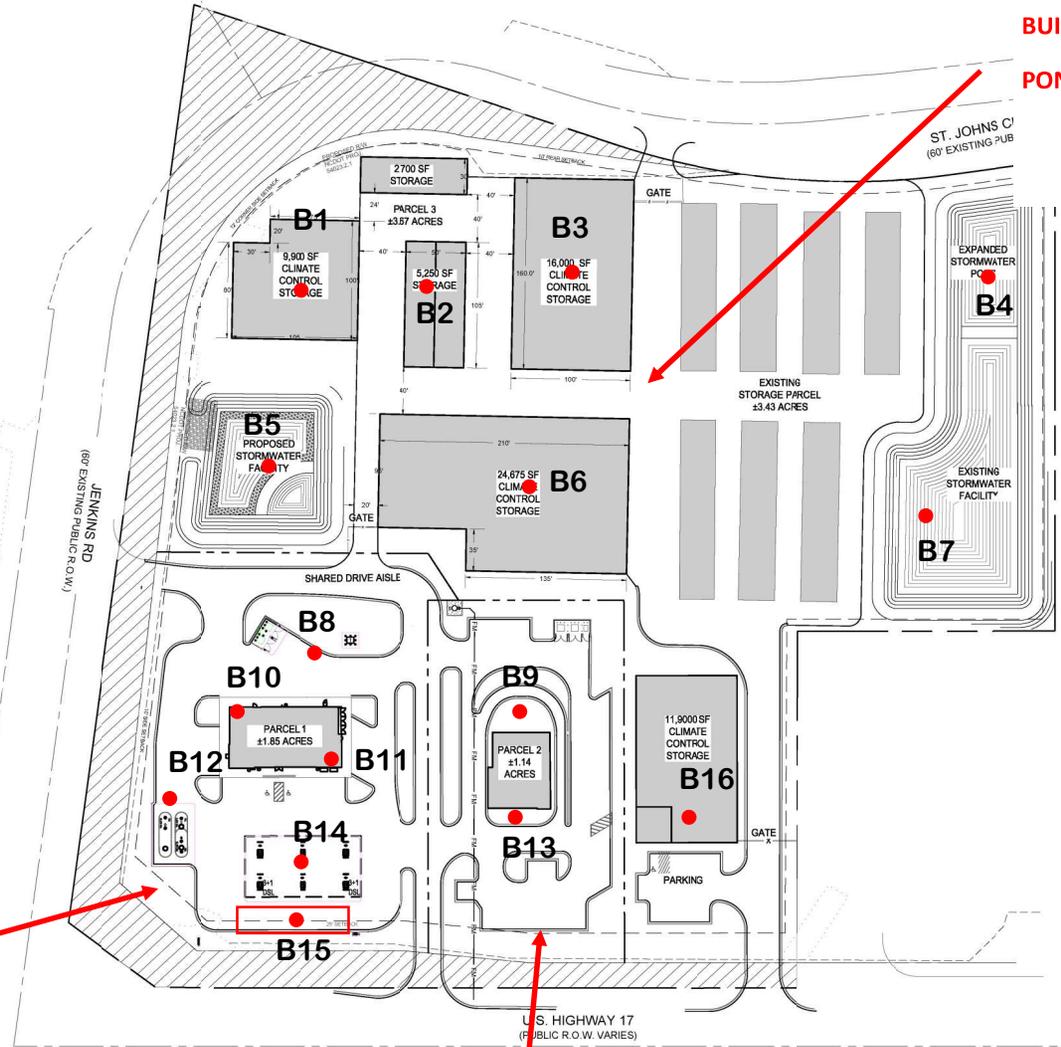
# US HWY 17 & JENKINS - SOIL BORINGS - SITE PLAN UPDATE 04 03 24

**STORAGE PARCEL SCOPE:**  
**BUILDING: 5 BORINGS @ 20'**  
**PONDS: 3 BORING @ 15'**



EXISTING SITE DATA	
APPLICANT:	HARBOUR REAL ESTATE
6601 MYRTLE GROVE RD.	HAMPSTEAD, NC 28409
PROJECT ADDRESS:	U.S. HWY 17 HAMPSTEAD, NC 28443
PARCEL ID:	3293-76-0432-0000, 3293-76-1248-0000, 293-76-1281-0000, 3293-76-2124-0000, 3293-76-1324-0000, 3293-78-1416-0000, 3293-76-2056-0000, 3293-76-3001-0000, 3293-76-4283-0000, 3293-76-6586-0000,
NC DOT PARCELS:	3293-75-4917-0000, 3293-75-3964-0000, 3293-76-2444-0000
TOTAL AREA:	± 11.55 ACRES (PRE-NC DOT TAKING) ± 10.09 ACRES (POST-NC DOT TAKING)
CURRENT ZONING:	GB, RP
PROPOSED ZONING:	GB
PARCEL DATA	
EXISTING STORAGE PARCEL:	± 3.47 ACRES (PRE-NC DOT TAKING) ± 3.43 ACRES (POST-NC DOT TAKING)
PARCEL 1	± 2.35 ACRES (PRE-NC DOT TAKING) ± 1.85 ACRES (POST-NC DOT TAKING)
PARCEL 2	± 1.23 ACRES (PRE-NC DOT TAKING) ± 1.14 ACRES (POST-NC DOT TAKING)
PARCEL 2	± 4.50 ACRES (PRE-NC DOT TAKING) ± 3.67 ACRES (POST-NC DOT TAKING) TOTAL STORAGE AREA: 70,425 SF (PARCEL 3)

**PARCEL 1 SCOPE:**  
**BUILDING: 2 BORINGS @ 20'**  
**CANOPY: 1 BORING @ 20'**  
**TANKS: 1 BORING @ 25'**  
**PAVEMENT: 2 BORINGS @ 10'**



**PARCEL 2 SCOPE:**  
**BUILDING: 2 BORINGS @ 20'**

**FIGURE 1**

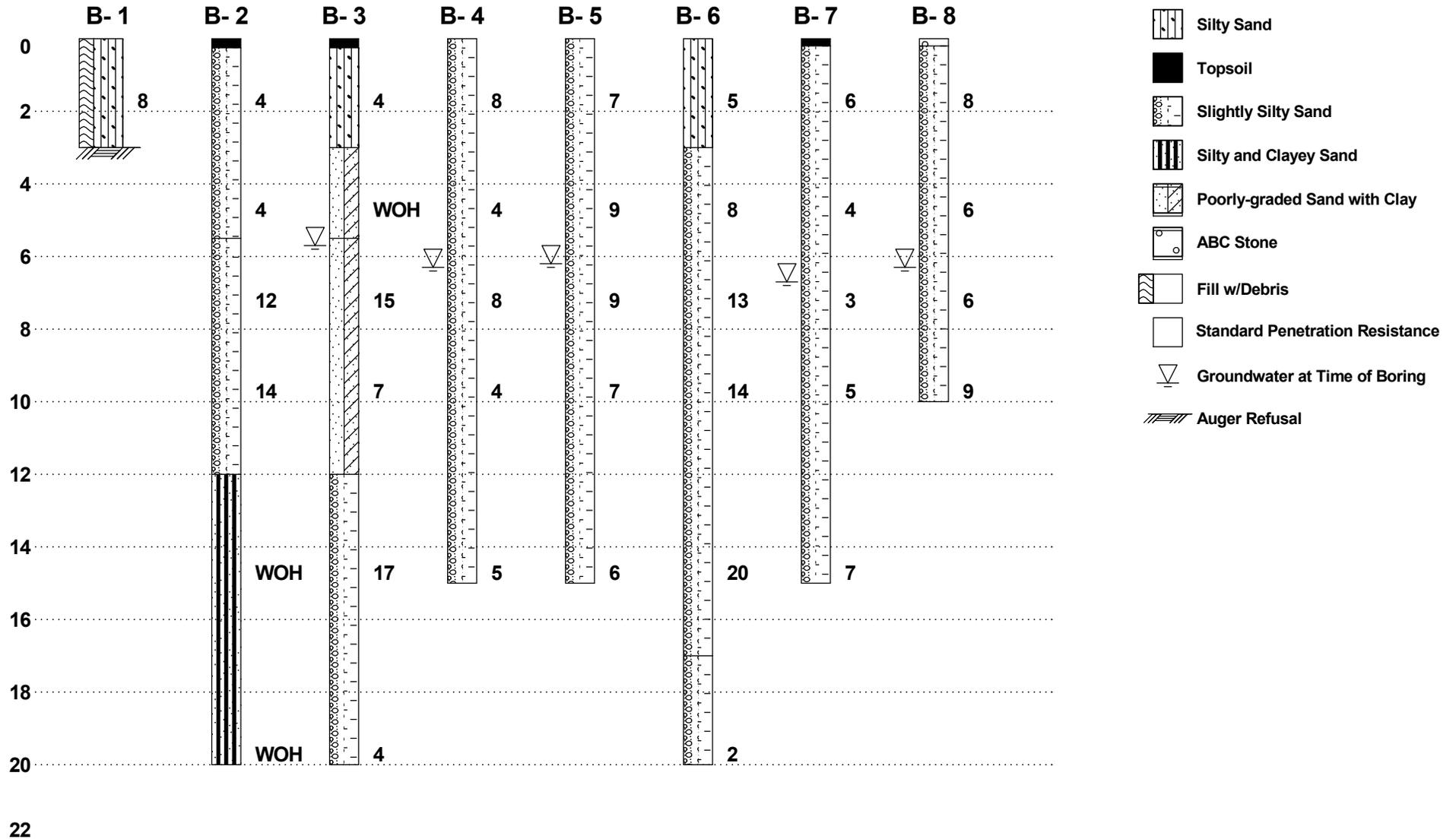


CLIENT INFORMATION	
HARBOUR REAL ESTATE 6601 MYRTLE GROVE RD. HAMPSTEAD, NC 28409	
PARAMOUNT	
122 Cinema Drive Wilmington, NC 28403 (910) 791-6707 (O) (910) 791-6760 (F) NC License #: C-2846	
PRELIMINARY SITE PLAN	
HAMPSTEAD COMMERCIAL U.S. HIGHWAY 17 HAMPSTEAD, NORTH CAROLINA	
PROJECT STATUS	CONCEPTUAL LAYOUT FINAL DESIGN FOR CONSTRUCTION
DRAWING INFORMATION	DATE: 04/03/24 SCALE: 1"=50' DRAWN BY: [Redacted] CHECKED BY: [Redacted]
SEAL	
PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION	
C-2.0	
PEI JOB#: 23315 PEI	

Depth (Feet)

### GENERALIZED SUBSURFACE PROFILE

### LEGEND



**PROJECT:**

Homestead Commercial  
Hampstead, North Carolina



GeoTechnologies, Inc.

**SCALE:** As Shown

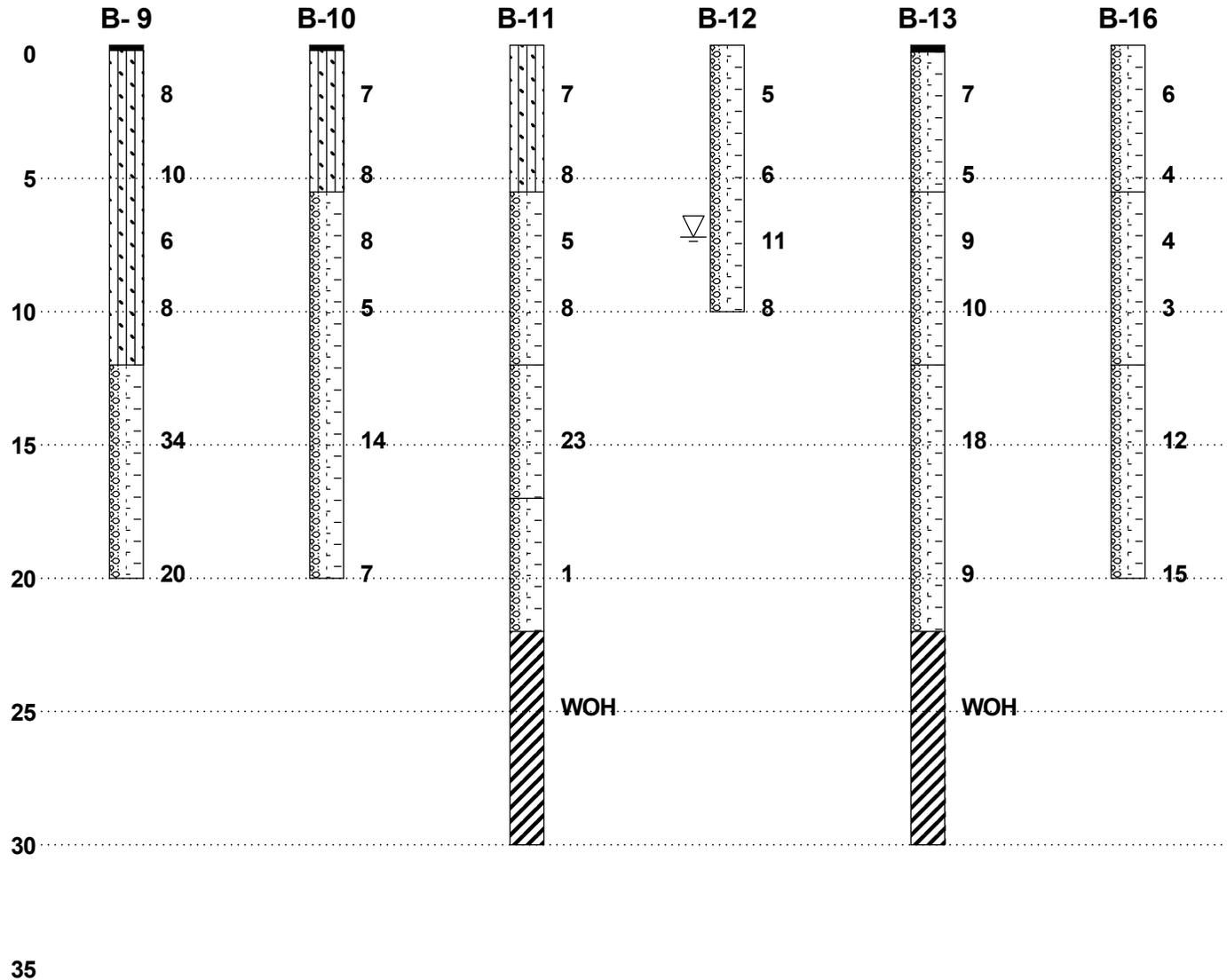
**JOB No:** 124-0528-EA

**FIGURE No:** 2A

Depth (Feet)

### GENERALIZED SUBSURFACE PROFILE

### LEGEND



- Topsoil
- Silty Sand
- Slightly Silty Sand
- High Plasticity Clay
- Standard Penetration Resistance
- Groundwater at Time of Boring

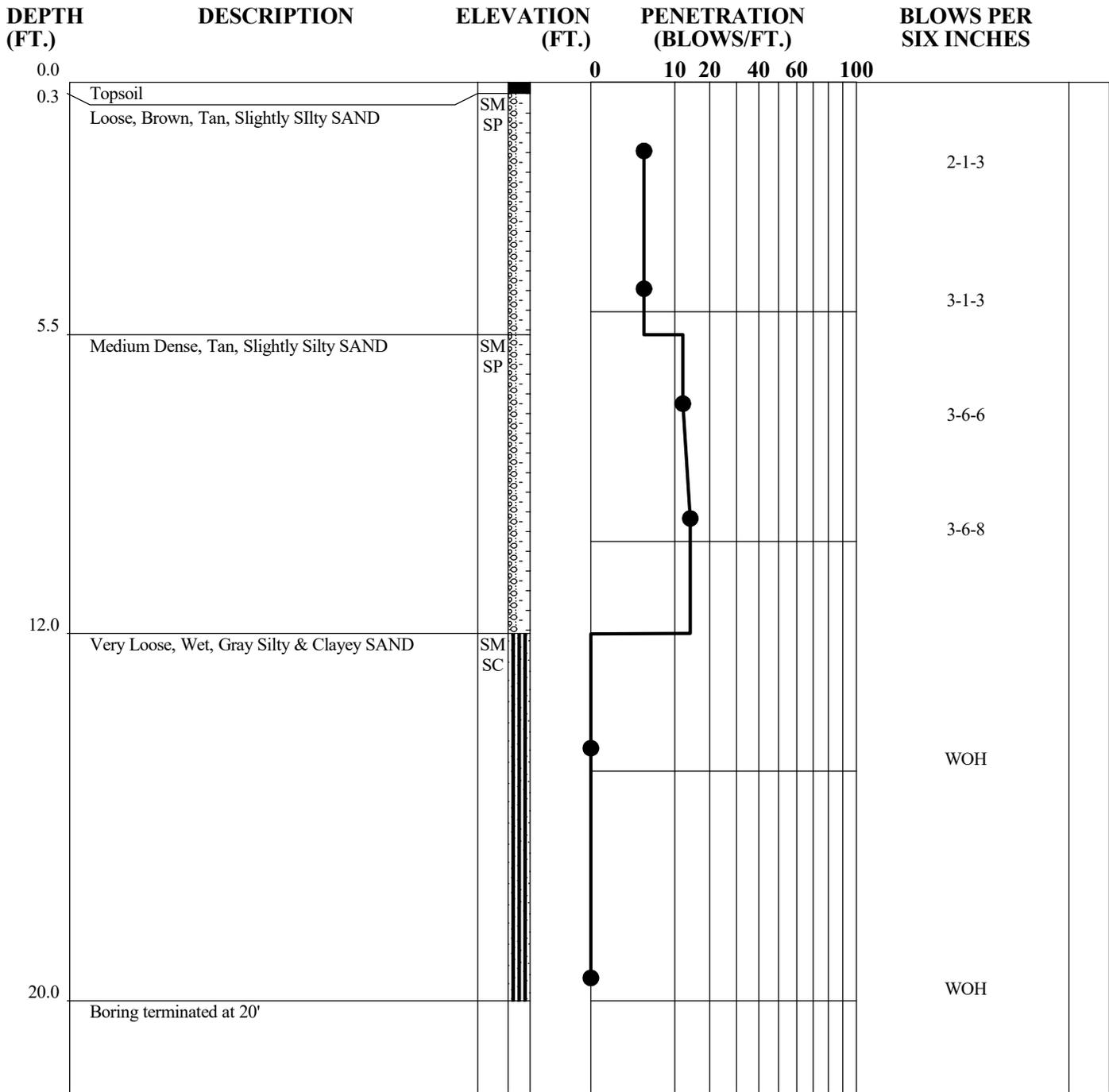
**PROJECT:**  
Homestead Commercial  
Hampstead, North Carolina



**SCALE:** As Shown  
**JOB No:** 124-0528-EA  
**FIGURE No:** 2B



# TEST BORING RECORD



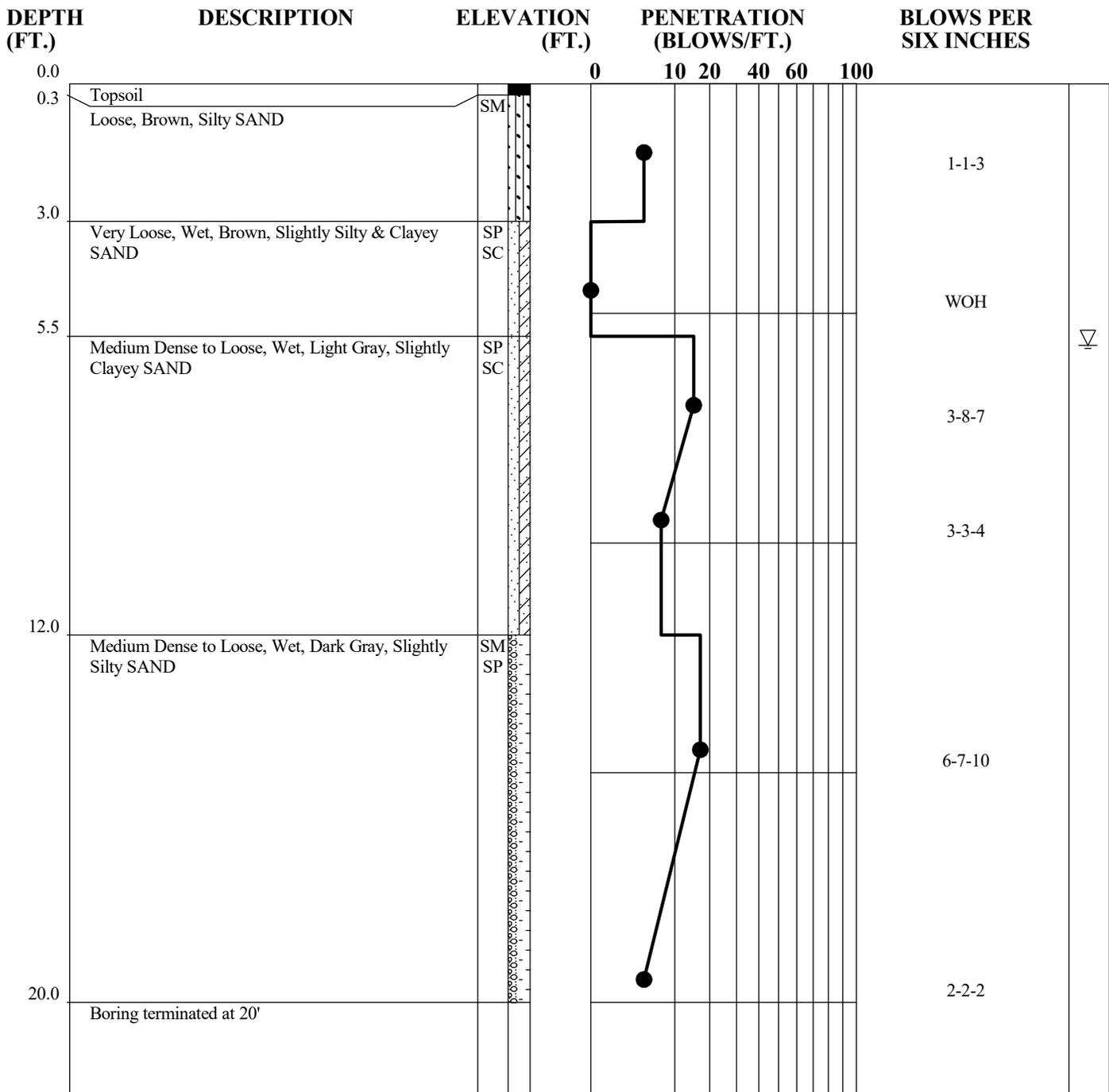
GTI\_MAIN 240528.GPJ GTI.GDT 6/24/24

Groundwater not encountered at time of boring.

**JOB NUMBER**    124-0528-EA  
**BORING NUMBER**    B- 2  
**DATE**                6-18-24



# TEST BORING RECORD



GTI\_MAIN 240528.GPJ GTI/GDT 6/24/24

Groundwater encountered at 5.7' at time of boring.

**JOB NUMBER**    124-0528-EA  
**BORING NUMBER**    B- 3  
**DATE**    6-18-24



# TEST BORING RECORD

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	PENETRATION (BLOWS/FT.)	BLOWS PER SIX INCHES
0.0	Loose, Brown, Gray, Silty to Slightly Silty SAND	SM SP	0    10   20   40   60   100	
			●	2-4-4
			●	2-2-2
			●	2-4-4
			●	2-2-2
15.0	Boring terminated at 15'		●	2-3-2



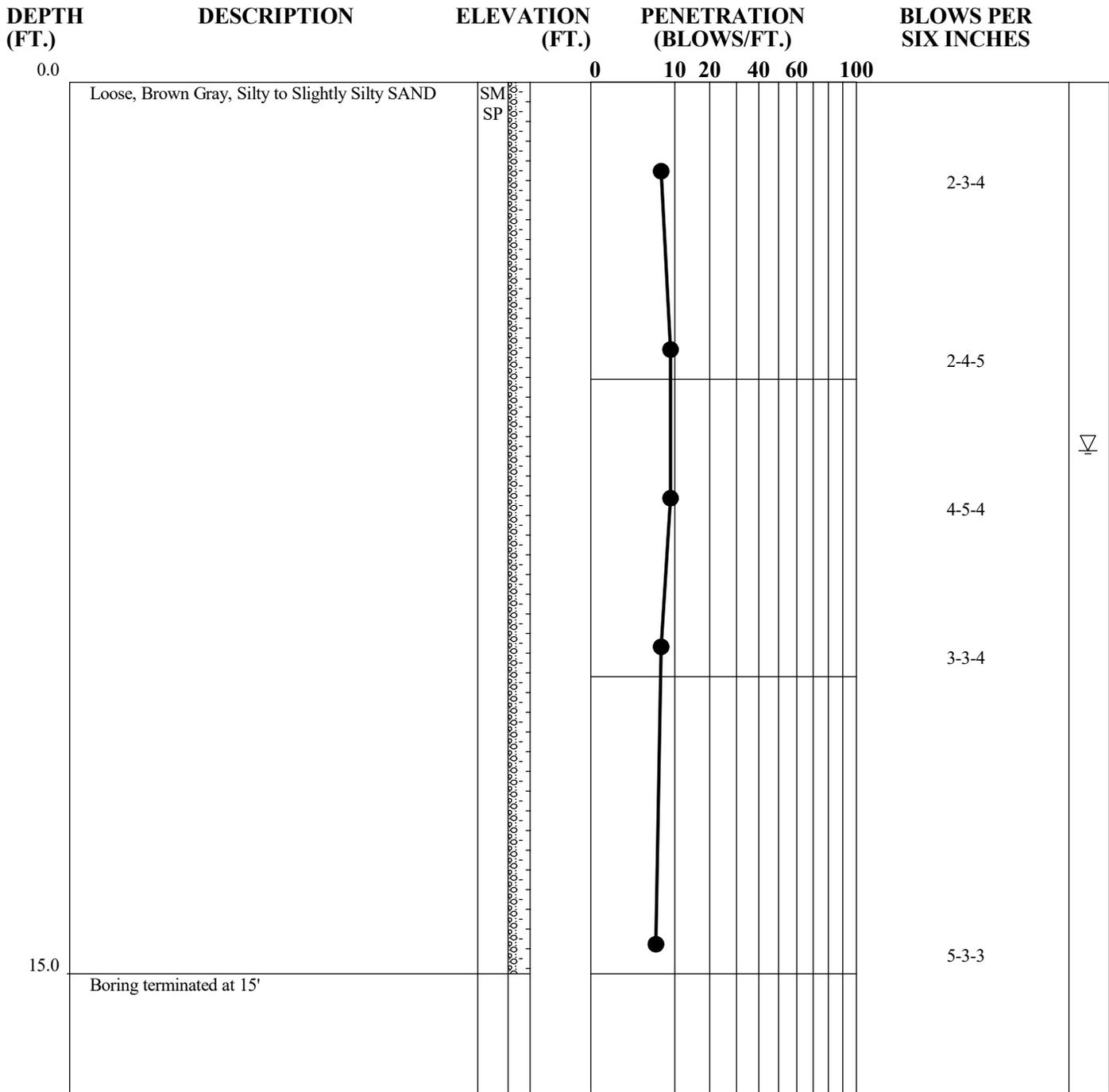
GTI\_MAIN 240528.GPJ GTI/GDT 6/24/24

Groundwater encountered at 6.3 at time of boring.

**JOB NUMBER**    124-0528-EA  
**BORING NUMBER**    B- 4  
**DATE**                6-17-24



# TEST BORING RECORD

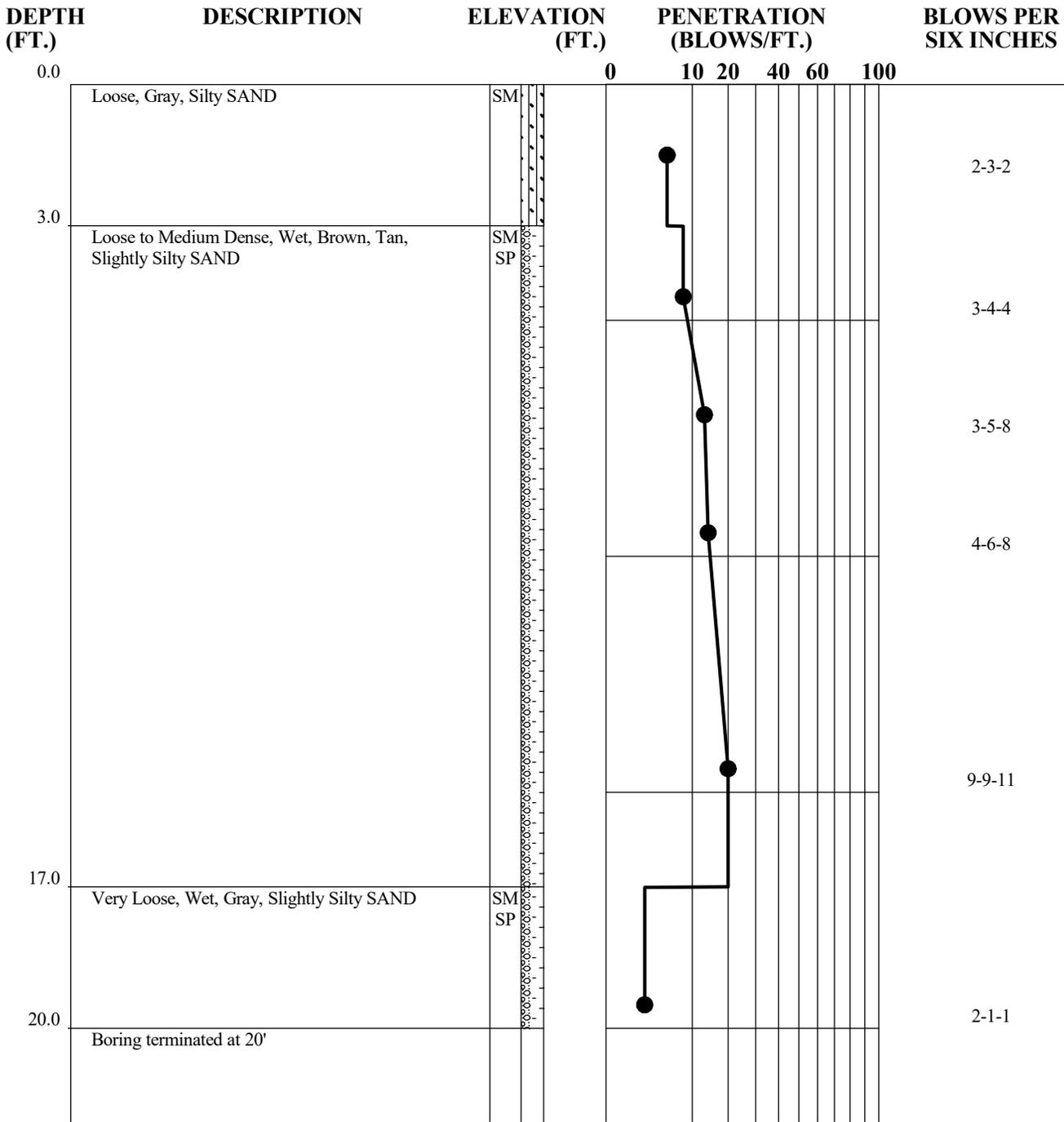


Groundwater encountered at 6.2 at time of boring.

**JOB NUMBER** 124-0528-EA  
**BORING NUMBER** B- 5  
**DATE** 6-19-24



# TEST BORING RECORD



GTI\_MAIN 240528.GPJ GTI/GDT 6/24/24

Groundwater not encountered at time of boring.

**JOB NUMBER** 124-0528-EA  
**BORING NUMBER** B- 6  
**DATE** 6-16-24



# TEST BORING RECORD

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	PENETRATION (BLOWS/FT.)	BLOWS PER SIX INCHES
0.0			0    10   20   40   60   100	
0.2	Topsoil			
	Loose to Very Loose, Gray, Tan & Brown, Slightly Silty SAND	SM SP	●	2-2-4
			●	2-2-2
			●	2-1-2
			●	2-1-4
			●	2-4-3
15.0	Boring terminated at 15'			



GTI\_MAIN 240528.GPJ GTI/GDT 6/24/24

Groundwater encountered at 6.7 at time of boring.

**JOB NUMBER**    124-0528-EA  
**BORING NUMBER**    B- 7  
**DATE**                6-12-24



# TEST BORING RECORD

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	PENETRATION (BLOWS/FT.)	BLOWS PER SIX INCHES
0.0 0.2	Aggregate Base Course Stone Loose, Brown, Tan, Silty to Slightly Silty SAND	0	10 20 40 60 100	
	SM SP		●	3-4-4
			●	2-3-3
			●	2-2-4
			●	3-4-5
10.0	Boring terminated at 10'			

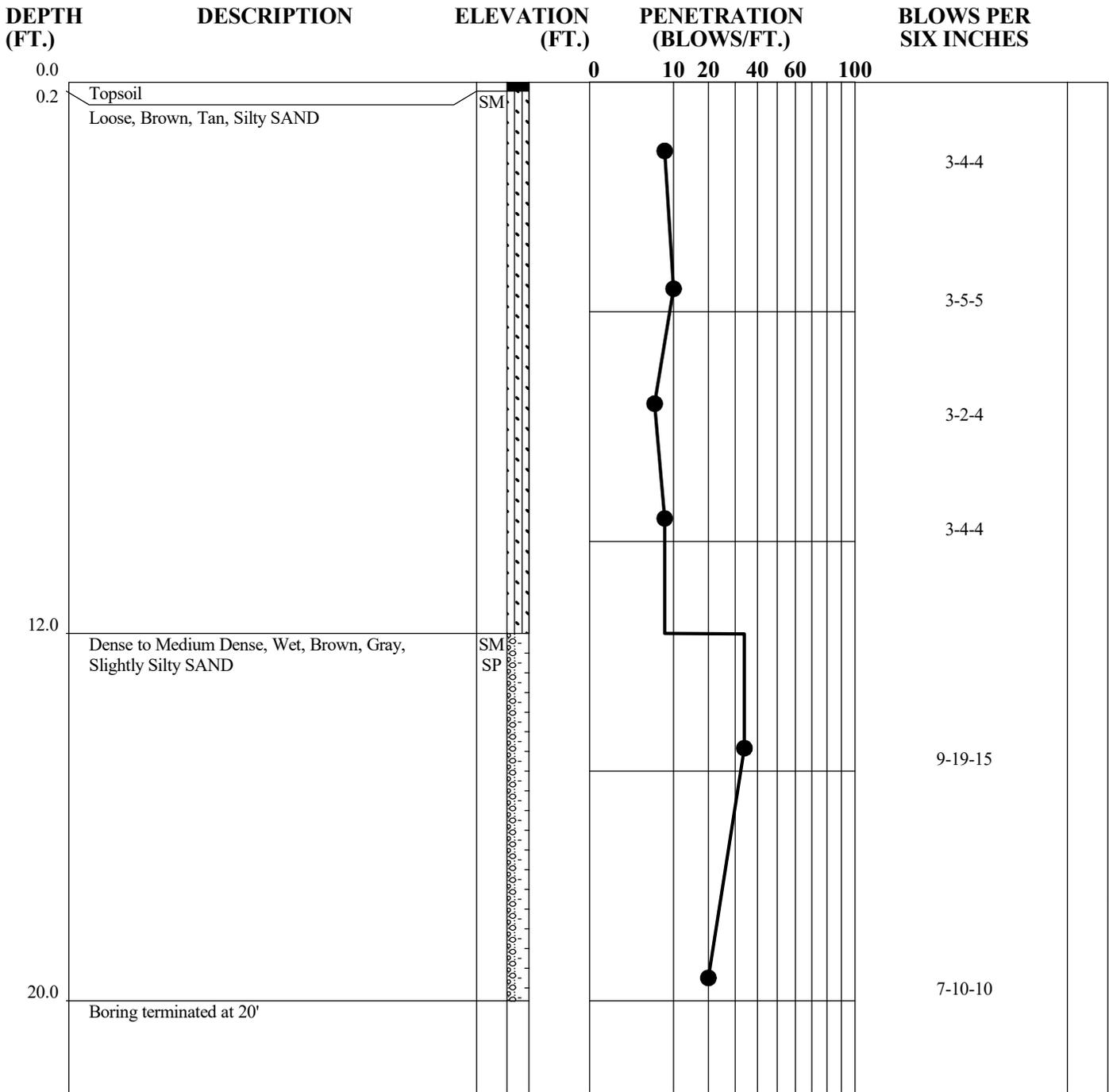
GTI\_MAIN 240528.GPJ GTI.GDT 6/24/24

Groundwater encountered at 6.3 at time of boring.

**JOB NUMBER** 124-0528-EA  
**BORING NUMBER** B- 8  
**DATE** 6-12-24



# TEST BORING RECORD



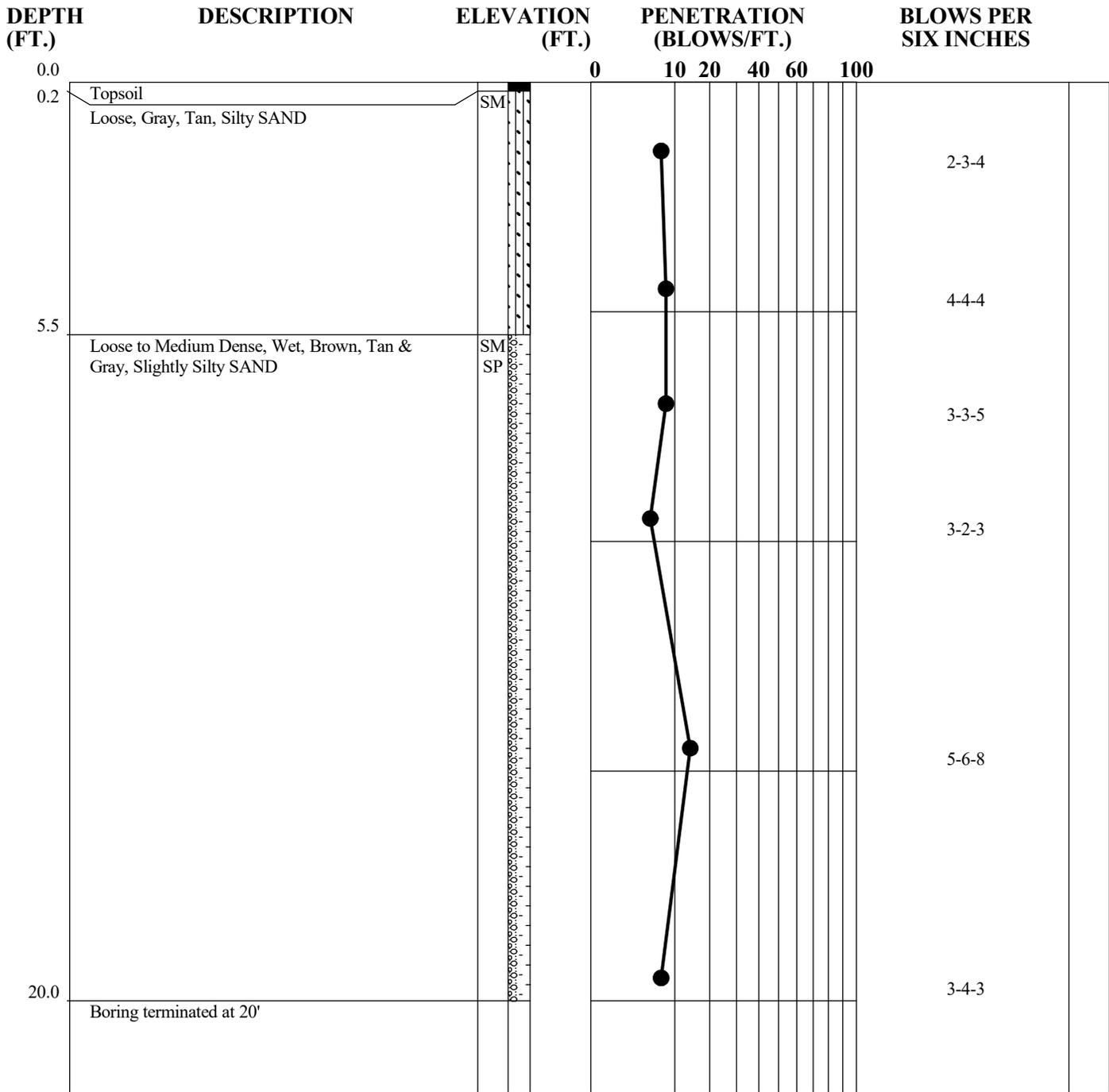
GTI\_MAIN 240528.GPJ GTI/GDT 6/24/24

Groundwater not encountered at time of boring.

**JOB NUMBER**    124-0528-EA  
**BORING NUMBER**    B- 9  
**DATE**    6-14-24



# TEST BORING RECORD



GTI\_MAIN 240528.GPJ GTI/GDT 6/24/24

Groundwater not encountered at time of boring.

**JOB NUMBER**    124-0528-EA  
**BORING NUMBER**    B-10  
**DATE**    6-19-24



# TEST BORING RECORD

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	PENETRATION (BLOWS/FT.)	BLOWS PER SIX INCHES				
0.0	Loose, Brown, Silty SAND	SM	0					
			10	20	40	60	100	3-3-4
5.5	Loose, Wet, Dark Brown, Slightly Silty SAND	SM SP						4-4-4
								2-3-2
12.0	Medium Dense, Wet, Gray, Slightly Silty SAND	SM SP						9-10-13
17.0	Very Loose, Wet, Gray, Slightly Silty SAND	SM SP						2-0-1
22.0	Very Soft, Gray, Sandy CLAY	CH						WOH
30.0	Boring terminated at 30'							

GTI\_MAIN 240528.GPJ GTI/GDT 6/24/24

**JOB NUMBER** 124-0528-EA  
**BORING NUMBER** B-11  
**DATE** 6-14-24



# TEST BORING RECORD

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	PENETRATION (BLOWS/FT.)	BLOWS PER SIX INCHES
0.0	Loose to Medium Dense, Tan, Brown, Silty to Slightly Silty SAND	SM SP	0    10   20   40   60   100	
			●	2-3-2
			●	3-3-3
			●	4-5-6
10.0	Boring terminated at 10'		●	2-3-5



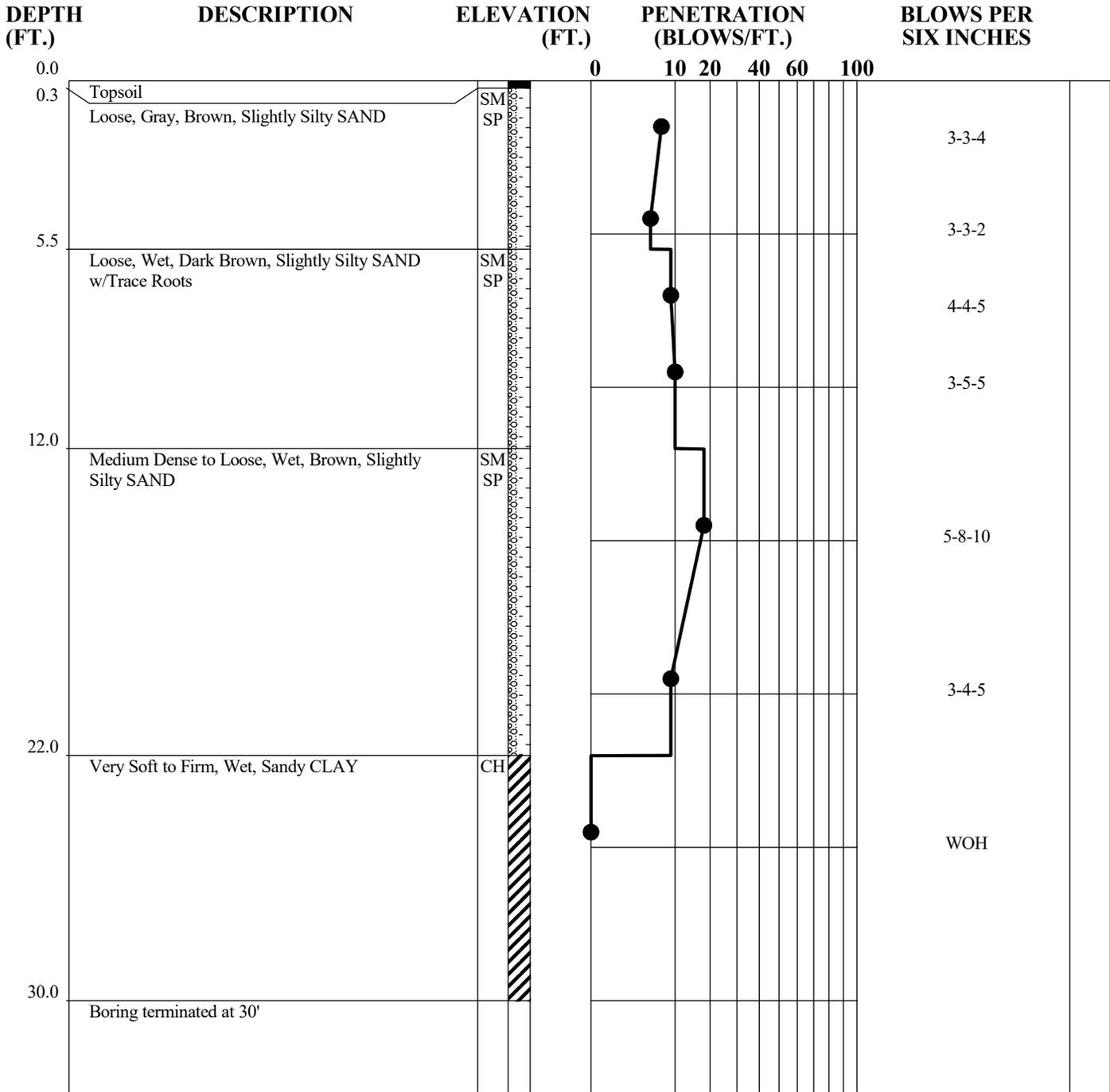
GTI\_MAIN 240528.GPJ GTI.GDT 6/24/24

Groundwater encountered at 7.2 at time of boring.

**JOB NUMBER**    124-0528-EA  
**BORING NUMBER**    B-12  
**DATE**    6-18-24



# TEST BORING RECORD



GTI\_MAIN 240528.GPJ GTI.GDT 6/24/24

Groundwater not encountered at time of boring.

**JOB NUMBER**    124-0528-EA  
**BORING NUMBER**    B-13  
**DATE**    6-13-24



# TEST BORING RECORD

DEPTH (FT.)	DESCRIPTION	ELEVATION (FT.)	PENETRATION (BLOWS/FT.)	BLOWS PER SIX INCHES
0.0	Loose, Gray, Brown, Slightly Silty SAND	SM SP	0	2-3-3
			10 20 40 60 100	
5.5	Very Loose, Wet, Dark Brown, Slightly Silty SAND	SM SP	10	1-2-2
			20	
12.0	Medium Dense, Wet, Brown to Gray, Slightly Silty SAND	SM SP	20	2-1-2
			40	
20.0	Boring terminated at 15'	SM SP	40	3-5-7
			60	
20.0	Boring terminated at 15'	SM SP	60	3-6-9
			80	

GTI\_MAIN 240528.GPJ GTI/GDT 6/24/24

Groundwater not encountered at time of boring.

**JOB NUMBER** 124-0528-EA  
**BORING NUMBER** B-16  
**DATE** 6-12-24





**APPENDIX B**

**STORMWATER CALCULATIONS**

# Site Conditions Analysis

Project: 2002.17  
 Project Name: Cliffdale Rd. 7-Eleven  
 Computed By: GAF  
 Date: 17-Mar-25  
 City: Fayetteville

## Existing Conditions

---

<b>Total Disturbed Area</b>	<span style="border: 1px solid black; padding: 2px;">80,953.00</span> sq. ft.	1.86 Ac	100.00 %
<b>Proposed Impervious Area</b>			
<b>Per Master Plan</b>	<span style="border: 1px solid black; padding: 2px;">54,982.00</span> sq. ft.	1.26 Ac	67.92 %
<b>Total Impervious</b>	54,982.00 sq. ft.	1.26 Ac	67.92 %
<b>Proposed Pervious Area</b>			
<b>Grass</b>	<span style="border: 1px solid black; padding: 2px;">25,971.00</span> sq. ft.	0.60 Ac	32.08 %
<b>Total Pervious Area</b>	25,971.00 sq. ft.		32.08 %

## Proposed Site Conditions (On-site)

---

<b>Total Disturbed Area</b>	<span style="border: 1px solid black; padding: 2px;">80,953.00</span> sq. ft.	1.86 Ac	100.00 %
<b>Proposed Impervious Area</b>			
<b>Structures</b>	<span style="border: 1px solid black; padding: 2px;">4,816.00</span> sq. ft.	0.11 Ac	5.95 %
<b>Concrete</b>	<span style="border: 1px solid black; padding: 2px;">13,044.00</span> sq. ft.	0.30 Ac	16.11 %
<b>Asphalt</b>	<span style="border: 1px solid black; padding: 2px;">22,166.00</span> sq. ft.	0.51 Ac	27.38 %
<b>Shared Drives</b>	<span style="border: 1px solid black; padding: 2px;">11,174.00</span> sq. ft.	0.26 Ac	13.80 %
<b>Total Impervious</b>	51,200.00 sq. ft.	1.18 Ac	63.25 %
<b>Proposed Pervious Area</b>			
<b>Pervious Concrete</b>	<span style="border: 1px solid black; padding: 2px;">0.00</span> sq. ft.	0.00 Ac	0.00 %
<b>Grass</b>	<span style="border: 1px solid black; padding: 2px;">29,753.00</span> sq. ft.	0.68 Ac	36.75 %
<b>Total Pervious Area</b>	29,753.00 sq. ft.	0.68 Ac	36.75 %

## Site Improvement Analysis

---

Existing Impervious Area	54,982.00 sq. ft.		67.92 %
Proposed Impervious Area	51,200.00 sq. ft.		63.25 %
<b>Total Impervious Area Increase</b>	<b>-3,782.00 sq. ft.</b>		<b>-4.67 %</b>



PROJECT: Cliffdale Rd. 7-Eleven  
 DATE: 3/31/2025  
 DESIGNER: GAF

**SITE CONDITIONS INPUT (DA-A)**

(Provide existing and proposed site conditions)

Storm Frequency                      24 hour Rainfall Depth  
 2 yrs.                                      4.59 in.

**EXISTING CONDITIONS:**

Existing Soils

**B**

USE	AREA	CN
Impervious	1.26	98
Pervious	0.60	61
Pervious(Forested)	0.00	55
<b>TOTAL</b>	<b>1.86</b>	

CN= 86

Tc= 5.00

S= 1.61 (1000/CN-10)

I<sub>a</sub> = 0.899 (From Table 4.1)

Q<sub>exist</sub> 4.50 cfs

**PROPOSED CONDITIONS:**

Existing Soils

**B**

USE	AREA	CN
Impervious	1.18	98
Pervious	0.68	61
Pervious (Forest)	0.00	55
<b>TOTAL</b>	<b>1.86</b>	

CN= 84

Tc= 5.00

S= 1.85 (1000/CN-10)

I<sub>a</sub> = 0.899 (From Table 4.1)

CN<sub>adj</sub> = N/A

(From Runoff Reduction Spreadsheet)

S<sub>adj</sub> = 1.85 (1000/CN-10)

I<sub>adj</sub> = 0.8990 (From Table 4.1)

Q<sub>dev</sub> = 4.26 cfs



PROJECT: Cliffdale Rd. 7-Eleven  
 DATE: 3/31/2025  
 DESIGNER: GAF

**SITE CONDITIONS INPUT (DA-A)**

(Provide existing and proposed site conditions)

Storm Frequency                      24 hour Rainfall Depth  
 10 yrs.                                      7.12 in.

**EXISTING CONDITIONS:**

Existing Soils

**B**

USE	AREA	CN
Impervious	1.26	98
Pervious	0.60	61
Pervious(Forested)	0.00	55
<b>TOTAL</b>	<b>1.86</b>	

CN= 86

Tc= 5.00

S= 1.61 (1000/CN-10)

I<sub>a</sub> = 0.899 (From Table 4.1)

Q<sub>exist</sub> 7.98 cfs

**PROPOSED CONDITIONS:**

Existing Soils

**B**

USE	AREA	CN
Impervious	1.18	98
Pervious	0.68	61
Pervious (Forest)	0.00	55
<b>TOTAL</b>	<b>1.86</b>	

CN= 84

Tc= 5.00

S= 1.85  
(1000/CN-10)

I<sub>a</sub> = 0.899  
(From Table 4.1)

CN<sub>adj</sub> = N/A

(From Runoff Reduction Spreadsheet)

S<sub>adj</sub> = 1.85  
(1000/CN-10)

I<sub>adj</sub> = 0.8990  
(From Table 4.1)

Q<sub>dev</sub> = 7.69 cfs



PROJECT: Cliffdale Rd. 7-Eleven  
 DATE: 3/31/2025  
 DESIGNER: GAF

**SITE CONDITIONS INPUT (DA-A)**

(Provide existing and proposed site conditions)

Storm Frequency                      24 hour Rainfall Depth  
 25 yrs.                                      8.95 in.

**EXISTING CONDITIONS:**

Existing Soils

**B**

USE	AREA	CN
Impervious	1.26	98
Pervious	0.60	61
Pervious(Forested)	0.00	55
<b>TOTAL</b>	<b>1.86</b>	

CN= 86

Tc= 5.00

S= 1.61 (1000/CN-10)

I<sub>a</sub> = 0.899 (From Table 4.1)

Q<sub>exist</sub> 10.56 cfs

**PROPOSED CONDITIONS:**

Existing Soils

**B**

USE	AREA	CN
Impervious	1.18	98
Pervious	0.68	61
Pervious (Forest)	0.00	55
<b>TOTAL</b>	<b>1.86</b>	

CN= 84

Tc= 5.00

S= 1.85  
(1000/CN-10)

I<sub>a</sub> = 0.899  
(From Table 4.1)

CN<sub>adj</sub> = N/A

(From Runoff Reduction Spreadsheet)

S<sub>adj</sub> = 1.85  
(1000/CN-10)

I<sub>adj</sub> = 0.8990  
(From Table 4.1)

Q<sub>dev</sub> = 10.25 cfs



**APPENDIX C**

**WATER DEMAND CALCULATIONS**



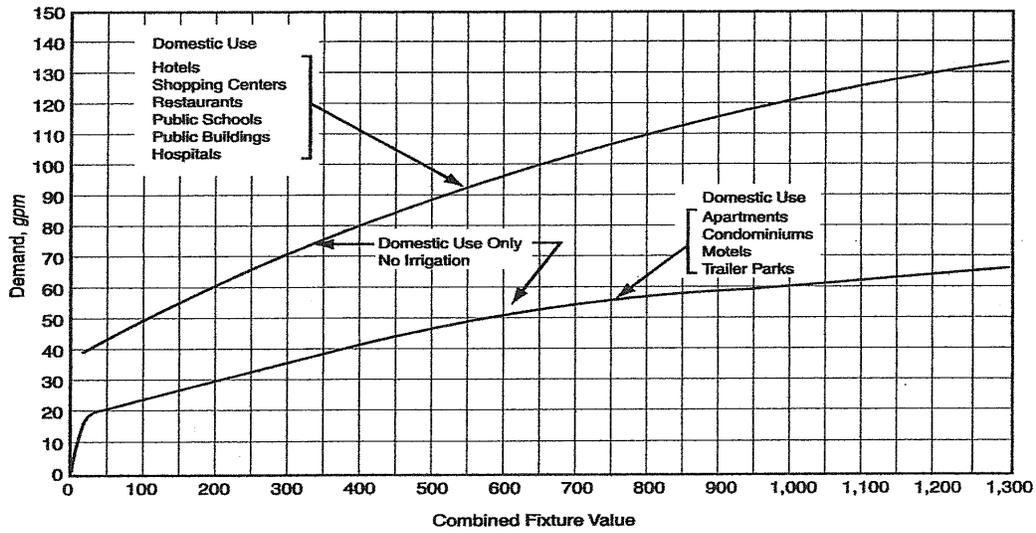
**30 SIZING WATER SERVICE LINES AND METERS**

Customer:	7-Eleven - US Hwy 17 & Jenkins Rd.	Address		
Building Address:	17007 US Hwy 17	Zip Code		
Subdivision		Lot No.	Blk No.	
Type of Occupancy:	Domestic Meter			

Fixture	Fixture Value 60 psi	X	No. of Fixtures	=	Fixture Value
Bathtub	8	X		=	0.0
Bedpan Washers	10	X		=	0.0
Bidet	2	X		=	0.0
Dental Unit	2	X		=	0.0
Drinking Fountain - Public	2	X	1	=	2.0
Kichen Sink	2.2	X	2	=	4.4
Lavatory	1.5	X	2	=	3.0
Showerhead (Shower Only)	2.5	X		=	0.0
Service Sink	4	X	4	=	16.0
Toliet Flush Valve	35	X	3	=	105.0
Tank Type	4	X		=	0.0
Urinal Pedestal Flush Valve	35	X		=	0.0
Wall Flush Valve	16	X	1	=	16.0
Wash Sink (Each Set of Faucets)	4	X	2	=	8.0
Dishwasher	2	X	1	=	2.0
Washing Machine	6	X		=	0.0
Hose (50 ft Wash Down) 1/2 in.	5	X	2	=	10.0
5/8 in.	9	X		=	0.0
3/4 in.	12	X		=	0.0
		X		=	0.0
		X		=	0.0
		X		=	0.0
<b>Combined Fixture Value Total</b>					<b>166.4</b>
<b>Customer Peak Demand From Fig. 4-2 or 4 - 3 x Press Factor</b>				=	[ ] gpm
<b>Add Irrigation</b>	[ ] Sections	x	1.16	=	0 gpm
	[ ] Hose Bibs	x	x Fixture Value	x [ ] Press. Factor =	0 gpm
<b>Added Fixed Load</b>				=	0 gpm
<b>TOTAL FIXED DEMAND</b>				=	<b>56.9 gpm</b>

**Figure 4-5 Water customer data sheet**



What type of development?

Option 1

Option 1 = Hotels, Shopping Centers, and Restaurants  
 Option 2 = Apartments, Condominium, and Campgrounds

Total Combined Fixture Value

166

Total Water Demand

56.9 gpm

(includes irrigation)

Figure 4-2 Water flow demand per fixture value - low range

Table 6-1 AWWA meter standards

Meter	Minimum Flow Rate (gpm)	Low Normal Flow Rate (gpm)	Change-over Range (Compound Meters)	High Normal Flow Rate (gpm)	Maximum Flow Rate (gpm)	Head Loss at Maximum Flow (psi)
<b>Positive Displacement</b>						
1/2 in.	0.25	1	N/A	7.5	15	15
5/8 in.	0.25	1		10	20	15
3/4 in.	0.5	2		15	30	15
1 in.	0.75	3		25	50	15
1 1/2 in.	1.5	5	N/A	50	100	15
2 in.	2	8		80	160	15
<b>Multijet</b>						
5/8 in.	0.25	1	N/A	10	20	15
3/4 in.	0.5	2		15	30	15
1 in.	0.75	3		25	50	15
1 1/2 in.	1.5	5		50	100	15
2 in.	2.0	8		80	160	15
<b>Turbine class 1</b>						
3/4 in.	1.5	N/A	N/A	20	30	15
1 in.	2			35	50	15
1 1/2 in.	3			65	100	15
2 in.	4			100	160	15
3 in.	6			220	350	15
4 in.	8			420	630	15
6 in.	15			865	1,300	15
<b>Turbine class 2</b>						
1 1/2 in.	4	N/A	N/A	80	120	7
2 in.	4			100	160	7
3 in.	8			240	350	7
4 in.	15			420	630	7
6 in.	30			920	1,400	7
8 in.	50			1,600	2,400	7
10 in.	75			2,500	3,800	7
12 in.	120			3,300	5,000	7
14 in.	150			5,200	7,500	7
16 in.	200			6,500	10,000	7
18 in.	250			8,500	12,500	7
20 in.	300			10,000	15,000	7
<b>Compound</b>						
2 in.	0.25	2	20	80	160	20
3 in.	0.5	4	23	160	320	20
4 in.	0.75	6	28	250	500	20
6 in.	1.5	10	32	500	1,000	20
8 in.	2	16	50	800	1,600	20
<b>Singlejet</b>						
1 1/2 in.	0.5	1.5	N/A	50	100	15
2 in.	0.5	2.0		80	160	15
3 in.	0.5	2.5		160	320	15
4 in.	0.75	3.0		250	500	15
6 in.	1.5	4.0		500	1000	15

Source: Data are drawn from AWWA Standards C700, C701, C702, C708, C710, and C712, of latest revision as of December 2002.

N/A = not applicable

Total Water Demand 56.9 gpm (Peak Demand)

Required Water Meter 1.5 in. (Positive Displacement)



**APPENDIX D**

**SANITARY SEWER DEMAND CALCULATIONS**

**15A NCAC 02T .0114 WASTEWATER DESIGN FLOW RATES**

(a) This Rule shall be used to determine wastewater flow rates for all systems governed by this Subchapter unless alternate criteria are provided by a program-specific rule or for flow used for the purposes of 15A NCAC 02H .0105. Higher flow rates shall be required where usage and occupancy are atypical, including those in Paragraph (e) of this Rule. Wastewater flow calculations shall take hours of operation and anticipated maximum occupancies and usage into account when calculating peak flows for design.

(b) In determining the volume of sewage from dwelling units, the flow rate shall be 120 gallons per day per bedroom. The minimum volume of sewage from each dwelling unit shall be 240 gallons per day and each additional bedroom above two bedrooms shall increase the volume by 120 gallons per day. Each bedroom or any other room or addition that can function as a bedroom shall be considered a bedroom for design purposes. When the occupancy of a dwelling unit exceeds two persons per bedroom, the volume of sewage shall be determined by the maximum occupancy at a rate of 60 gallons per person per day.

(c) The following table shall be used to determine the minimum allowable design daily flow of wastewater facilities. Design flow rates for establishments not identified below shall be determined using available flow data, water-using fixtures, occupancy or operation patterns, and other measured data.

Type of Establishments	Daily Flow For Design
Barber and beauty shops	
Barber Shops	50 gal/chair
Beauty Shops	125 gal/booth or bowl
Businesses, offices and factories	
General business and office facilities	25 gal/employee/shift
Factories, excluding industrial waste	25 gal/employee/shift
Factories or businesses with showers or food preparation	35 gal/employee/shift
Warehouse	100 gal/loading bay
Warehouse – self storage (not including caretaker residence)	1 gal/unit
Churches	
Churches without kitchens, day care or camps	3 gal/seat
Churches with kitchen	5 gal/seat
Churches providing day care or camps	25 gal/person (child & employee)
Fire, rescue and emergency response facilities	
Fire or rescue stations without on site staff	25 gal/person
Fire or rescue stations with on-site staff	50 gal/person/shift
Food and drink facilities	
Banquet, dining hall	30 gal/seat
Bars, cocktail lounges	20 gal/seat
Caterers	50 gal/100 sq ft floor space
Restaurant, full Service	40 gal/seat
Restaurant, single service articles	20 gal/seat
Restaurant, drive-in	50 gal/car space
Restaurant, carry out only	50 gal/100 sq ft floor space
Institutions, dining halls	5 gal/meal
Deli	40 gal/100 sq ft floor space
Bakery	10 gal/100 sq ft floor space
Meat department, butcher shop or fish market	75 gal/100 sq ft floor space
Specialty food stand or kiosk	50 gal/100 sq ft floor space
Hotels and Motels	
Hotels, motels and bed & breakfast facilities, without in-room cooking facilities	120 gal/room
Hotels and motels, with in-room cooking facilities	175 gal/room
Resort hotels	200 gal/room
Cottages, cabins	200 gal/unit
Self service laundry facilities	500 gal/machine
Medical, dental, veterinary facilities	
Medical or dental offices	250 gal/practitioner/shift
Veterinary offices (not including boarding)	250 gal/practitioner/shift

Veterinary hospitals, kennels, animal boarding facilities	20 gal/pen, cage, kennel or stall	
Hospitals, medical	300 gal/bed	
Hospitals, mental	150 gal/bed	
Convalescent, nursing, rest homes without laundry facilities	60 gal/bed	
Convalescent, nursing, rest homes with laundry facilities	120 gal/bed	
Residential care facilities	60 gal/person	
Parks, recreation, camp grounds, R-V parks and other outdoor activity facilities		
Campgrounds with comfort station, without water or sewer hookups	75 gal/campsite	
Campgrounds with water and sewer hookups	100 gal/campsite	
Campground dump station facility	50 gal/space	
Construction, hunting or work camps with flush toilets	60 gal/person	
Construction, hunting or work camps with chemical or portable toilets	40 gal/person	
Parks with restroom facilities	250 gal/plumbing fixture	
Summer camps without food preparation or laundry facilities	30 gal/person	
Summer camps with food preparation and laundry facilities	60 gal/person	
Swimming pools, bathhouses and spas	10 gal/person	
Public access restrooms	325 gal/plumbing fixture	
Schools, preschools and day care		
Day care and preschool facilities	25 gal/person (child & employee)	
Schools with cafeteria, gym and showers	15 gal/student	
Schools with cafeteria	12 gal/student	
Schools without cafeteria, gym or showers	10 gal/student	
Boarding schools	60 gal/person (student & employee)	
Service stations, car wash facilities		
Service stations, gas stations	250 gal/plumbing fixture	
Car wash facilities	1200 gal/bay	
Sports centers		
Bowling center	50 gal/lane	
Fitness, exercise, karate or dance center	50 gal/100 sq ft	
Tennis, racquet ball	50 gal/court	
Gymnasium	50 gal/100 sq ft	
Golf course with only minimal food service	250 gal/plumbing fixture	
Country clubs	60 gal/member or patron	
Mini golf, putt-putt	250 gal/plumbing fixture	
Go-kart, motocross	250 gal/plumbing fixture	
Batting cages, driving ranges	250 gal/plumbing fixture	
Marinas without bathhouse	10 gal/slip	
Marinas with bathhouse	30 gal/slip	
Video game arcades, pool halls	250 gal/plumbing fixture	
Stadiums, auditoriums, theaters, community centers	5 gal/seat	
Stores, shopping centers, malls and flea markets		
Auto, boat, recreational vehicle dealerships/showrooms with restrooms	125 gal/plumbing fixture	
Convenience stores, with food preparation	60 gal/100 sq ft	48.53 x 60 = 2,912gpd
Convenience stores, without food preparation	250 gal/plumbing fixture	
Flea markets	30 gal/stall	
Shopping centers and malls with food service	130 gal/1000 sq ft	
Stores and shopping centers without food service	100 gal/1000 sq ft	
Transportation terminals – air, bus, train, ferry, port and dock	5 gal/passenger	

(d) Design daily flow rates for proposed non-residential developments where the types of use and occupancy are not known shall be designed for a minimum of 880 gallons per acre, or the applicant shall specify an anticipated flow based upon anticipated or potential uses.

(e) Design daily flow rates for residential property on barrier islands and similar communities located south or east of the Atlantic Intracoastal Waterway and used as vacation rental as defined in G.S. 42A-4 shall be 120 gallons per day per habitable room. Habitable room shall mean a room or enclosed floor space used or intended to be used for living or sleeping, excluding kitchens and dining areas, bathrooms, shower rooms, water closet compartments, laundries, pantries, foyers, connecting corridors, closets, and storage spaces.

(f) An adjusted daily sewage flow design rate shall be granted for permitted but not yet tributary connections and future connections tributary to the system upon showing that the capacity of a sewage system is adequate to meet actual daily wastewater flows from a facility included in Paragraph (b) or (c) of this Rule without causing flow violations at the receiving wastewater treatment plant or capacity-related sanitary sewer overflows within the collection system as follows:

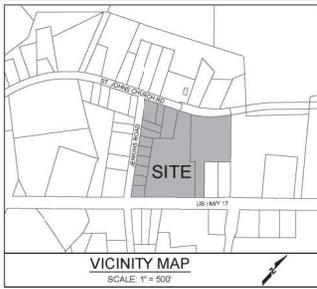
- (1) Documented, representative data from that facility or a comparable facility shall be submitted by an authorized signing official in accordance with Rule .0106 of this Section to the Division for all flow reduction requests, as follows:
  - (A) dates of flow meter calibrations during the time frame evaluated and indication if any adjustments were necessary;
  - (B) a breakdown of the type of connections (e.g. two bedroom units, three bedroom units) and number of customers for each month of submitted data as applicable. Identification of any non-residential connections including subdivision clubhouses and pools, restaurants, schools, churches and businesses. For each non-residential connection, information identified in Paragraph (c) of this Rule (e.g. 200 seat church, 40 seat restaurant, 35 person pool bathhouse);
  - (C) a letter of agreement from the owner or an official, meeting the criteria of Rule .0106 of this Section, of the receiving collection system or treatment works accepting the wastewater and agreeing with the adjusted design rate;
  - (D) age of the collection system;
  - (E) analysis of inflow and infiltration within the collection system or receiving treatment plant, as applicable;
  - (F) if a dedicated wastewater treatment plant serves the specific area and is representative of the residential wastewater usage, at least the 12 most recent consecutive monthly average wastewater flow readings and the daily total wastewater flow readings for the highest average wastewater flow month per customers, as reported to the Division;
  - (G) if daily data from a wastewater treatment plant cannot be used or is not representative of the project area: 12 months worth of monthly average wastewater flows from the receiving treatment plant shall be evaluated to determine the peak sewage month. Daily wastewater flows shall then be taken from a flow meter installed at the most downstream point of the collection area for the peak month selected that is representative of the project area. Justification for the selected placement of the flow meter shall also be provided; and
  - (H) an estimated design daily sewage flow rate shall be determined by calculating the numerical average of the top three daily readings for the highest average flow month. The calculations shall also account for seasonal variations, excessive inflow and infiltration, age and suspected meter reading and recording errors.
- (2) The Division shall evaluate all data submitted but shall also consider other factors in granting, with or without adjustment, or denying a flow reduction request including: applicable weather conditions during the data period (i.e. rainy or drought), other historical monitoring data for the particular facility or other similar facilities available to the Division, the general accuracy of monitoring reports and flow meter readings, and facility usage, such as whether the facility is in a resort area.
- (3) Flow increases shall be required if the calculations required by Subparagraph (f)(1) of this Rule yield design flows higher than that specified in Paragraphs (b) or (c) of this Rule.
- (4) The permittee shall retain the letter of any approved adjusted daily design flow rate for the life of the facility and shall transfer such letter to a future permittee.

*History Note: Authority G.S. 143-215.1; 143-215.3(a)(1);  
Eff. September 1, 2006;  
Readopted Eff. September 1, 2018.*

# **SITE PLAN**

# US HWY 17 & JENKINS - SOIL BORINGS - SITE PLAN UPDATE 04 03 24

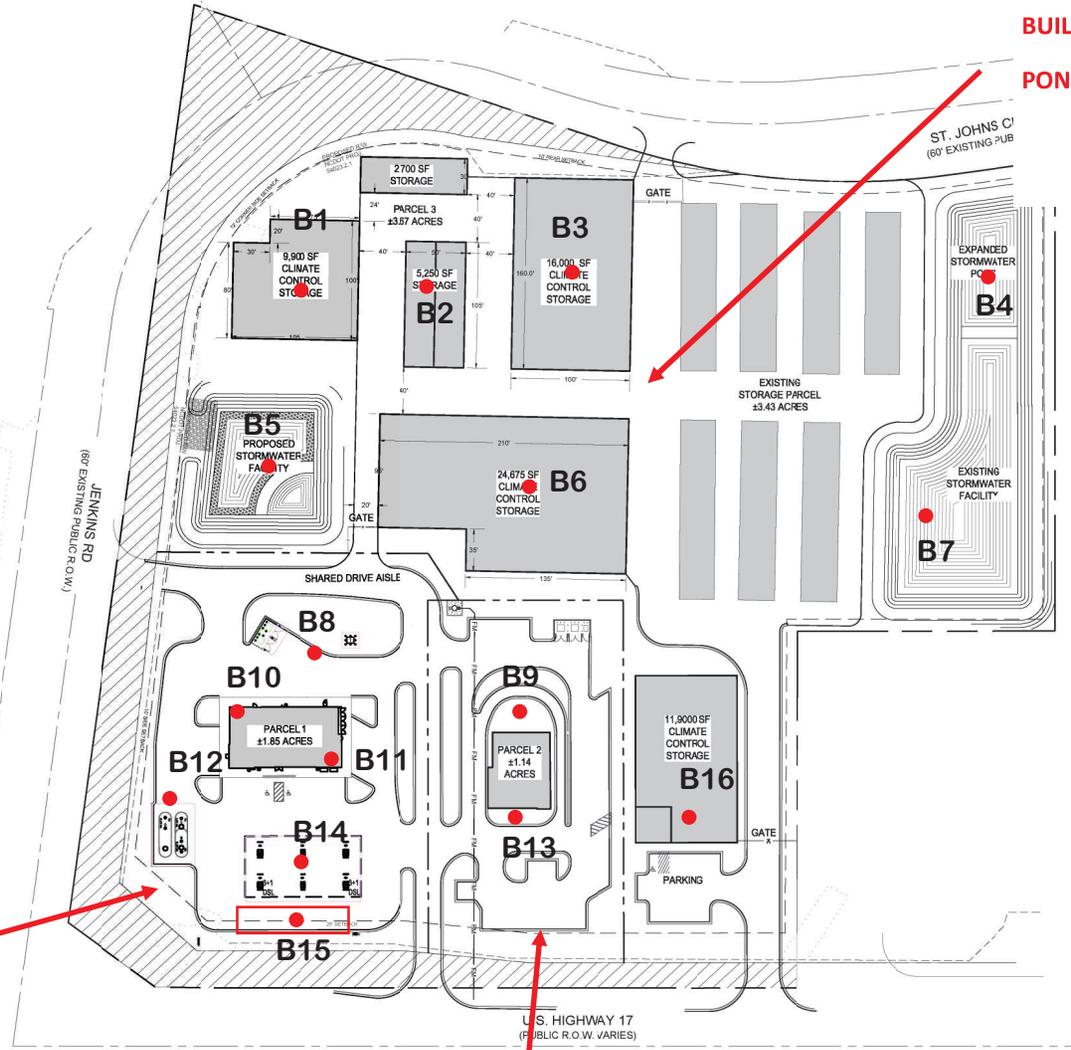
**STORAGE PARCEL SCOPE:**  
**BUILDING: 5 BORINGS @ 20'**  
**PONDS: 3 BORING @ 15'**



**EXISTING SITE DATA**  
 APPLICANT: HARBOUR REAL ESTATE  
 6601 MYRTLE GROVE RD.  
 HAMPSTEAD, NC 28409  
 PROJECT ADDRESS: U.S. HWY 17  
 HAMPSTEAD, NC 28443  
 PARCEL ID: 3293-76-0432-0000, 3293-76-1248-0000, 293-76-1281-0000,  
 3293-76-2124-0000, 3293-76-1324-0000, 3293-76-1416-0000,  
 3293-76-2056-0000, 3293-76-3001-0000, 3293-76-4283-0000,  
 3293-76-6586-0000,  
 NCDOT PARCELS: 3293-75-4917-0000, 3293-75-3964-0000, 3293-76-2444-0000  
 TOTAL AREA: ± 11.55 ACRES (PRE-NCDOT TAKING)  
 ± 10.09 ACRES (POST-NCDOT TAKING)  
 CURRENT ZONING: GB, RP  
 PROPOSED ZONING: GB  
**PARCEL DATA**  
 EXISTING STORAGE PARCEL: ± 3.47 ACRES (PRE-NCDOT TAKING)  
 ± 3.43 ACRES (POST-NCDOT TAKING)  
 PARCEL 1 ± 2.35 ACRES (PRE-NCDOT TAKING)  
 ± 1.85 ACRES (POST-NCDOT TAKING)  
 PARCEL 2 ± 1.23 ACRES (PRE-NCDOT TAKING)  
 ± 1.14 ACRES (POST-NCDOT TAKING)  
 PARCEL 2 ± 4.50 ACRES (PRE-NCDOT TAKING)  
 ± 3.67 ACRES (POST-NCDOT TAKING)  
 TOTAL STORAGE AREA: 70,425 SF (PARCEL 3)

**PARCEL 1 SCOPE:**  
**BUILDING: 2 BORINGS @ 20'**  
**CANOPY: 1 BORING @ 20'**  
**TANKS: 1 BORING @ 25'**  
**PAVEMENT: 2 BORINGS @ 10'**

**PARCEL 2 SCOPE:**  
**BUILDING: 2 BORINGS @ 20'**



CLIENT INFORMATION  
 HARBOUR REAL ESTATE  
 6601 MYRTLE GROVE RD.  
 HAMPSTEAD, NC 28409

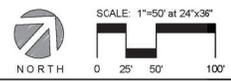
PARAMOUNT  
 122 Cinema Drive  
 Wilmington, NC 28403  
 (910) 791-6707 (O) (910) 791-6760 (F)  
 NC License #: C-2846

PRELIMINARY SITE PLAN  
 HAMSTEAD COMMERCIAL  
 U.S. HIGHWAY 17  
 HAMPSTEAD, NORTH CAROLINA

PROJECT STATUS  
 CONCEPTUAL LAYOUT  
 PRELIMINARY DESIGN  
 NOT FOR CONSTRUCTION  
 DRAWING INFORMATION  
 DATE: 04/03/24  
 SCALE: AS SHOWN  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]

SEAL  
 PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION  
 C-2.0  
 PEI: OBR 23315 PEI

FIGURE 1



PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION