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October 7, 2016

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via email - [jdjohn@hotmail.com](mailto:jdjohn@hotmail.com)

**Re: Geotechnical Exploration and  
Foundation Recommendations  
Candlewood Suites  
750 Cobb Place Boulevard  
Kennesaw, Georgia  
Project No. 01-165031**

Dear Mr. Patel:

In compliance with your instructions, we have conducted a geotechnical exploration and foundation evaluation for the referenced project. The results, together with our recommendations, are to be found in the accompanying report.

Often because of design and construction details that occur on a project, questions arise concerning subsurface conditions. AEI would be pleased to continue its role as Geotechnical Engineer during the project implementation.

Very truly yours,  
Ahlberg Engineering, Inc.

Ryan D. Woodcum, PE  
Principal Engineer

**GEOTECHNICAL EXPLORATION  
AND  
FOUNDATION RECOMMENDATIONS**

**FOR THE PROPOSED**

**Candlewood Suites  
750 Cobb Place Boulevard  
Kennesaw, Georgia  
Project No. 01-165031**

**PREPARED FOR**

**J.D.H. Developers  
400 Galleria Parkway  
Suite 1140  
Atlanta, GA 30339**

**BY**

**Ahlberg Engineering, Inc.  
525 Webb Industrial Drive  
Suite A  
Marietta, GA 30062  
770-919-9968**

**October 7, 2016**

# **GEOTECHNICAL EXPLORATION AND FOUNDATION RECOMMENDATIONS**

## **INTRODUCTION**

### **Authorization**

This report presents the results of a geotechnical exploration and foundation analysis for the proposed Candlewood Suites, conducted for J.D.H. Developers. The work for this project was performed in accordance with our Proposal No. P-16156 dated September 14, 2016. Authorization to perform this exploration and analysis was in the form of a signed copy of that proposal.

### **Purpose**

The purpose of this exploration was to evaluate the soil and groundwater conditions at the site and to recommend a type and depth of foundation system suitable for the proposed structure as well as to provide criteria for the Architects and Design Engineers to use in preparing the foundation design.

### **Scope**

The scope of the exploration and analysis included a reconnaissance of the immediate site, the subsurface exploration, field testing, and an engineering analysis and evaluation of the foundation materials.

The scope of services did not include any environmental assessment for the presence or absence of wetlands or hazardous or toxic materials in the soil, surface water, groundwater, or air, on or below or around this site. Any statement in this report or on the boring logs regarding odors, colors or unusual or suspicious items or conditions is strictly for the information of the client.

### **General**

The general subsurface conditions used in the analysis were based upon interpolation of the subsurface data between the borings. There is a possibility that varying conditions may be encountered between boring locations. If deviations from the noted subsurface conditions are encountered during construction, they should be brought to the attention of the Geotechnical Engineer.

The recommendations submitted for the proposed structure are based on the available soil information and the preliminary design details. Any revision in the plans for the proposed structure, from those described in this report, should be brought to the attention of the Geotechnical Engineer to determine if changes in the foundation recommendations are required.

The Geotechnical Engineer warrants that the findings, recommendations, specifications, or professional advice contained herein, have been presented after being prepared in accordance with generally accepted professional engineering practice in the fields of foundation engineering, soil mechanics and engineering geology. No other warranties are implied or expressed.

After the plans and specifications are complete, it is recommended that the Geotechnical Engineer be provided the opportunity to review the final design and specifications, in order to verify that the earthwork and foundation recommendations are properly interpreted and implemented.

This report has been prepared for the exclusive use of J.D.H. Developers for the specific application to the Candlewood Suites - Kennesaw project.

## **DESCRIPTION OF SITE**

### **Site Location**

The site of the proposed building is at the existing Cobb Conference Center located at 750 Cobb Place Boulevard in Kennesaw, Georgia.

### **Topography**

The topography of the site is relatively flat. A cast in place concrete retaining wall, approximately twenty (20) feet in height, is present along the northeast side of the proposed building footprint.

## **GEOLOGY**

### **General Area Geology**

Kennesaw, Georgia is located in the Piedmont Physiographical Province which covers a broad strip extending from central Alabama across Georgia, the Carolinas and Virginia, and tapering out to an end in the vicinity of Baltimore and Philadelphia. Crystalline rocks that were formed under tremendous heat and pressure underlie the entire region. The oldest rocks consist of gneisses and schists that were formed by the metamorphism of ancient sediments and igneous rock in the Pre-Cambrian Era. These rocks have been intruded by large quantities of igneous rocks. The intrusive are of two classes, distinguished by structure and rock type. The older intrusive are massive in structure and few extend above ground level (except Stone Mountain). The younger intrusions are in the form of narrow dikes and sills of varied composition. Some are granitic in nature and include many varieties of granite and granite pegmatite. Others are basic or trap rock. These include diabase, amphibolite and their altered forms. The region is cut by many faults; however, the faults are classified as ancient and have been inactive during recent times.

A typical soil profile in the Piedmont Region consists of three zones. The upper zone is crust, three to ten feet in thickness, made up of deep red silty clay or clayey silt soils. These soils are generally quite stiff. The intermediate zone, which is comparatively softer than the overlying crust, consists of micaceous sandy silts or silty sand soils. Unlike the upper zone that has been subject to severe weathering and leaching, the soils in the intermediate zone still retain the remnants of structures from their parent rock as seen in the strong banding of these soils. This is characteristic of residual soils, formed by the in-situ weathering of the parent bedrock. The third zone is that area of partially weathered rock just above sound bedrock. Soils in this zone consist of gravelly micaceous silts to silty sands and may be seen in alternating hard and soft layer.

Natural processes, man-made processes or a combination of both may alter this profile. Surface water movement or excavation, thus removing part or all of the upper components, often erodes landforms. Likewise, fill placement or alluvial deposition can add strata that would not be typical of in-situ weathering of the parent material.

## **FIELD EXPLORATION**

### **Scope**

The field exploration to evaluate the engineering characteristics of the foundation materials included a reconnaissance of the project site, drilling the test borings, performing standard penetration tests, and recovering split barrel samples. The depth to groundwater was recorded in each test boring during drilling.

Six (6) test borings were drilled to depths ranging from twenty-five (25) feet to seventy-two (72) feet below the existing ground surface. They were made in the locations determined by the project architect. The field tests were located in the field by the AEI Engineers utilizing normal taping procedures. They are presumed to be accurate to within a few feet. The locations are shown on the accompanying Boring Location Plan. After completion of the field testing, the excavations were backfilled with excavated soil. The concrete encountered in Boring B-1 was patched with concrete.

### **Drilling and Sampling Procedures**

A drilling rig equipped with a rotary head made the test borings. Hollow-stem augers were used to advance the holes. Representative samples were obtained employing split-barrel sampling procedures in general accordance with the procedures for "Penetration Test and Split-Barrel Sampling of Soils" (ASTM D 1586).

All of the samples recovered were identified and evaluated by the Geotechnical Engineer.

## **Field Tests and Measurements**

**Penetration Tests** - During the soil boring procedure, standard penetration tests (SPT) were performed at pre-determined intervals to obtain the standard penetration value of the soil. The standard penetration value (N) is defined as the number of blows of a 140-pound hammer, falling thirty (30) inches, required to advance the split-barrel sampler one (1) foot into the soil. The sampler is lowered to the bottom of the previously cleaned drill hole and advanced by blows from the hammer. The number of blows is recorded for each of three (3) successive increments of six (6) inches penetration.

The "N" value is obtained by adding the second and third incremental numbers. The results of the standard penetration test are shown on the Boring Logs and indicate the relative density of cohesionless soils and comparative consistency of cohesive soils, and thereby provide a basis for estimating the relative strength and compressibility of the soil profile components.

**Water Level Measurements** - Water level measurements were taken during the test boring operations. They are noted on the test boring logs presented in the Appendix.

**Ground Surface Elevations** - No ground surface elevations were furnished.

## **SUBSURFACE CONDITIONS**

### **General**

The types of foundation bearing materials encountered in the test borings have been visually classified. They are described on the boring logs. The results of the field tests and water level observations are presented on the boring logs.

Representative samples of the soils were placed in sample jars. They are now stored in the laboratory for further analysis if desired. Unless notified to the contrary, all samples will be disposed of after sixty (60) days.

### **Soil Conditions**

**Surface** – Approximately six (6) inches of concrete was encountered in Boring B-1. Approximately six (6) inches of topsoil was encountered in Borings B-2 through B-6.

**Backfill Materials** – Backfill materials were encountered beneath the concrete in Boring B-1 to an approximate depth of twenty-three (23) feet below the existing ground surface. The backfill materials consist of reddish brown sandy silts. Standard penetration test values measured in the backfill materials ranged from thirteen (13) to twenty-seven (27) indicating to well compacted backfill materials.

**Fill Materials** – Fill materials were encountered beneath the topsoil in Borings B-2 through B-6. The depth of the fill materials ranged from approximately eight (8) feet to approximately twenty (20) feet below the existing ground surface. The fill materials consist of reddish brown sandy silts and dark brown sandy silts. Standard penetration test values measured in the fill materials ranged from nine (9) to forty-three (43) indicating moderately compacted to well compacted fill materials.

**Residual Soils** – Residual soils were encountered beneath the backfill materials in Boring B-1 and beneath the fill materials in Borings B-2 through B-6. The residual soils consist of reddish brown silty sands and reddish brown silty sands. Standard penetration test values measured in the fine grained residual soils were thirteen (13) and fourteen (14) indicating soils of stiff consistency. Standard penetration test values measured in the coarse grained residual soils ranged from three (3) to twenty-seven (27) and generally ranged from nine (9) to twenty-seven (27) indicating soils of loose to medium dense relative density. The lower standard penetration test values were encountered in Boring B-6 at depths ranging from thirty (30) to forty (40) feet below the existing ground surface, which is at or near the groundwater table.

**Partially Weathered Rock** - Partially weathered rock was encountered beneath the residual soil in Borings B-3 and B-6. The partially weathered rock consists of reddish brown silty sands. Standard penetration values measured in the partially weathered rock were greater than fifty (50+) indicating material of very dense relative density. Partially Weathered Rock (PWR) is locally defined as material that requires more than fifty (50) blows of the SPT hammer to advance the sampler six (6) inches.

### **Groundwater Conditions**

Groundwater was encountered in Boring B-6 at a depth of approximately thirty-eight (38) feet below the existing ground surface during drilling and at a depth of approximately thirty-six (36) feet below the existing ground surface after 24 hours. Groundwater was not encountered in any of the other test borings.

### **Refusal Materials**

Refusal materials were encountered in Boring B-6 at a depth of approximately seventy-two (72) feet below the existing ground surface. Refusal materials were not encountered in any of the other test borings.

## **FOUNDATION DISCUSSION AND RECOMMENDATIONS**

### **Project Description**

The proposed project consists of the demolition of the existing Cobb Conference Center and the construction of a 98 room hotel. Proposed finished floor elevations have not been provided. However, it is anticipated that the proposed finished floor elevation will be at or near existing grades thus requiring minimal cuts and fills. The proposed hotel building will be a five story structure with the first story consisting of masonry block construction and the upper four stories consisting of wood frame construction. The building will have an EFIS exterior finish. Wall loads will be approximately 5 Kips / foot and maximum column loads will be approximately 80 kips.

## **Engineering Analysis**

The bearing capacity of the backfill materials, fill materials, and naturally occurring soil was evaluated from the results of the field tests. These test results indicate that the backfill materials, fill materials, and naturally occurring soil have a moderate to high bearing capacity.

Lower N values were present at or near the groundwater table. This is a result of a quick condition in which the pore pressures are increased from drilling activity and the shear strength of the material is reduced. As a result, the measured N value is not a true indicator of the material's in-situ strength. In addition, these soils are below the influence of the proposed structure.

The foundation types considered for the proposed structure include conventional spread and continuous wall footings, raft or mat, driven piles, drilled piers or caissons, and augured cast-in-place piles.

Considering the soil conditions on this site and the proposed loads of the structure, it appears that conventional spread and continuous wall footings will be a suitable foundation system.

In view of the loading conditions imposed by the proposed structure and the prevailing soil conditions at this site, a raft or mat, driven piles, caissons, or augured cast-in-place piers do not appear to be economically feasible.

The boring locations were limited to the building area. Exploration of the subsurface materials in the area of site retaining walls, utility trenches and paved areas was not included in the scope of work. Varying subsurface conditions may be encountered in those areas.

Groundwater was encountered in Boring B-6 at a depth of approximately thirty-eight (38) feet below the existing ground surface during drilling and at a depth of approximately thirty-six (36) feet below the existing ground surface after 24 hours and was not encountered in any of the other test borings; therefore dewatering is not anticipated for shallow foundation excavations.

Refusal materials were encountered in Boring B-6 at a depth of approximately seventy-two (72) feet below the existing ground surface and were not encountered in any of the other test borings; therefore rock excavation is not anticipated for shallow foundation excavations.

## **Engineering Analysis – Seismic**

### **General Procedure**

The Seismic Site Class was determined by the General Procedure in accordance with Section 1613.3.2 of the 2012 International Building Code. The soil properties were evaluated for the top 100 feet of the profile. The typical profile at this site consists of soil to a depth of seventy-two (72) feet where refusal materials were encountered. The seismic properties of the soil were interpolated from the standard penetration test values. A Seismic Site Class "D" was determined for this site.



Higher soil shear wave velocities are sometimes obtained for typical subsurface materials in the Atlanta area when the shear wave velocities are determined by testing instead of by estimating from standard penetration test values. Seismic shear wave velocity testing was beyond the scope of this exploration, however AEI can provide this service if requested.

### **Recommendations**

1. The existing building and all associated utilities and pavement should be removed from beneath the proposed building pad footprint. Utility excavations should be backfilled with compacted structural fill material in accordance with the following recommendations.
2. The topsoil should be stripped from all structural areas and be stockpiled for later use in landscape areas or be discarded.
3. The surface of the site should be proofcompacted to detect and compact any localized soft areas at the surface of the site.
4. Structural fill materials should be free of organic matter and be compacted to a minimum of 95 percent of the maximum dry density within  $\pm 3\%$  of the optimum moisture content as determined by Standard Proctor ASTM D 698.
5. Fill should be placed in six (6) inch lifts (compacted thickness) in mass fill areas and as needed to obtain proper compaction in utility trenches and behind walls. Ahlberg Engineering should monitor filling operations. A sufficient number of density tests should be taken to verify that the specified compaction is obtained.
6. The conventional spread footings and continuous wall footings should be designed as follows:

<b><u>Foundation Type</u></b>	<b><u>Net allowable Soil Bearing</u></b>	<b><u>Minimum Footing Width</u></b>	<b><u>Minimum Depth Below Grade</u></b>
Spread footings	3,000 psf	24 inches	12 inches
Continuous wall footings	3,000 psf	18 inches	12 inches

7. A Site Class "D" is recommended for seismic design.
8. Footings should be suitably reinforced to reduce the effects of differential movement that may occur to variations in the properties of the supporting soils.
9. A representative of the Ahlberg Engineering should test the soils in the footing excavations to verify the design soils bearing pressure.
10. Every effort should be made to keep the footing excavations dry as the soils will tend to soften when exposed to free water.

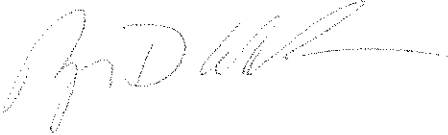
11. A 4" granular, free draining stone sub-base (GDOT #57 or equivalent) and vapor barrier (minimum of 10 mils thickness) is recommended for slab-on-grade construction.

### **GENERAL COMMENTS**

When the plans and specifications are complete, or if significant changes are made in the character or location of the proposed structure, a consultation should be arranged to review the changes with respect to the prevailing soil conditions. At that time it may be necessary to submit supplementary recommendations.

It is recommended that the services of Ahlberg Engineering, Inc. be engaged to test and evaluate the compaction of any additional fill materials and to test and evaluate the bearing value of the soils in the footing excavations.

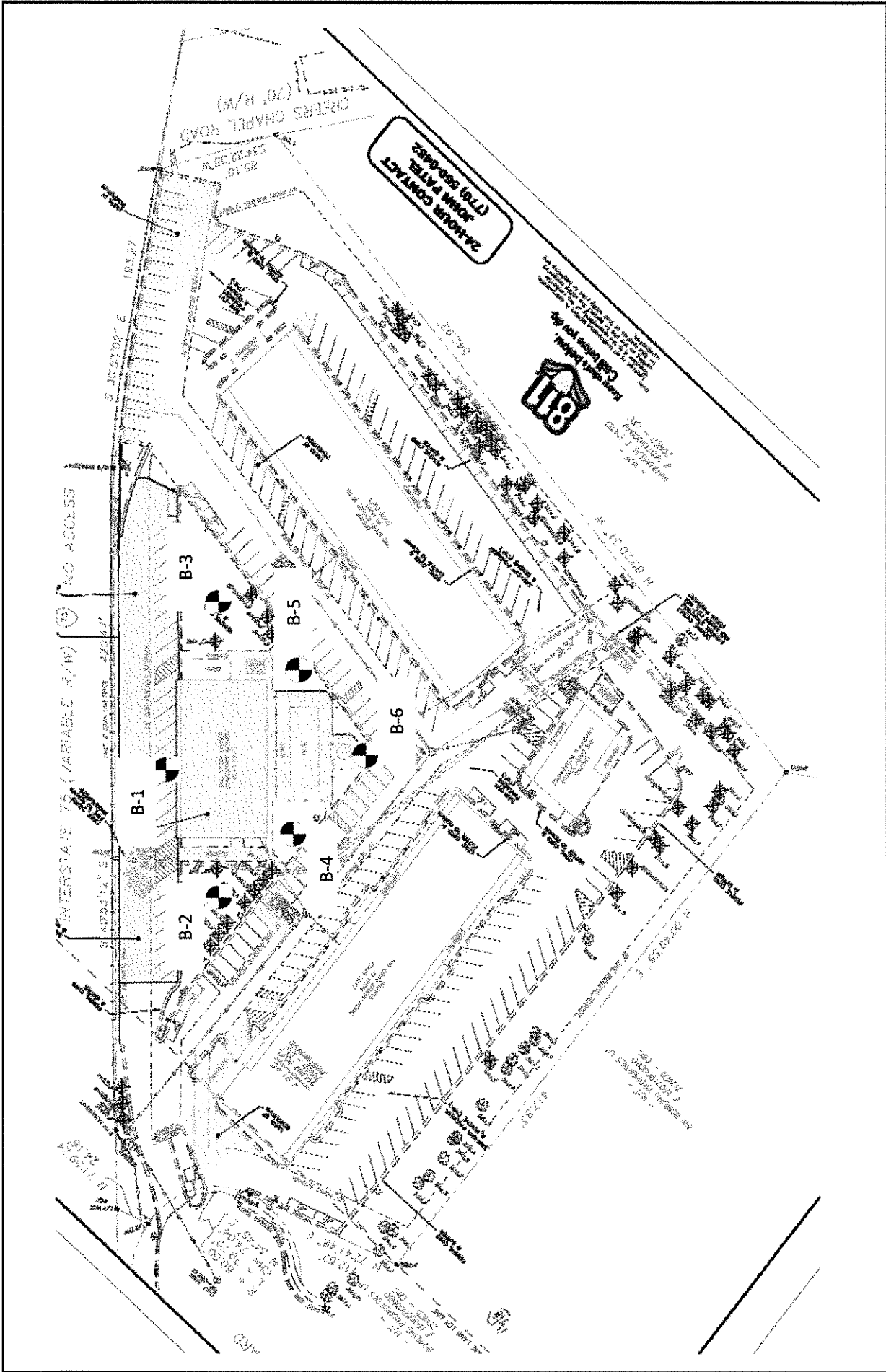
Respectfully submitted,  
AHLBERG ENGINEERING, INC.



Ryan D. Woodcum, PE  
Project Engineer



J. Tyler Wood, PE  
Senior Engineer



<b>PROJECT NAME</b> Candlewood Suites - Kennesaw 750 Cobb Place Boulevard Kennesaw, Georgia	<b>BORING LOCATION PLAN</b> <b>AHLBERG ENGINEERING, INC.</b>		 Boring Location
	<b>PROJECT NO.</b> 01-165031	<b>DATE</b> 9/28/2016	

Project: Candlewood Suites - Kennesaw  
 Project Location: 750 Cobb Place Boulevard  
 Kennesaw, Georgia  
 Project Number: 01-165031

# Log of Boring B-1

## Sheet 1 of 1



Date(s) Drilled	9/28/16	Logged By	AEI	Checked By	R. Woodcum, PE
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	2.25 HSA	Total Depth of Borehole	25 feet bgs
Drill Rig Type	CME 550	Drilling Contractor	Excalibur	Approximate Surface Elevation	N/A
Groundwater Level and Date Measured	Not encountered	Sampling Method(s)	ASTM D1586	Hammer Data	Automatic
Borehole Backfill	Yes	Location			

Depth (feet)	Sample Number	Sample Type	Sampling Resistance, blows/ft, N value	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
0				Concrete = 6"	
	SS-1		13	BACKFILL; Reddish brown sandy SILT with some clay and trace rock, moist	
	SS-2		20		
5					
	SS-3		19		
	SS-4		18		
10					
	SS-5		27		
15					
	SS-6		19	RESIDUAL; Reddish brown silty SAND with trace mica and clay, moist	
20					
	SS-7		11	Boring terminated at -25 feet	
25					
30					
35					

Project: Candlewood Suites - Kennesaw  
 Project Location: 750 Cobb Place Boulevard  
 Kennesaw, Georgia  
 Project Number: 01-165031

# Log of Boring B-2

## Sheet 1 of 1



Date(s) Drilled	9/28/16	Logged By	AEI	Checked By	R. Woodcum, PE
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	2.25 HSA	Total Depth of Borehole	25 feet bgs
Drill Rig Type	CME 550	Drilling Contractor	Excalibur	Approximate Surface Elevation	N/A
Groundwater Level and Date Measured	Not encountered	Sampling Method(s)	ASTM D1586	Hammer Data	Automatic
Borehole Backfill	Yes	Location			

Depth (feet)	Sample Number	Sample Type	Sampling Resistance, blows/ft, N value	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
0				Topsoil = 6"	
	SS-1		22	FILL; Reddish brown sandy SILT with some clay and trace rock, dry	
5	SS-2		11		
	SS-3		20	moist	
10	SS-4		22		
15	SS-5		14	Dark brown sandy SILT with some clay, moist	
20	SS-6		9	RESIDUAL; Reddish brown sandy SILT with trace clay, moist	
25	SS-7		13	Boring terminated at -25 feet	
30					
35					

Project: Candlewood Suites - Kennesaw  
 Project Location: 750 Cobb Place Boulevard  
 Kennesaw, Georgia  
 Project Number: 01-165031

# Log of Boring B-3

## Sheet 1 of 1



Date(s) Drilled	9/27/16	Logged By	AEI	Checked By	R. Woodcum, PE
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	2.25 HSA	Total Depth of Borehole	25 feet bgs
Drill Rig Type	CME 550	Drilling Contractor	Excalibur	Approximate Surface Elevation	N/A
Groundwater Level and Date Measured	Not encountered	Sampling Method(s)	ASTM D1586	Hammer Data	Automatic
Borehole Backfill	Yes	Location			

Depth (feet)	Sample Number	Sample Type	Sampling Resistance, blows/ft, N value	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
0				Topsoil = 6"	
	SS-1		41	FILL; Reddish brown sandy SILT with some clay and trace rock, dry	
	SS-2		27		
5				moist	
	SS-3		29		
	SS-4		27		
10				RESIDUAL; Reddish brown silty SAND with trace mica, moist	
	SS-5		10		
15					
	SS-6		26		
20				PARTIALLY WEATHERED ROCK; Reddish brown silty SAND, moist	
	SS-7		50/2"		
25				Boring terminated at -25 feet	
30					
35					

Project: Candlewood Suites - Kennesaw  
 Project Location: 750 Cobb Place Boulevard  
 Kennesaw, Georgia  
 Project Number: 01-165031

Log of Boring B-4  
 Sheet 1 of 1



Date(s) Drilled	9/28/16	Logged By	AEI	Checked By	R. Woodcum, PE
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	2.25 HSA	Total Depth of Borehole	25 feet bgs
Drill Rig Type	CME 550	Drilling Contractor	Excalibur	Approximate Surface Elevation	N/A
Groundwater Level and Date Measured	Not encountered	Sampling Method(s)	ASTM D1586	Hammer Data	Automatic
Borehole Backfill	Yes	Location			

Depth (feet)	Sample Number	Sample Type	Sampling Resistance, blows/ft, N value	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
0				Topsoil = 6"	
	SS-1		14	FILL; Reddish brown sandy SILT with some clay and trace rock, moist	
	SS-2		16		
5					
	SS-3		16		
	SS-4		14		
10					
	SS-5		12		
15					
	SS-6		9	RESIDUAL; Reddish brown sandy SILT with some clay and trace rock, moist	
20					
	SS-7		14	Boring terminated at -25 feet	
25					
30					
35					

Project: **Candlewood Suites - Kennesaw**  
 Project Location: **750 Cobb Place Boulevard  
 Kennesaw, Georgia**  
 Project Number: **01-165031**

**Log of Boring B-5**  
**Sheet 1 of 1**



Date(s) Drilled <b>9/27/16</b>	Logged By <b>AEI</b>	Checked By <b>R. Woodcum, PE</b>
Drilling Method <b>Hollow Stem Auger</b>	Drill Bit Size/Type <b>2.25 HSA</b>	Total Depth of Borehole <b>25 feet bgs</b>
Drill Rig Type <b>CME 550</b>	Drilling Contractor <b>Excalibur</b>	Approximate Surface Elevation <b>N/A</b>
Groundwater Level and Date Measured <b>Not encountered</b>	Sampling Method(s) <b>ASTM D1586</b>	Hammer Data <b>Automatic</b>
Borehole Backfill <b>Yes</b>	Location	

Depth (feet)	Sample Number	Sample Type	Sampling Resistance, blows/ft, N value	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
0				Topsoil = 6"	
	SS-1		30	FILL; Reddish brown sandy SILT with some clay and trace rock, dry	
	SS-2		43		
5				moist	
	SS-3		24		
	SS-4		18	RESIDUAL; Reddish brown silty SAND with trace mica, moist	
10					
	SS-5		19		
15					
	SS-6		16		
20					
	SS-7		20		
25				Boring terminated at -25 feet	
30					
35					



Project: Candlewood Suites - Kennesaw  
 Project Location: 750 Cobb Place Boulevard  
 Kennesaw, Georgia  
 Project Number: 01-165031

Log of Boring B-6  
 Sheet 1 of 3



Date(s) Drilled	9/27/16	Logged By	AEI	Checked By	R. Woodcum, PE
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	2.25 HSA	Total Depth of Borehole	72 feet bgs
Drill Rig Type	CME 550	Drilling Contractor	Excalibur	Approximate Surface Elevation	N/A
Groundwater Level and Date Measured	36' during drilling & 33' at 24 hours	Sampling Method(s)	ASTM D1586	Hammer Data	Automatic
Borehole Backfill	Yes	Location			

Depth (feet)	Sample Number	Sample Type	Sampling Resistance, blows/ft, N value	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
0				Topsoil = 6"	
	SS-1		31	FILL; Reddish brown sandy SILT with some clay, moist	
	SS-2		12		
5	SS-3		10		
	SS-4		12	Brown sandy SILT with some clay, moist	
10					
	SS-5		10		
15				RESIDUAL; Reddish brown silty SAND, moist	
	SS-6		16		
20					
	SS-7		10		
25					
	SS-8		9		
30					
	SS-9		6		
35					

▼ at 24 hours  
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Project: Candlewood Suites - Kennesaw  
 Project Location: 750 Cobb Place Boulevard  
 Kennesaw, Georgia  
 Project Number: 01-165031

Log of Boring B-6  
 Sheet 2 of 3



Depth (feet)	Sample Number	Sample Type	Sampling Resistance, blows/ft, N value	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
35				RESIDUAL; Reddish brown silty SAND, moist	$\nabla$ during drilling
40	SS-10		6		
45	SS-11		9		
50	SS-12		14		
55	SS-13		16		
60	SS-14		19		
65	SS-15		27		
70	SS-16		50/2"		

Project: Candlewood Suites - Kennesaw  
 Project Location: 750 Cobb Place Boulevard  
 Kennesaw, Georgia  
 Project Number: 01-165031

Log of Boring B-6  
 Sheet 3 of 3



Depth (feet)	Sample Number	Sample Type	Sampling Resistance, blows/ft, N value	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
70				RESIDUAL; Reddish brown silty SAND, moist	
				Auger refusal at -72 feet	
75					
80					
85					
90					
95					
100					
105					

Project: Candlewood Suites - Kennesaw  
 Project Location: 750 Cobb Place Boulevard  
 Kennesaw, Georgia  
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## Key to Log of Boring Sheet 1 of 1



Depth (feet)	Sample Number	Sample Type	Sampling Resistance, blows/ft, N value	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
1	2	3	4	5	6
<b>COLUMN DESCRIPTIONS</b> <div> <div> <p>1 Depth (feet): Depth in feet below the ground surface.</p> <p>2 Sample Number: Sample identification number.</p> <p>3 Sample Type: Type of soil sample collected at the depth interval shown.</p> </div> <div> <p>4 Sampling Resistance, blows/ft, N value: Number of blows to advance driven sampler one foot (or distance shown) beyond seating interval using the hammer identified on the boring log.</p> <p>5 MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text.</p> <p>6 REMARKS AND OTHER TESTS: Comments and observations regarding drilling or sampling made by driller or field personnel.</p> </div> </div>					
<b>FIELD AND LABORATORY TEST ABBREVIATIONS</b> <div> <div> <p>CHEM: Chemical tests to assess corrosivity</p> <p>COMP: Compaction test</p> <p>CONS: One-dimensional consolidation test</p> <p>LL: Liquid Limit, percent</p> </div> <div> <p>PI: Plasticity Index, percent</p> <p>SA: Sieve analysis (percent passing No. 200 Sieve)</p> <p>UC: Unconfined compressive strength test, Qu, in ksf</p> <p>WA: Wash sieve (percent passing No. 200 Sieve)</p> </div> </div>					
<b>MATERIAL GRAPHIC SYMBOLS</b>					
<div> <div> <b>TYPICAL SAMPLER GRAPHIC SYMBOLS</b> <div> <div>  Auger sampler            CME Sampler         </div> <div>  Bulk Sample            Grab Sample         </div> <div>  3-inch-OD California w/ brass rings            2.5-inch-OD Modified California w/ brass liners         </div> </div> <div> <b>OTHER GRAPHIC SYMBOLS</b> <div>  Pitcher Sample            2-inch-OD unlined split spoon (SPT)            Shelby Tube (Thin-walled, fixed head)         </div> <div>  Water level (at time of drilling, ATD)            Water level (after waiting)            Minor change in material properties within a stratum            Inferred/gradational contact between strata            Queried contact between strata         </div> </div> </div> </div>					
<b>GENERAL NOTES</b> <p>1: Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive, and actual lithologic changes may be gradual. Field descriptions may have been modified to reflect results of lab tests.</p> <p>2: Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative of subsurface conditions at other locations or times.</p>					

Figure B-1